

التعلم بالممارسة  
LEARNING BY DOING



كليات التقنية العليا  
HIGHER COLLEGES OF TECHNOLOGY

ربع قرن  
من التميز

Applied  
Communications  
Computer  
Information  
Science  
Health Sciences  
Engineering  
Technology  
and Science  
Business  
Education

CATALOGUE  
2013-2014



Compiled by Central Academic and Student Services  
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Every effort has been made to ensure the accuracy of this publication at the time of going to press; however, HCT reserves the right to alter any programme or course. Students should check for any amendments prior to enrolment. All amendments or updates will be published in the official online version at [www.hct.ac.ae](http://www.hct.ac.ae)



## OUR MISSION

The Higher Colleges of Technology is dedicated to the delivery of technical and professional programmes of the highest quality to the students, within the context of sincere respect for diverse beliefs and values.

Graduates will have the linguistic ability to function effectively in an international environment, the technical skills to operate in an increasingly complex technological world, the intellectual capacity to adapt to constant change, the commitment to sustainable development and the leadership potential to make the fullest possible contribution to the community for the good of all its people.

**Higher Colleges of Technology**  
**2013 - 2014 Catalogue**



## MESSAGE FROM THE CHANCELLOR



In this academic year the Higher Colleges of Technology will maintain a strong commitment to providing its 20,000 students, throughout the United Arab Emirates, with the highest quality, vocational education. This catalogue details an extensive list of programmes offered in the HCT's seven core academic Faculties of Arabic and Emirati Studies, Business, Computer Information Science and Applied Communications, Education and General Studies, Engineering Technology and Science, Foundations, and Health Sciences. It is particularly pleasing to see the rich variety of General Studies courses in Arts and Humanities, Communication, Emirati Studies, Mathematics, Physical and Biological Sciences, and Social and Behavioural Studies, which will greatly assist our newest students as they transition from high school life to the colleges. In fact, all of these courses have been meticulously designed to assist all of our students in their journeys through higher education.

These programmes have been developed in conjunction with a wide range of employers so that they are current and industry-relevant, and ensure graduates have the necessary skills to join the workforce and contribute to the development of our nation. The calibre of the programmes detailed in this catalogue reflects HCT's goal to become the number-one ranked technical and applied higher education institution in the United Arab Emirates and the region. By ensuring that our students are studying courses which are relevant to our country's needs, and that the courses are reviewed and benchmarked against the highest international standards I believe the HCT is well on its way to achieving this important milestone.

In addition to these vital steps the HCT has seamlessly integrated into its operations a number of significant processes which will ensure the Higher Colleges of Technology can rightfully claim its place at the pinnacle of higher education in this country. These include the appointment of Executive Deans to lead HCT's separate Faculties, who bring to the positions extensive

international knowledge and experience in their selected fields. The appointment of the Executive Deans will allow the College Directors to concentrate on the smooth running and management of their campuses, while it will also bring HCT's academic processes into line with accepted international educational practices.

We have also incorporated into the curriculum an array of Applied Diploma courses, that have a strong Learning by Doing, job-oriented focus. Importantly, they are specifically designed to ultimately target employment for our students, which means they are workplace-oriented, practical and hands-on. These new qualifications will also allow students who wish to continue their studies to move into the HCT's Bachelor of Applied Science (BAS) degree programmes. Hence, these courses are linked to employers, industry and the community through internships, community service activities, and work-study programmes to ultimately produce work-ready graduates.

As can be seen from reading this extensive catalogue, the HCT is committed to providing opportunities for students to fulfill their potential and to ensure they have the critical thinking skills, the technical knowledge, confidence and the innovative spirit required to succeed as future leaders of this nation.

The Higher Colleges of Technology is fortunate to have the strong support of our nation's leaders and we greatly appreciate their guidance, leadership and support which have helped the HCT to become a model of educational effectiveness and achievement, renowned for providing highly skilled and well-prepared graduates. Our nation's leaders' generous support of our students, and their advocacy for our colleges, are essential to our continued success. We are therefore committed to meeting the high expectations that our leaders have placed upon the Higher Colleges of Technology as a premier institution of applied learning in the United Arab Emirates and throughout our region.

I strongly urge and encourage all students to use this catalogue as a basis for exploration of the many possibilities available to them at the Higher Colleges of Technology, as they embark on exciting and new educational futures.

My very best wishes to all of you as you embark on a wonderful journey of learning in the year ahead.

**MOHAMMAD OMRAN AL SHAMSI**  
CHANCELLOR  
HIGHER COLLEGES OF TECHNOLOGY



## LEARNING BY DOING



Welcome to the Higher Colleges of Technology catalogue for the 2013-2014 academic year, which will be an indispensable tool for HCT students, their families and for faculty members.

This academic year our emphasis at HCT will be on reinforcing our unwavering commitment to the Learning by Doing philosophy which makes HCT a unique destination in the higher education landscape. A major role will be to ensure that all of our actions are underpinned by the theme of Learning by Doing – Ensuring Student Success by Design, which was highlighted at the 26th Annual Conference. This catalogue will also highlight that Learning by Doing will form an integral part of all that we do at HCT, as we strive to provide our students with the best possible educational experience.

The catalogue fully details the programmes in each of the Faculties being offered by HCT's colleges throughout the UAE, as well as providing our students with important dates and valuable information on the HCT's operational structures; policies, rules and regulations; its learning model and the services and resources it provides across all campuses.

You will note from the quality and diversity of programmes offered in this catalogue that the HCT is keeping pace with the changing nature and needs of the community, and the region, by providing highly qualified and work-ready graduates. This is achieved by offering the best quality, career-oriented academic and training programmes so as to meet the specific needs of employers.

This year we shall also maintain our focus on HCT students' growth, development and success by offering them rewarding college experiences; providing them with opportunities to graduate; helping them find

productive employment and providing them with pathways to continuing studies and education. In order to achieve these primary goals we will ensure that the HCT maintains flexibility, uniformity, creativity and innovation in its practices, resulting in all programmes being structured towards Learning by Doing, courses being effectively taught and students properly assessed. As part of this process, we are continuing to integrate cutting-edge technologies throughout our campuses to ensure our students' learning experiences are beneficial to their future careers and endeavours.

As can be seen from the depth and variety of courses available in the 2013/2014 catalogue, the HCT is continuing to challenge students by setting high standards for academic levels, student experiences and learning outcomes. We are therefore ensuring our students, in every college, have the opportunity to earn industry-relevant and internationally accredited Applied Diploma and Bachelor degrees. Our commitment to excellence to date can be seen in the large number of high school graduates choosing to enrol in our colleges this year.

As a result, the Higher Colleges of Technology will continue to produce work-ready, confident and highly skilled graduates, who will join the cohort of over 60,000 successful HCT alumni. As valued members of their own communities, and of our nation, these HCT graduates will be prepared for individual and professional growth and advancement and for a lifetime of useful, productive work and citizenship.

HCT's strong commitment to teaching and learning will see it maintain its status and reputation as a hub of educational excellence in the United Arab Emirates and the region – a dynamic college system that is dedicated to serving its students and our nation. At the Higher Colleges of Technology we are therefore pleased to provide details of the many varied and exciting opportunities, as found in this catalogue, for all of our students throughout the UAE.

I wish all HCT students success in their studies throughout this year, as they strive for excellence in all that they undertake.

**TAYEB A. KAMALI**  
VICE CHANCELLOR  
HIGHER COLLEGES OF TECHNOLOGY

## PREFACE

This catalogue is divided into three sections.

In the first section, an overview of the HCT is given, including its history and status in the current educational climate of the United Arab Emirates. Information is also provided about the HCT's governance structure, organisation, and educational and academic settings.

The second section provides more detailed information about the HCT and its regulations, policies and procedures, and includes information about Academic and Student Services. HCT Academic regulations and policies are published online at <http://www.hct.ac.ae>. The online catalogue contains any addenda for updated policies.

The third section provides information on programmes and course descriptions. This section provides information about the goal of the programme, the programme entry requirements, the courses that are required or optional for the programme major, the credits that correspond to the courses and the programme length.

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# HCT Academic Calendar

## ACADEMIC YEAR 2013-2014

SUN 8 SEPTEMBER 2013 – THU 3 JULY 2014

2013-14 Academic Year	Sunday 8 September 2013 – Thu 3 July 2014
Deans and Programme Chair report (last day)	Wed 14 Aug 2013
Faculty report (last day)	Wed 14 Aug 2013
System meetings and PD	Sun 25 Aug to Thu 29 Aug 2013
College Meets, PD and Orientation	Sun 1 Sep to Thu 5 Sep 2013
<b>First Semester 201310</b>	<b>Sun 8 Sep 2013 – Thu 13 Feb 2014</b>
Semester starts	Sun 8 Sep 2013
Last day for supplemental assessments (AY 2012 -13) and challenges	Thu 19 Sep 2013
Last day to add/drop courses	Thu 26 Sep 2013
Last day to withdraw from a semester length course without penalty	Sun 20 Oct 2013
Mid-year recess for staff and students	Sun 15 Dec 2013 – Thu 2 Jan 2014
Professional Development week for Faculty and Staff (on-duty days)	Sun 15 Dec 2013 – Thu 19 Dec 2013
Mid-year recess for staff (off-duty days)	Sun 22 Dec 2013 – Thu 2 Jan 2014
Classes resume	Sun 5 Jan 2014
Last day to complete Work Experience	Thu 23 Jan 2014
Final Assessment period	Wed 22 Jan – Thu 30 Jan 2014
Supplementary Assessment period	Sun 2 Feb – Thu 6 Feb 2014
Student Progression Advisory	Sun 9 Feb – Thu 13 Feb 2014
<b>Second Semester 201320</b>	<b>Sun 16 Feb – Thu 3 Jul 2014</b>
Semester starts	Sun 16 Feb 2014
Last day for Supplemental Assessment (201310)	Thu 27 Feb 2014
Last day to add/drop courses	Thu 6 Mar 2014
Last day to withdraw from a semester length course without penalty	Thu 27 Mar 2014
Spring Recess for Students	Sun 30 Mar – Thu 10 Apr 2014
Spring Recess for Staff (off-duty days)	Sun 30 Mar – Thu 10 Apr 2014
Professional Development Week for Faculty and Staff (on-duty days)	Sun 6 Apr to Thu 10 Apr 2014
Classes resume	Sun 13 Apr 2014
Last day to complete Work Experience	Thu 19 June 2014
Final Assessment period	Wed 18 Jun to Thu 26 Jun 2014
Supplementary Assessment period	Sun 29 Jun to Thu 3 Jul 2014
Student Progression Advisory	Sun 6 Jul to Thu 10 Jul 2014
<b>Summer Term (Optional)</b>	<b>Sun 6 Jul to Thu 28 Aug 2014</b>
Summer Sessions may be scheduled to run in the weeks between:	Sun 6 Jul – Thu 28 Aug 2014
Students may:	
Add/drop Summer classes before completion of:	10% of the class
Withdraw from Summer classes without penalty before completion of:	35% of the course
All Final Assessments must be completed by:	Thu 28 Aug 2014

**RELIGIOUS AND PUBLIC HOLIDAYS \***

Ramadan	1 Ramadan 1434	Wed 10 Jul 2013
Eid Al Fitr	1 Shawwal 1434	Thu 8 Aug - Sat 10 Aug 2013
Eid Al Adha	10 Thul Hijja 1434	Mon 14 - Thu 17 Oct 2013
Al Hijra New Year	1 Muharram 1435	Tue 5 Nov 2013
National Day		Mon 2 Dec 2013
New Year's Day		Wed 1 Jan 2014
Prophet's Birthday	12 Rabee Al Awal 1435	Tue 14 Jan 2014
Al Isra'a Wal Miraaj Day	27 Rajab 1435	Tue 27 May 2014
Ramadan	1 Ramadan 1435	Sun 29 Jun 2014
Eid Al Fitr	1 Shawwal 1435	Tue 29 Jul 2014

\* Religious Holidays are subject to confirmation

**NOTES ON ACADEMIC CALENDAR:**

The HCT will officially announce closure on a Religious and/or Public holiday to students and staff.

Ramadan and Religious Holidays are based on the official Hijra Calendar from the Ministry of Justice and Islamic Affairs subject to confirmation.

The off-duty days for faculty are determined and managed, based on the Academic Calendar published prior to the start of the Academic Year.

**HCT Meeting Schedules:**

College meetings are scheduled on Sundays, and Systems meeting are scheduled on Mondays during the Academic Year.

College Directors determine the date when staff will report for duty at HCT campuses.

Semester 1: 19 weeks  
Total teaching days: 87 days  
Public Holidays: approximately 8 days

Semester 2: 18 weeks  
Total teaching days: 89 days  
Public Holidays: approximately 1 day

**Vacation****On/Off days for faculty:**

Sun 15 Dec 2013 – Thu 19 Dec 2013 (1 week PD)  
Sun 22 Dec 2013 – Thu 2 Jan 2014 (2 weeks off)  
Sun 30 Mar 2014 – Thu 3 Apr 2014 (1 week off)  
Sun 6 Apr 2014 – Thu 10 Apr 2014 (1 week PD)  
Sun 6 Jul 2014 – Tue 19 August (6.6 weeks off)  
Faculty return Wednesday 20 August 2014



# OVERVIEW OF THE HCT





# Overview of the HCT

In 1985, HE Sheikh Nahayan Mabarak Al Nahayan, Chancellor of the United Arab Emirates University, made a commitment to establish a new system of post-secondary education for UAE Nationals that would stress the ideals of productivity, self-determination and excellence.

His Excellency envisioned a system of the highest quality that would be used to educate Nationals for the professional and technical careers necessary in a rapidly developing society.

In fulfillment of that vision, the Higher Colleges of Technology (HCT) was established in 1988 by Federal Law No 2 issued by the Late Sheikh Zayed bin Sultan Al Nahyan, may his soul rest in peace.

Today, the system of the HCT is the largest higher educational institution in the United Arab Emirates with the current enrolment exceeding 20,000 students, all of whom are UAE Nationals.

The seventeen HCT men's and women's campuses offer an impressive range of instructional programmes in the fields of Applied Communications, Business, Computer Information Science, Engineering Technology and Science, Education, Foundations, General Studies and Health Sciences, with all HCT programmes being delivered in English.

Graduates of the HCT make immediate contributions to government, business and industrial sectors, and develop into leaders in their fields. The HCT is dedicated to student-oriented learning, which places the responsibility for education upon the students themselves and promotes lifelong learning.

## PROFILE

Enrolment	over 20,000
Campuses	17
Academic Faculties	7
Graduates	over 34,000
Credentials	over 60,000

## OUR VISION

HCT will be recognised as the best-in-class applied higher education institution that produces diverse, technology advanced, and knowledgeable graduates ready to enter the workforce and keen to support the nation in its pursuit of excellence.

## OUR MISSION

The Higher Colleges of Technology is dedicated to the delivery of technical and professional programmes of the highest quality to the students, within the context of sincere respect for diverse beliefs and values. Graduates will have the linguistic ability to function effectively in an international environment, the technical skills to operate in an increasingly complex technological world, the intellectual capacity to adapt to constant change, the commitment to sustainable development and the leadership potential to make the greatest possible contribution to the community for the good of all its members and stakeholders.

## HCT VALUES

HCT's institutional strengths that differentiate it from other higher educational institutions in the UAE are:

- ▶ **Commitment to Educational Access** - HCT is an access institution for the UAE built upon twenty-five years of producing high quality Emirati graduates who are prepared to enter the workforce and contribute to economic development and UAE society.
- ▶ **Practical application of knowledge** - HCT is a national resource for connecting the practical application of knowledge to workforce needs and applications. This is the cornerstone of HCT learning model and its educational philosophy.
- ▶ **The quality of our faculty and learning environment** - HCT produces graduates with superior technical skills, English language competency, and work readiness skills that have proved to be productive and contributing members to the economy and society. The quality and high employment rate of its graduates is reflective of the quality of the faculty and the learning environment.
- ▶ **Institutional and Programme Accreditation** - HCT programmes are internationally accredited by professional accrediting agencies.
- ▶ **Linkages with Business and the Community** - HCT programmes are continually aligned with the changing and emerging needs of business and industry; and are supported by state-of-the-art technologies. HCT campuses are also cultural and community centres that contribute to local culture, history and Emirati heritage.
- ▶ **Graduate Employment** - HCT's most consistent effectiveness measure is the high employment rate of its graduates who are in strong demand by employers across the UAE.

# Governance and Organisation

## GOVERNANCE

The Higher Colleges of Technology constitute a federal independent academic corporate body for higher education established under Federal Law No. 2 of 1988 and later re-organised under Federal Law no. 17 of 1998. HCT confers degrees at the Graduate, Bachelor of Applied Science and Diploma levels.

The HCT operates as a system of 17 separate campuses for male and female students in urban and rural locations in five emirates. The headquarters are located in the city of Abu Dhabi.

The HCT is governed by a Governing Council which includes the Chancellor, HE Mohammad Omran Al Shamsi, the Vice Chancellor Dr Tayeb Kamali and other qualified and experienced members from various sectors in the UAE appointed by the Cabinet on the recommendation of the Chancellor. The Chancellor is the legal representative of the System. The Vice Chancellor is responsible for the management of the HCT and the implementation of its regulations and resolutions.

## ORGANISATION

The Higher Colleges of Technology organisation comprises a central administration and seventeen campuses. The central administration, under the offices of the Deputy Vice Chancellors, includes Administrative and Academic Affairs directorates.

Central Administration performs the various functions and services that provide a centralised resource to enable the campuses to achieve their educational objectives.

### Central Administration Academic Central Services:

The Academic Central Services Directorate (ACS) provides academic leadership, academic policy and planning guidance, coordination and evaluation of instructional programmes and processes, academic standards and assessment, and learning resources in support of the implementation of academic programmes.

### Academic Faculties

There are seven academic faculties, namely:

- ▶ Faculty of Arabic and Emirati Studies
- ▶ Faculty of Business
- ▶ Faculty of Computer Information Science and Applied Communications
- ▶ Faculty of Education and General Studies
- ▶ Faculty of Engineering Technology and Science
- ▶ Faculty of Foundations
- ▶ Faculty of Health Sciences

The Faculty Executive Deans provide academic leadership to ensure the quality of teaching, learning, evaluation and assessment. They manage academic resources to support all HCT campuses. Faculty Executive Deans maintain and enhance the HCT's learner-centred environment in the following areas:

### *Cost Recovery Programmes*

The Higher Colleges of Technology is dedicated to the delivery of Cost Recovery Courses and Programmes to UAE Nationals and Expatriates. Offering Diploma, Bachelor of Applied Science and Graduate level degree credentials aimed at developing the workforce in a constantly changing environment. Individuals also have the opportunity to join graduate Master's Programmes that are offered in response to the region's needs. The objective is to serve the wider community of UAE Nationals and Expatriates by providing them with high calibre continuing education and to contribute to the development of the country's workforce, ensuring individual and economic growth and sustainability.

### *Academic Learning Services*

Academic Learning Services coordinate academic resources and provide technical services to campus libraries, learning centres, student support services and central registry across the HCT system.

### *Academic Services*

Academic Services is made up of various units including Academic Advancement and Accreditation, Community Relations, Finance, Budget and Internal Audit, Human Resources, Policy, Planning and Institutional Research, Procurement and Contracts, Technology and Administration.

## HIGHER COLLEGES OF TECHNOLOGY CAMPUS CONTACTS AND FACULTY CONTACTS

HCT has campuses throughout UAE. Each campus has a College Director who is responsible for community relations and creating an effective learning environment on a local community basis. In addition each Faculty has an Executive Dean that is responsible for the academic integrity, quality and delivery of the programmes under their leadership. The contact information for each is provided below:

HCT CAMPUS	FOUNDED	DIRECTOR	TELEPHONE	FAX	PO BOX	WEB
Al Ain Men's College	1988	Hamsa Saleh	03-782 0888	03-782 0099	17155	aam.hct.ac.ae/
Al Ain Women's College	1988	Hamsa Saleh	03-782 0777	03-782 0766	17258	aaw.hct.ac.ae/
Abu Dhabi Men's College	1988	Sultan Karmostaji	02-445 1514	02-445 1571	25035	admc.hct.ac.ae/
Abu Dhabi Women's College	1995	Sultan Karmostaji	02-641 3839	02-641 3456	41012	adwc.hct.ac.ae/
Abu Dhabi Women's College - Khalifa City Campus	2009	Sultan Karmostaji	02-641 3839	02-641 3456	41012	adwc.hct.ac.ae/
Dubai Men's College	1989	Dr Saoud Al Mulla	04-326 0333	04-326 0303	15825	dbm.hct.ac.ae/
Dubai Women's College	1989	Dr Saoud Al Mulla	04-267 2929	04-267 3939	16062	dwc.hct.ac.ae/
Fujairah Men's College	1989	Dr Robert Moulton	09-222 2112	09-222 2113	4114	fjw.hct.ac.ae/
Fujairah Women's College	2004	Dr Robert Moulton	09-228 1212	09-228 1313	1626	fjw.hct.ac.ae/
Madinat Zayed Men's College	2006	Nial Farrell	02-894 3700	02-884 9081	58855	mzc.hct.ac.ae
Madinat Zayed Women's College	2006	Nial Farrell	02-884 3700	02-884 9081	58855	mzc.hct.ac.ae
Ras Al Khaimah Men's College	1999	Dr Ali Al Mansoori	07-221 2999	07-221 1611	4793	rkm.hct.ac.ae/
Ras Al Khaimah Women's College	1993	Dr Ali Al Mansoori	07-221 0550	07-221 0660	4792	rkw.hct.ac.ae/
Ruwais Men's College	2007	Nial Farrell	02-8943800	02-8778158	58855	-
Ruwais Women's College	2007	Nial Farrell	02-8943800	02-8778158	58855	-
Sharjah Men's College	1993	Dr Muhadditha Al Hashimi	06-558 5222	06-558 5252	7946	sjm.hct.ac.ae/
Sharjah Women's College	1998	Dr Muhadditha Al Hashimi	06-558 5333	06-558 5353	7947	sjw.hct.ac.ae/

### HCT ACADEMIC FACULTIES

Faculty of Arabic and Emirati Studies	Dr Muhadditha Al Hashmi
Faculty of Business	Dr Sam Shaw (acting)
Faculty of Computer Information Science and Applied Communications	Dr Hamad Odhabi
Faculty of Education and General Studies	Dr Robert Moulton
Faculty of Engineering Technology and Science	Dr Richard Gibb
Faculty of Foundations	Dr Phil Quirke and Mr Tim Smith
Faculty of Health Sciences	Dr Muhadditha Al Hashmi

# Educational and Academic Settings

## THE LEARNING MODEL

The UAE government is committed to 21st century nation-building through the provision of cutting-edge education to all Nationals who want to develop their potential.

The HCT aims to be a key educational pillar on which the modern nation is built. The HCT Learning Model is a strategic framework through which the HCT mission is attained.

The HCT Learning Model is based on the following professional values:

- ▶ Innovative practice
- ▶ Continuous improvement
- ▶ Professional integrity
- ▶ Efficiency and effectiveness
- ▶ Responsiveness to the needs of stakeholders.

It sets standards for the design of curricula, gives principles which should be followed in teaching and learning, and guidelines for assessment within the HCT.

The Learning Model defines the HCT's educational philosophy and identifies eight graduate outcomes:

### GRADUATE OUTCOME ONE: COMMUNICATION AND INFORMATION LITERACY

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Communicating information, opinions, concepts and ideas effectively in English and Arabic through the spoken and written mediums to a variety of audiences;
- ▶ Selecting, understanding, evaluating and making effective use of information from a variety of sources presented in both spoken and written form in English and Arabic; and
- ▶ Acting ethically in the use and presentation of information from a variety of sources.

### GRADUATE OUTCOME TWO: CRITICAL AND CREATIVE THINKING

According to their credential, HCT graduates

demonstrate an appropriate level of competence in:

- ▶ Evaluating and analysing knowledge and information;
- ▶ Identifying and understanding problems; and
- ▶ Demonstrating creativity and innovation in problem-solving.

### GRADUATE OUTCOME THREE: GLOBAL AWARENESS AND CITIZENSHIP

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Recognising and analysing ethical dilemmas, and practicing ethical decision-making;
- ▶ Recognising and analysing the issues affecting the UAE society, regional and global environment; and
- ▶ Recognising and analysing the interrelations between the UAE, regional and global contexts and cultures.
- ▶ The role of the leaders of the UAE in developing the social, cultural, economic and political aspects of the nation

### GRADUATE OUTCOME FOUR: TECHNOLOGICAL LITERACY

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Recognising the influence of technology upon individuals and society;
- ▶ Using technology to perform effectively in their personal and professional lives and acting ethically when using technology.

### GRADUATE OUTCOME FIVE: SELF-MANAGEMENT AND INDEPENDENT LEARNING

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Reflecting on and evaluating their own learning;
- ▶ Working independently; and
- ▶ Demonstrating a positive work attitude and

effective work habits.

#### **GRADUATE OUTCOME SIX: TEAMWORK AND LEADERSHIP**

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Understanding the functions and dynamics of groups;
- ▶ Contributing effectively to teamwork;
- ▶ Acting effectively in a leadership role; and
- ▶ Demonstrating confidence and social maturity in interpersonal relationships.

#### **GRADUATE OUTCOME SEVEN: VOCATIONAL COMPETENCIES**

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Applying profession-specific knowledge required for successful employment in their chosen field;
- ▶ Applying profession-specific skills required for successful employment in their chosen field; and
- ▶ Demonstrating the specific attributes required for successful employment in their chosen field.

#### **GRADUATE OUTCOME EIGHT: MATHEMATICAL LITERACY**

According to their credential, HCT graduates demonstrate an appropriate level of competence in:

- ▶ Applying relevant numerical analytical tools to solve problems in authentic contexts; and
- ▶ Analysing and communicating mathematical concepts with confidence in authentic contexts.

Through its learning model, academic staff are committed to providing educational experiences that will transform school leavers into HCT students who will graduate with the knowledge, skills and attributes to effectively contribute to the nation-building process and to help them develop a sense of personal and social responsibility.

The educational experiences that the HCT provides ensure that HCT students:

- ▶ Are capable of graduating from their chosen programme with academic integrity;
- ▶ Are deserving of respect and equally capable of respecting others;
- ▶ Can be active contributors to nation-building;
- ▶ Are responsible and accountable for their actions;
- ▶ Act ethically;
- ▶ Learn more effectively in applied learning environments;
- ▶ Are able to communicate effectively using English and Arabic;
- ▶ Are technologically literate;
- ▶ Are mathematically literate;
- ▶ Are able to work independently and collaboratively; and
- ▶ Are able to think critically and creatively.

#### **COURSE CREDIT DEFINITION**

HCT course credit units are granted in recognition that a course of studies has been successfully completed per the requirements of the relevant course outline. The number of credit units assigned to each course is based on the amount of time that students are expected to spend under supervised delivery as well as independent study of the content in order to achieve learning outcomes. For example: a standard Bachelor-level course is assigned 3 credit units, but this may vary based on the specific learning outcomes of the course, and the associated requirements from the students, or other factors. The set number of credits for each course is specified in the course outline. Most courses are one semester long, which if completed with a passing grade, carry the number of course credit units as specified. Some courses are two semesters long, and credit units are awarded only upon the satisfactory completion of both semesters. Credit may not be given for completing the first semester only of a year-long course.

# HCT Services and Resources for Students

## STUDENT SUPPORT SERVICES

Student Support Services at the HCT campuses involve both the Academic Registry Services and the Student Services departments, working closely with Central Student Support Services to ensure both the academic integrity of an HCT credential and student access to a supportive campus environment in order to promote all students' personal well-being and academic success, as well as to prepare them to contribute to the on-going development of the UAE.

College Academic Registry Services provide all record-related services from admission, registration, official transcripts, course and examination schedules, student timetables and verification of graduation eligibility up to final credential award.

College Student Services are responsible for supporting the different aspects of student life, starting with new student recruitment and orientation. The staff assist with financial aid services, student behaviour, discipline and attendance issues, safety and security, counselling services, wellness and any special needs accommodations. They give guidance to students organising student councils, peer tutoring, extra and co-curricular athletic and recreational activities as well as clubs and other special events. They also provide career services and, organise alumni activities.

## ALUMNI ASSOCIATION

There is an HCT Alumni Association which graduates are welcome to join. This association:

- ▶ Helps graduates stay connected to each other
- ▶ Keeps graduates informed about the HCT including international and national conferences and events
- ▶ Provides opportunities for lifelong learning
- ▶ Allows graduates to sign up for voluntary support
- ▶ Provides career advice and opportunities with a directory of employers

## CAREER SERVICES

The HCT Career Services are staffed by specialists in career management and counselling, which place strong emphasis on career development in a constantly

changing global workforce.

The activities of the HCT Career Centres include:

- ▶ Assisting students to make informed career decisions, and provide career assessment opportunities
- ▶ Providing one-to-one counselling to help students match their interests with suitable careers
- ▶ Building relationships between the HCT, employers and business communities
- ▶ Organising career fairs and other career-centred events, including summer orientation sessions for high-school students
- ▶ Posting employment listings received from employers in both the private and public sectors
- ▶ Assisting students in the search for employment and liaising between employers, graduates and students
- ▶ Providing student-focused workshops on topics such as career planning, developing a positive professional attitude, CV and resume writing as well as job interview techniques

## COUNSELLING SERVICE

The HCT provides personal and academic counselling to help students with their classroom performance or social adjustment at the college.

College Counsellors are available to meet students who are having academic or personal problems that interfere with their classroom performance or social adjustment. Counsellors can help students find solutions to their problems and facilitate academic and personal growth.

Students are assigned an Academic Adviser at the start of each academic year. The adviser is usually a class teacher who will give academic advice and monitor progress.

## EXTRA-CURRICULAR ACTIVITIES

During the year, a wide variety of physical, social and cultural activities are available to interested students. Students are encouraged to make every effort to participate in these activities, which are designed to

supplement and complement their classroom work, enhance their experience at the Higher Colleges of Technology, and provide a healthy balance in life.

In many cases, students organise or coordinate college events such as film festivals, athletic and recreational competitions, health and wellness days, heritage and cultural displays, art shows and career fairs. These events develop individual and group initiatives, teamwork and leadership skills. They provide the students with the opportunity to apply the skills they have learned, to support charitable causes and to demonstrate academic achievements.

### SAFETY AND SECURITY

The HCT is concerned that all individuals the students meet are properly authorised to enter the campus. All HCT campuses have security gates, with security personnel stationed at each entrance. These security officers allow only those who are properly authorised to enter the campus.

Security officers have the right to prevent female students from leaving the college without permission, and to carry out random checks on student and staff vehicles.

All HCT security officers are appointed for the safety of the staff and students of the colleges, and should be treated with proper respect.

### FIRE DRILLS

In case of fire, each college has procedures to follow. Students should learn the location of emergency exits, fire alarms and fire extinguishers. In the event of a fire drill or emergency, students must follow the directions of teachers or security personnel.

### MEDICAL CASES

If a student is seriously ill and needs help, the teacher will call Student Services who will provide assistance and contact their family. An ambulance will be called if necessary.

### STUDENT COUNCILS

Each college has a Student Council to give the student body an effective means for providing input to the staff and faculty to improve overall student life. The Student Councils are composed of students from the colleges, thus providing many opportunities for student growth and leadership development such as:

- ▶ Planning and organising student activities
- ▶ Developing closer relationships between students and faculty
- ▶ Establishing a better atmosphere for learning
- ▶ Informing the college of student needs and recommendations
- ▶ Developing leadership qualities, and
- ▶ Improving student morale

The name and organisational structure of councils and their membership may vary from college to college.

Student representatives from all the colleges also meet to elect a system-wide HCT Student Council. This committee represents the wider HCT student body, inside the country as well as abroad.

### STUDENTS WITH SPECIAL NEEDS

Under the conditions outlined in HCT policy, reasonable academic accommodation is provided for students with special needs.

Students with special needs (e.g. physical, medical or learning difficulties) are eligible for appropriate support which could take the form of special equipment or materials, or additional time to complete course requirements. Students are required to provide appropriate medical documentation detailing their special need.

It is important that students contact the Student Services office at their college as early as possible in order to obtain the necessary support.

### FINANCIAL AID

The HCT recognises that some students may need assistance with meals and transportation costs. Students who require such assistance are encouraged to contact their campus Student Services Supervisor or College Counsellor for details regarding financial aid.

Student Services can also assist in various ways, such as helping to organise temporary employment or providing equipment.

In addition, the Higher Colleges of Technology forms partnerships with employers who can provide opportunities to sponsor students to follow regular programmes. Sponsored students progress towards graduation with the support of employers in return for commitments specified in the sponsorship agreement.

# Academic Learning Resources

## LIBRARIES

Libraries at the HCT are among the best equipped and most extensive in the Gulf region. In addition to the full range of library collections and services, they feature advanced information and learning technologies. Students have access to high-performance computers and extensive digital information resources.

Library users can search the HCT web-based library catalogue to find and request books and materials housed at any of the libraries within the system. A wide variety of online databases, to which the HCT libraries subscribe, provide full-text journal articles, e-books, and other electronic resources. All library resources are easy to access via <http://library.hct.ac.ae>.

Resources available in each library include:

- ▶ general and course-related books that may be borrowed by students and staff
- ▶ reference books for use in the library
- ▶ local and international newspapers in print and online
- ▶ magazines and journals on a wide variety of topics
- ▶ aggregated databases featuring full-text articles from journals and magazines
- ▶ e-books, online documents and reports
- ▶ graded readers, annual reports, pamphlets, and local newspaper clippings
- ▶ instructional resources and kits
- ▶ DVD's, videocassettes and audiocassettes
- ▶ computer software

The HCT library collections consist of over 160,000 titles, 320,000 items and many more online information resources. In addition, HCT students and staff have access to over 350,000 books through LIWA ([www.liwa.ac.ae](http://www.liwa.ac.ae)), the shared catalogue of the libraries of the HCT, United Arab Emirates University and Zayed University. Document delivery services from other UAE libraries are available through the interlibrary loan programme.

Perhaps the most valuable resources are the librarians and staff who assist students and faculty in each of the libraries. Library staff help find the answers, from quick

facts to extensive research questions. Each library offers individual and group instruction, with sessions ranging from general information literacy skills to specific research techniques and resources in each area of study.

## LEARNING RESOURCE CENTRES

The Learning Resource Centres provide students with computers and a variety of interactive software and print-based learning materials. Students can use the Learning Resource Centres to develop their learning and study skills, improve their English language skills, review course materials, complete project assignments, or work with an instructor on a specific assignment.

## TEXTBOOKS AND MATERIALS

Textbooks and other instructional items are provided by the colleges either free of charge or for a fee as determined by the Chancellor. Students are expected to equip themselves with routine personal items required for classroom use.

Instructional items provided by the college include:

- ▶ essential textbooks (students are required to pay for loss replacement)
- ▶ materials, equipment and tools required for laboratory and other practical instruction special clothing (e.g. uniforms, hard hats, instruction, protective boots, etc.) which become the property of the students to whom they are issued.

## INTERNET ACCESS

The HCT internet access and electronic mail services are provided under the authority of the Chancellor and the Vice Chancellor of the HCT in accordance with federal laws and regulations governing the use of this service. Users of the internet are governed by the HCT Internet Access and Electronic Mail Policy. Provision of access to internet resources and services is intended to support the recognised need for HCT graduates to possess the computer and information-seeking skills that are essential for the workplace and for lifelong education.

### **COPYRIGHT POLICY AND GUIDELINES**

The main objectives of the HCT Copyright Policy and Guidelines are:

- ▶ to ensure compliance with the provisions of UAE Federal Law No. 7, 2002;
- ▶ to establish and protect HCT ownership of all HCT produced materials;
- ▶ to provide guidelines in determining the application principles for interpretation of the law.

The HCT acknowledges that the Ministry of Information and Culture is regarded as the definitive source of information on matters of intellectual property rights.

## Academic Framework

The Higher Colleges of Technology offers instructional programmes leading to Bachelor of Applied Science Degrees in the Applied Communications, Business, Computer Information Science, Education, Engineering Technology and Science and Health Sciences.

### GRADUATION REQUIREMENTS

This framework provides a pattern that accommodates academic programme requirements, a reasonable, substantive general education pattern, sensitivity to the learning needs of our student body and feasibility.

#### BACHELOR OF APPLIED SCIENCE DEGREE

To earn a Bachelor of Applied Science at Higher Colleges of Technology, a student must:

1. Have a minimum cumulative GPA of 2.0 in all baccalaureate coursework.
2. Complete at least 120 credit units including:
  - a. 13 general education courses in specified areas.
  - b. A minimum of 60 units in a major or programme.
3. Complete all required courses for a major or programme.

#### DIPLOMA

To earn an Diploma at Higher Colleges of Technology, a student must:

1. Have a minimum cumulative GPA of 2.0 in all baccalaureate coursework.
2. Complete at least 60 credit units including:
  - a. Required general education courses.
  - b. Required core and elective units in a major or programme.
3. Complete all required courses for a major or programme.

### PRINCIPLE QUALIFICATIONS TITLES OF QFEMIRATES

QFEmirates is the UAE's National Qualifications Framework and is termed as the "Qualifications Framework for the Emirates" to distinguish it from other countries.

Handbook available at: <http://www.aurak.ac.ae/media/document/QF-Handbook.pdf>

Level	Generic Nomenclature	Principal Qualification titles used in the QFEmirates (each with its own profile)		
		Vocational Education and Training (VET)	Higher Education (HE)	General Education (G 12 – GE)
10	Doctoral Degree	—	Doctoral	—
9	Master Degree	Applied Master	Master	—
8	Graduate Diploma	Applied Graduate Diploma	Postgraduate Diploma	—
7	Bachelor Degree	Applied Bachelor	Bachelor	—
6	Diploma	Advanced Diploma	Higher Diploma	—
5	Diploma / Associate Degree	Diploma	Associate Degree	—
4	Certificate	Certificate 4	—	Secondary School Certificate (G 12)
3	Certificate	Certificate 3	—	TBA
2	Certificate	Certificate 2	—	—
1	Certificate	Certificate 1	—	—

Source: QF handbook page 40

## GENERAL STUDIES PROGRAMME

Our students will live in a global society where change is fast paced and inevitable. At the Higher Colleges of Technology we recognise that our graduates must be ready to not only take their place in a competitive career marketplace, but also to adapt to and even initiate change. We can prepare students for a dynamic future by providing world-class degree programmes including a General Studies programme

that will introduce them to ideas which will prepare them for a lifetime of continuing education. The career and technical programmes prepare our students for jobs in the markets we serve, while General Education is a course of study in Arts and Humanities, Communication, Global Studies, Mathematics, Social Sciences and Science which gives students a broad base of knowledge they will draw upon all their lives. This knowledge and these career skills are critical in today's world and are much in demand by employers.

### GENERAL STUDIES PATTERN FOR THE BACHELOR OF APPLIED SCIENCE DEGREE

39 CREDIT UNITS ARE REQUIRED TO COMPLETE BAS GENERAL EDUCATION REQUIREMENTS. THEY MAY INCLUDE ONE ELECTIVE GENERAL EDUCATION COURSE FROM ANY CATEGORY AND UP TO THREE 3 CREDIT COURSES WITHIN MAJOR CONTENT AREAS THAT ARE AT, OR ABOVE A DESIGNATED LEVEL, TO BE COUNTED AS MEETING MAJOR AND GENERAL EDUCATION REQUIREMENTS.

ART AND HUMANITIES

COMMUNICATION

EMIRATI STUDIES

MATHEMATICS

PHYSICAL AND BIOLOGICAL SCIENCES

SOCIAL AND BEHAVIOURAL STUDIES

## Institutional Accreditation

Higher Colleges of Technology with campuses in all of the Emirates, is in the process of undergoing re-licensure and institutional accreditation with the Commission for Academic Accreditation, Ministry of Higher Education and Scientific Research of the United Arab Emirates to continue awarding degrees/ qualifications in post- secondary education.

## Programme Accreditation

To ensure programmes at the Higher Colleges of Technology are benchmarked to international standards, the HCT has developed strategic relationships with a range of external accreditation bodies, both in the UAE and abroad. Programme quality and consistency is also achieved through accreditation with recognised international bodies

PROGRAMME OF STUDY	ACCREDITATION/BENCHMARKING
<u>Business</u>	Selected Business programmes are accredited by the Association of Collegiate Business Schools and Programmes, (ACBSP), USA.
<u>Computer Information Science</u>	<ul style="list-style-type: none"> <li>▶ CIS Bachelor's programmes are accredited with the Canadian Information Processing Society (CIPS).</li> <li>▶ CIS Bachelor's programmes are planned for submission to the Accreditation Board for Engineering and Technology (Computing Accreditation Commission) - USA.</li> </ul>
<u>Education</u>	<ul style="list-style-type: none"> <li>▶ The Bachelor of Education degree in English Language Teaching in Schools (ELTS) is benchmarked with the University of Melbourne, Australia.</li> <li>▶ The Education Faculty has been accepted as a candidate for accreditation for the Bachelor of Education degree in English Language Teaching in Schools (ELTS) through the Teacher Education Accreditation Council (TEAC), USA.</li> </ul>
<u>Engineering Technology and Science</u>	<ul style="list-style-type: none"> <li>▶ Chemical Engineering Technology programmes are accredited by the Chemical Engineering Institute of Chemical Engineers (ICHEME), UK.</li> <li>▶ The Aviation programmes are licensed by the UAE General Civil Aviation Authority (GCAA, UAE).</li> <li>▶ The Engineering Technology Faculty Civil Engineering programmes have been accepted as Candidates for accreditation through the the Engineering Technology Accreditation Commission of ABET, <a href="http://www.abet.org">http://www.abet.org</a>.</li> </ul>
<u>Health Sciences</u>	<ul style="list-style-type: none"> <li>▶ The BSc in Medical Laboratory Technology programme is accredited by the Institute of Biomedical Science (IBMS), UK 2009-2013.</li> <li>▶ The Bachelor of Applied Science in Nursing is benchmarked with the University of Oklahoma, USA 2007.</li> <li>▶ The BAS in Health Information Management. Health Information Management Association of Australia (HIMAA, Australia) 2010 -2013.</li> <li>▶ The BSc Medical Imaging is accredited with Society of Radiographers (SCOR,UK) 2010-2015.</li> <li>▶ The Bachelor in Pharmacy: Benchmarked by The Canadian Council for Accreditation of Pharmacy Programmes (CCAPP, Canada) 2007</li> </ul>

\* Engineering Technology Accreditation Commission.

# Regulations, Academic Policies and Procedures



# Regulations, Academic Policies and Procedures

## ADMISSION TO THE HCT AND PLACEMENT INTO PROGRAMMES

Admission and placement to all HCT credential programmes is subject to the following criteria being met:

### GENERAL ADMISSION REQUIREMENTS

UAE Nationals are eligible for admission to the Higher Colleges of Technology (HCT), provided that they meet all the following four criteria:

- ▶ Possess a valid UAE National ID card (and valid UAE passport if enrolled in federally funded credential programme)
- ▶ Have reached 17 years of age before the start date in the academic year of admission
- ▶ Possess a valid medical certificate
- ▶ Have completed the Common Educational Placement Assessment (CEPA English) with a minimum of 150, and have passed the government secondary General School Certificate (GSC) of 70. or;
- ▶ Have completed the Common Educational Placement Assessment (CEPA English) with a minimum of 160, and have passed the government secondary General School Certificate (GSC) of 60.

Applicants are required to submit evidence of eligibility to NAPO before being granted admission to HCT.

### PROGRAMME PLACEMENT CRITERIA

#### Bachelor of Applied Science Programme

Applicants who meet the general admission requirements and have achieved:

- ▶ CEPA English with a minimum of 180 or
- ▶ IELTS (Academic) overall band 5.0 with no individual skill band less than 4.5 or an accepted equivalency,

may enrol into a Bachelor of Applied Science programme. Each programme may require additional programme-specific admission criteria. Successful completion of UGRU at UAE University or the Academic programme-specific admission criteria. Successful completion of UGRU at UAE University or the Academic Bridge

Programme at Zayed University may be accepted for direct entry to an HCT Bachelor Programme. These are considered as 'Non-current' applicants.

### Other Eligibility Conditions

- ▶ The successful completion of the Math 2 course, or its equivalent is an entry requirement for all Engineering Technology programmes; for all other Bachelor Program's Math 2 or equivalent must be completed with a passing grade by the end of the first year of study
- ▶ Please note that, in addition to the above requirements, each BAS programme may require additional programme-specific admission criteria before an applicant is fully eligible to enrol.

### Applied Diploma Programme

Applicants who meet the general admission requirements and have achieved:

**CEPA English: 160 or**

**Achieved a minimum of 55% in Foundations Level 2 English course**

### Foundation Studies

Eligible applicants who do not meet the requirements for HCT programmes are placed into Foundations which will assist students to meet the entry requirements for the Bachelor of Applied Science.

## APPLICATION PROCEDURES

### Current Student Status: (Priority one)

- ▶ Applicant who has fulfilled the NAPO Admission Eligibility Requirements and HCT Minimum Admission Eligibility Requirements and is included in the student census data within one year of secondary graduation date.
- ▶ Student is classified as a deferral student. See below for deferral student status.

### Non-current Student Status: (Priority two)

- ▶ Applicant who has graduated from secondary school prior to the year in which he/she is applying for admission. Applicant was not included in student census data within one year of secondary school graduation date.

### Former Student Status (Priority three)

- ▶ Applicant was a former HCT student and is reapplying to HCT under the re-enrolment status, re-admission status, or the re-instatement status. See table for re-enrolment, re-admission, or re-instatement student status.
- ▶ **Approved Applicant:** Applicant who has been approved by the Chancellor of the HCT.
- ▶ **Eligible Applicant:** Applicant who has fulfilled the HCT Minimum Admission Eligibility Requirements.
- ▶ **Minimum Academic Requirements for Programme Entry:** Minimum levels of proficiency in English and Mathematics.

### ADMISSION APPROVAL REGULATIONS

1. Approved Applicants are those who have completed the application procedure at NAPO, who meet the HCT general admission and admission priority requirements (where needed), and who have been approved by the Chancellor of the HCT.
2. Approved applicants must confirm acceptance of the offer of admission by the confirmation deadline listed in the HCT Academic Calendar.
3. Students who confirm acceptance but who are “no shows” as of the end of the add/drop period in the semester of admission forfeit the offer and must reapply as a returning student (one year absence) or, as a re-admission (more than one year absence).
4. **Inter-institutional transfers, re-admissions and non-current applicant** approvals will be finalised in order of priority after the confirmation of the approved current applicants
5. Admission must be completed before the close of add/drop period of the relevant semester. instruction.

### Enrolment after a Leave of Absence

Students who wish to enroll after an interruption or graduation are classified by their campuses under one of the following statuses. Enrolment holds are placed on all students in the categories below, with the exception of those on deferred status.

<p><b>DEFERRAL (RETURNING STUDENT, ADMISSION PRIORITY CATEGORY 1)</b></p>	<p>Applicable for</p> <ul style="list-style-type: none"> <li>▶ Students who withdraw from or fail a course, or set of courses, in a given semester and are allowed by their college to put their programme on hold while they wait to repeat the course or set of courses in a subsequent term.</li> </ul> <p>Note: The deferral can span up to two consecutive semesters, after which a re-enrolment hold is applied. Deferred students who re-enrol before the expiration of the deferral period are not required to apply for re-enrolment. The maximum deferral period is from the semester in which the failure or withdrawal occurred until the add/drop period of the second subsequent semester.</p>
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<p><b>RE-ADMISSION (FORMER STUDENT ADMISSION PRIORITY CATEGORY 3)</b></p>	<p>Applicable for</p> <ul style="list-style-type: none"> <li>▶ Students who deferred enrolment but who did not enrol before the expiration of the deferral period, or</li> <li>▶ Students withdrawn without deferral in a given semester who did not return to enrolled status in the following semester. Students who were awarded an HCT credential and seek another at a higher level to obtain a Bachelor Degree, and did not return in the following two consecutive semesters.</li> </ul>
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<p><b>RE-INSTATEMENT (RETURNING STUDENT ADMISSION PRIORITY CATEGORY 1 OR FORMER STUDENT, ADMISSION PRIORITY CATEGORY 3)</b></p>	<p>Applicable for</p> <ul style="list-style-type: none"> <li>▶ Students who previously were required by their Colleges to withdraw without deferral from their programme, for academic or other reasons, and have appealed to resume their studies.</li> </ul> <p>Note: Re-instatement is subject to approval of the Executive Dean based upon academic eligibility. A student who is dismissed from the HCT for breach of academic honesty is not eligible to apply for re-instatement.</p>
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Approvals for enrolments after an interruption are confirmed in order of priority, as defined in Enrolment Planning Policy and Procedure.

## COURSE REGISTRATION

Course registration is conducted prior to the beginning of each semester. The campus Academic and Student Services Office will announce course registration procedures prior to each semester. A student may register in a course only after successful completion of any course which is designated as a pre-requisite.

## PROGRAMME DURATION

Each programme major has a maximum time allowed for completion, referred to as the “duration of study”.

The duration of study is an additional four consecutive semesters above the full-time programme length. It is calculated from the date of first registration in the relevant programme major and includes all withdrawn periods. Students who do not complete their studies within the overall duration of the programme will be subject to academic dismissal. In extenuating circumstances, students who have exceeded the duration allowed may apply for an extension provided the application is submitted 3-6 months prior to the end of the duration of study period. Approval for extension is at the discretion of the College Director. Any extension is limited to two consecutive semesters. No further extension is permitted.

A new duration of study period commences when a student either:

- ▶ Starts a new programme major as a result of transfer from one programme major to another; or
- ▶ Is re-admitted to a new programme major.

The duration of study allowed for transfer students, and special cases is reviewed on an individual basis.

## GRADE REPORTS AND UNOFFICIAL TRANSCRIPTS

Grade reports or unofficial transcripts are available to students via student web services throughout the duration of their study at the HCT.

## OFFICIAL TRANSCRIPTS

A student may request an official transcript via student web services at any time, payment can be made at the college. Official transcripts may be forwarded on request to other educational institutions or employers.

## GRADING AND ACADEMIC STANDING

Students do not receive a final grade for a semester course until the end of the semester.

Students do not receive a final grade for a full year course until the end of the second semester.

## GRADING SYSTEM

GRADE	RANGE	GRADE POINTS	EXPLANATION OF CODES
A	90 – 100	4	Achievement that is outstanding relative to the course and GPA requirements
A-	85 – 89	3.7	
B+	80 – 84	3.3	Achievement that is significantly above the course and GPA requirements
B	75 – 79	3	
C+	70 – 74	2.3	Achievement that satisfactorily meets the course and GPA requirements
C	65 – 69	2	
D	60 – 64	1	Achievement that minimally meets the course requirements but may not meet the GPA requirement
F	0 – 59	0	Achievement that does not meet requirements for course with normal grading mode.

## GRADE POINT AVERAGE

The Grade Point Average (GPA) is computed on a scale from 0.00 to 4.00. The GPA is calculated by dividing the total number of grade points earned by the total credits attempted.

Any grade followed by an asterisk is not computed in the GPA calculation. Courses graded P/FL e.g. WORK and PROJ, are excluded from the GPA calculation.

PROGRAMME	GRADE	POINTS		CREDIT	GRADE POINTS
HPS 1706	A	4	x	6	24
LSM 1103	C+	2.3	x	3	6.9
HSC 1103	B	3	x	5	15
SCL 0111	CH		x		Not counted in GPA
HPS 1103	D	1	x	3	3
LSC 1103	F	0	x	3	0
Total				20	48.9

$$48.9 / 20 = 2.45 \text{ GPA}$$

## CUMULATIVE GRADE POINT AVERAGE

Cumulative Grade Point Average is based on all courses in the particular programme major, excluding:

- ▶ Courses graded P/FL, AU, CC, I, IP, NG, NS, U and W
- ▶ Advanced standing grades (EX, TR, EL)
- ▶ Grades with an asterisk (\*) and
- ▶ Grades in parentheses.

For repeated courses, only the highest course grade will be included in the cumulative grade point average (GPA) calculation. For one year post Higher Diploma Bachelor programmes it includes only those courses above Higher Diploma level.

A minimum cumulative grade point average of 2.0 is required for graduation from a credential.

## SEMESTER GRADE POINT AVERAGE

Semester Grade Point Average is based on all courses taken within a semester excluding:

- ▶ Courses graded P/FL, AU, CC, I, IP, NG, NS, U and W
- ▶ Advanced standing grades (EX, TR, EL); and
- ▶ Grades with an asterisk (\*).

## ADVANCED STANDING

The HCT acknowledges that students may show evidence of learning not only through completing an HCT

programme's educational provision, but also through a variety of other ways such as: studies completed elsewhere; external examinations passed; professional qualifications held; and through workplace and life experience.

HCT recognises this by granting credit for prior learning within or outside of the HCT.

A student may be awarded credit for prior learning on condition that it does not exceed the following limits:

- ▶ 50% of the total programme credit
- ▶ 25% of the final two years credit of three or four year programmes
- ▶ 25% of the final year credit of two year programmes

Students may be given credit for prior learning by means of:

### 1. Exemption (EX)

Courses successfully completed in other HCT programmes

### 2. Transfer Credit (TR)

- ▶ Courses completed at Zayed University or UAE University
- ▶ Courses completed at other UAE institutions accredited by CAA
- ▶ Courses completed at overseas institutions accepted as being of equivalent standing
- ▶ Qualifications from professional bodies

- ▶ International examinations such as IELTS, TOEFL, GCSE (UK), International Baccalaureate etc

### 3. Experiential Learning (EL)

- ▶ Work or life experience such as structured internships, volunteer work-travel, self-study, or training

#### ACADEMIC STANDING

Students shall maintain a satisfactory rate of progress in their programmes and courses. College Directors will ensure that student progress is reviewed at regular intervals and that appropriate action is taken where progress is not satisfactory. This may include counselling, probation, suspension or termination of enrolment.

#### GOOD ACADEMIC STANDING

A student is considered to be in Good Academic Standing if he/she maintains a cumulative grade point average of 2.0 or higher.

#### ACADEMIC WARNING

A student is placed on academic warning if his/her semester grade point average is below 2.0 but his/her cumulative grade point average is above 2.0. A notation 'Academic Warning' is recorded on the student's academic transcript at the end of that semester.

#### ACADEMIC PROBATION

A student is placed on academic probation if his/her

cumulative grade point average falls below 2.0. A notation 'Academic Probation' is recorded at the end of that semester on the student's academic transcript. The student then has two further semesters on academic probation to attain a 2.0 cumulative grade point average and return to good academic standing.

If a student seeks to transfer to another programme while on academic warning or probation, he/she has one semester in the new programme to attain a grade point average (i.e. the semester grade point average) of 2.0.

#### ACADEMIC DISMISSAL

Students who do not maintain a satisfactory rate of progress are required to withdraw if:

- ▶ they have not attained at least a 2.0 cumulative grade point average after two semesters on Academic Probation, or
- ▶ they have not attained at least a 2.0 CGPA at the end of one semester after transferring to a new programme; or
- ▶ they have exceeded programme duration of study.

A notation of the appropriate reason will be endorsed on the student's transcript. Students who receive a grade of D in a course may be permitted to repeat the course once.

A minimum cumulative grade point average of 2.0 is required for graduation.

<b>GOOD ACADEMIC STANDING</b>	Cumulative GPA 2.0 or higher
<b>ACADEMIC WARNING</b>	Cumulative GPA above 2.0 but semester GPA below 2.0
<b>ACADEMIC PROBATION</b>	Cumulative GPA falls below 2.0, students have two semesters to increase cumulative GPA to above 2.0
<b>ACADEMIC DISMISSAL</b>	<ul style="list-style-type: none"> <li>▶ Cumulative GPA is below 2.0 after two semesters on Academic Probation; or</li> <li>▶ Cumulative GPA is below 2.0 at the end of one semester after transferring to a new programme, or</li> <li>▶ Cumulative GPA is below 2.0 at the end of the final semester; or</li> <li>▶ Programme duration of study is exceeded</li> </ul>

## WITHDRAWAL

### WITHDRAWAL FROM THE COLLEGE

Students who wish to withdraw must apply at the Academic and Student Services offices and follow the published procedure. If they wish to return to the College, they must apply for re-enrolment which is subject to a place being available.

Prior to withdrawal, students should consult their Programme Chair and get advice about how their withdrawal may affect them.

TYPE OF COURSE	WITHDRAWAL PERIOD	FINAL DATE TO* WITHDRAW	TRANSCRIPT RECORD
One full semester course (except summer semester courses)	Within three weeks of beginning of the semester.	Semester One course: - before 26 Sep 2013 Semester Two course: - before 6 Mar 2014	No course record on transcript.
	After the first two weeks and up to the end of six weeks from beginning of the semester.	Semester One course: - before 20 Oct 2013 Semester Two course: - before 27 Mar 2014	W grade in that course shown on transcript.
	After six weeks from beginning of the semester.	Semester One course: - after 20 Oct 2013 Semester Two course: - after 27 Mar 2014	F grade in that course shown on transcript.
Summer Semester Course	Before completion of:	- 38% of the class	W grade in that course shown on transcript.
	After completion of:	- 38% of the class	F grade for that course shown on transcript.
Less than full semester course	Time period for withdrawal without penalty will be prorated.		

\* Any changes to these dates will be announced on the HCT portal

## PROGRESSION WITHIN PROGRAMME MAJOR

Students who receive a grade of 'D' or 'F' in a course may be permitted to repeat the course once only.

A student may register in a course only after successful completion of any course which is designated as a pre-requisite for that course.

## GRADUATION

To graduate from a programme, a student must meet all requirements for graduation.

## GRADUATION REQUIREMENTS

### COMPLIANCE

To qualify for a Higher Colleges of Technology credential, a student must successfully complete the minimum number of credits and courses, campus-based assessments, system-wide assessments, English language external benchmark standards, work experience and other academic requirements specific to the student's programme major.

Students must achieve the required number of programme credits with a minimum cumulative GPA of 2.0 in order to qualify for graduation.

### DOCUMENTATION

Students who have met the graduation requirements must produce the requisite documentation, including an updated passport copy if their passport has expired since admission. Letters of Completion are issued only after all requisite documentation has been submitted.

The graduation eligibility period closes on 31 August each academic year.

### GRADUATION CEREMONY

Students who have successfully completed all programme requirements in their programme of study are eligible to receive the appropriate degree credential at a Graduation Ceremony. Students will graduate from the college where they completed the programme requirements.

Students who have met the programme requirements and been awarded will be issued with a Letter of Completion in the interim, pending the release of the credential at the Graduation Ceremony. The graduation date noted on the student transcript indicates the date when all graduation requirements are verified as having been met.

## STUDENT RECORDS

HCT maintains and archives students' personal and academic records. The integrity, confidentiality and security of these records are assured throughout. Students have the right to inspect and be provided with copies of their academic and personal information, and to seek rectification of these records where they believe them to be inaccurate. Student records will not be released by HCT to any third party without the written consent of the student.

Students should be aware of their obligation to provide up-to-date personal information on admission, at the start of each semester, and two weeks before the end of the final semester. This includes details of their sponsor, and consent to release their personal and academic information to their sponsor.

## STUDENT CONDUCT AND DISCIPLINE PROCEDURES

Students of the Higher Colleges of Technology are responsible for meeting the highest standards in their academic, assessment and personal responsibilities. All potential, enrolled and former students have rights which are set out in the HCT policy on Student Rights and Responsibilities, which is available through the HCT portal.

### STANDARDS OF STUDENT CONDUCT

Students are responsible for adhering to the following Standards of Student Conduct:

- ▶ attend all classes regularly and punctually and participate fully in all learning and assessment activities;
- ▶ direct their efforts at learning the content and completing the assignments and assessment activities of all courses in which they are enrolled;
- ▶ complete all assignments and assessment tasks on time;
- ▶ participate fully in educational activities outside the classroom, such as field trips, that form part of a course in which the student is enrolled;
- ▶ be prepared for classes;
- ▶ meet the requirements for course completion and programme completion;
- ▶ promote appropriate behaviour by example at all times;
- ▶ observe the regulations of the HCT colleges and the directives of the staff;

- ▶ conduct themselves in a courteous and considerate manner in their dealings with the staff, visitors and other students;
- ▶ behave in an orderly and disciplined manner in any assessment situation;
- ▶ refrain from all forms of academic dishonesty;
- ▶ respect and maintain all HCT property;
- ▶ contribute to the best of their abilities to creating an environment that is conducive to the educational objectives of the HCT;
- ▶ uphold the good name of the Higher Colleges of Technology as an organisation and as a community, and the reputation of all its staff and students, in any communications within or outside the HCT.

### NON-ACADEMIC MISCONDUCT

There are also rules concerning non-academic misconduct. Misconduct includes but is not limited to the following:

- ▶ conduct which causes injury to a person and/or damage to HCT property, including bullying and sexual harassment;
- ▶ the unauthorised removal or possession of HCT property;
- ▶ conduct which disrupts the educational and related activities of other students or staff, including behaviour which brings into disrepute the reputation, academic standing of the HCT or the political, religious or cultural values of the UAE;
- ▶ knowingly providing false or misleading information to the HCT.

Students may be subject to disciplinary measures in relation to non-academic misconduct.

These rules are applicable to students whilst on, approaching, or leaving the HCT campuses, HCT sponsored or HCT supervised events.

A student accused of misconduct is entitled to a hearing in accordance with HCT guidelines and procedures.

### DISCIPLINARY MEASURES

If students do not meet the standards of both personal and academic conduct, including during assessments, disciplinary measures may be taken. These may include:

- ▶ verbal warning;

- ▶ written warning;
- ▶ return of property or monetary reimbursement for damage to or misappropriation of property;
- ▶ disciplinary probation, which may include suspension or termination of specified privileges for a defined period, and the requirement to attend counselling sessions;
- ▶ suspension from classes for one semester or part thereof on one or more courses;
- ▶ suspension for more than one semester or dismissal from a programme;
- ▶ cancellation of the results of an examination, in this case the student shall be deemed to have failed the course;
- ▶ termination from the Higher Colleges of Technology;
- ▶ cancellation of the credential awarded.

A student shall receive only two notices or warnings before a stronger penalty is imposed for failing to meet any academic, student, or personal responsibilities.

Please refer to the specific disciplinary measures that apply to breaches of the Attendance and Academic Honesty policies.

### PROCEDURES FOR DISCIPLINARY MEASURES BEYOND WARNINGS

Each College Director shall designate a member of staff as procedural adviser to students who are subject to disciplinary proceedings other than verbal or written warnings. Such students shall be instructed to meet with the student procedural adviser.

Disciplinary measures shall not be imposed without the student having an opportunity to present his or her case and to answer questions about the incident. A student who fails to appear for a hearing on a set date shall forfeit the right to a hearing.

A full report of the circumstances and of the investigation in the case of any disciplinary measures shall be kept in the student's file. The matter shall also be reported to the student's family or sponsor, as appropriate.

### ATTENDANCE POLICY

Students are expected to attend all classes and participate in all learning activities in the courses for which they are registered.

## DISCIPLINARY MEASURES IMPOSED FOR BREACHES OF THE ATTENDANCE POLICY

Warnings will be given to students who are absent from classes. When absences in a course reach an unacceptable level, a failing grade will be recorded for the course and the student will not be allowed to continue in the course.

- ▶ When a student returns after any absence, the course instructor will remind the student of the Attendance Policy and the serious consequences of poor attendance.
- ▶ When a student is absent for more than 5% of the time allotted to a course in which classroom attendance is required (e.g. more than four periods in an 80-period course), the campus will issue a written warning to the student regarding the poor attendance. The student will be encouraged to seek counselling from a campus adviser.
- ▶ When a student is absent after receiving the first warning, and absences are more than 10% of the time allotted to a course in which classroom attendance is required (e.g. more than eight periods in an 80-period course), the campus will issue a final written warning indicating that further absences will result in the immediate recording of a failing grade for the course. A copy of the letter is then placed in the student's file.
- ▶ A student who is absent after receiving a final warning will be given an opportunity to explain the absences and to present relevant documentation. Unless, in the opinion of the College Director, there are extenuating circumstances, a failing grade will be recorded for the course and the student will not be allowed to continue in the course. The student will be informed of these actions in writing.

For courses that are scheduled in such a way that one absence results in a student exceeding 10% of the time allotted to a course, he/she will receive a verbal or written warning after the first absence and a final written warning after the second absence.

## ACADEMIC HONESTY

The HCT is committed to creating a learning environment that is honest and ethical. Breaches of academic honesty will be treated with the utmost seriousness. Academic honesty for the purpose of this policy is focused on cheating and plagiarism.

## DEFINITIONS

Cheating is a deliberate attempt to gain marks or academic credit dishonestly, or helping someone else to gain marks or academic credit dishonestly.

Examples of cheating may include, but are not limited to, the following:

- ▶ sharing or showing answers during a test or other form of assessment;
- ▶ copying anything done by another student and submitting it as your own;
- ▶ giving another student access to your electronic files, and allowing him or her to use your work as his or her own;
- ▶ telling another student what is on a test he or she will take later;
- ▶ bringing to an assessment, information or materials that are not allowed, even if they are not used;
- ▶ reading a test, examination or assessment before you should have access to it;
- ▶ allowing another person to take a test, examination or assessment for you;
- ▶ taking a test, examination or assessment for someone else; and
- ▶ using a computer improperly during an assessment, such as by gaining access to unauthorised material; communicating with others during assessments; or using files of other users.

Plagiarism is deliberately presenting another person's work as one's own without acknowledging the original source.

Examples of plagiarism may include, but are not limited to, the following:

- ▶ using someone else's work, or changing some words and keeping the same structure and the same meaning without noting the source(s), and submitting it as your own work;
- ▶ taking text from many other sources and putting the pieces together as one document and submitting it as your own work, without noting the source(s); and
- ▶ downloading information, pictures or charts from the Internet and inserting that material into your own document and submitting it as your own work without noting the source(s).

## ACADEMIC HONESTY RESPONSIBILITIES

Students are expected to refrain from all forms of academic dishonesty as defined in this policy and as explained and defined by HCT policies and procedures and directions from teachers or other campus personnel.

Campus personnel, teachers, Academic Chairs, Deans and Directors are responsible for ensuring that students understand their responsibilities associated with academic honesty and the disciplinary measures, which will be imposed for failing to meet these responsibilities. They are also responsible for carrying out the appropriate investigative and disciplinary procedures.

## DISCIPLINARY MEASURES FOR BREACH OF ACADEMIC HONESTY

Cheating and plagiarism: Immediate permanent dismissal from the Higher Colleges of Technology with a permanent record on the student's academic transcript. A student dismissed for breach of academic honesty is not eligible to apply for re-instatement.

## STUDENT APPEALS

### APPEALS TO THE EXECUTIVE DEAN

If a student is subject to disciplinary measures (except in cases of termination and cancellation of the degree or diploma), they may appeal the decision in writing, to their Faculty Executive Dean, within 10 working days of notification of the decision. If the Executive Dean determines that the case requires further review, he/she may appoint a committee not previously involved in the matter, to conduct a review and present their report and recommendations. Following consideration of the committee's report, the Executive Dean will present the recommendation(s) to the Deputy Vice Chancellor - Academic Affairs, who will render a decision within 5 working days.

## CASES OF DISMISSAL FROM THE HCT AND CANCELLATION OF THE DEGREE

### APPEALS TO THE VICE CHANCELLOR

Appeals may be made to the Vice Chancellor in cases of termination from the HCT and cancellation of the degree or diploma only after an appeal decision has been made by the Deputy Chancellor - Academic Affairs. If the student believes there has been a breach of correct procedure, he/she may appeal in writing to the Vice Chancellor with a rationale for the appeal, within two weeks of the date of the letter from the

Deputy Vice Chancellor - Academic Affairs. The decision of the Vice Chancellor will be final.

## STUDENT GRIEVANCES

HCT strives to ensure students are satisfied with their educational experience. Students have the right to make a complaint and are encouraged to do so.

LP235 Student Complaints Policy is implemented across all campuses. Students can access and view this policy on-line in the HCT Portal, <http://portal.hct.ac.ae/sites/ppnp/cass/Pages/LP235.aspx>

## TRANSFERS

### TRANSFERS BETWEEN PROGRAMME MAJORS

On the recommendation of the respective supervisors, students may transfer to another programme major within the same credential level with appropriate transfer of credits.

### TRANSFERS TO THE HCT FROM OTHER HIGHER EDUCATION INSTITUTIONS

Students who have successfully completed UGRU at UAE University, or the Academic Bridge Programme at Zayed University, qualify for direct entry to an HCT Bachelor programme subject to space availability.

Students who have completed courses at another higher education institution and wish to transfer to the HCT must apply to the campus they wish to attend through the non-current applicant system. Their transfer request will be considered on an individual basis, provided they are in good academic standing in their current higher education institution.

Since there are significant programme content differences between higher education institutions, students should be aware that such transfers are difficult and may result in them having to repeat some of the studies already completed. The final decision on the transfer application and the programme placement will be made jointly by the receiving HCT Campus and Academic Central Services.

## AWARDS

### GRADUATION AWARDS

Students graduate with Distinction, Distinction with Honours or Distinction with Highest Honours, provided they meet the following criteria in their programme or

major:

- ▶ Distinction: a Cumulative GPA between 3.50 and 3.74;
- ▶ Distinction with Honours: a Cumulative GPA between 3.75 and 4.00;
- ▶ Distinction with Highest Honours: highest Cumulative GPA system-wide, provided the Cumulative GPA is between 3.75 and 4.00.
- ▶ maintained at the individual campuses.

The achievement of 'Distinction', 'Distinction with Honours' and 'Distinction with Highest Honours' will be noted on the student's credential and transcript. If more than one student achieves the highest GPA in an individual programme major, then the appropriate number of awards will be made.

#### THE DEAN'S LIST

Students who achieve a Grade Point Average of 3.50 or above shall be placed on the Executive Dean's List for their Faculty.

Students in good standing on programmes who achieve a Grade Point Average of 3.50 or above in any semester while taking at least 15 credit units of classes are placed on the Executive Dean's List.

Records of the Dean's List are published and maintained on each campus.

#### ABU DHABI INDUSTRY AWARDS

The Abu Dhabi Industry Awards are awarded to top HCT graduates. Nominees for this award are in the top 10% of the graduating class in each of the following aspects:

- ▶ graduation GPA (grade point average);
- ▶ grades in graduation project and work placement;
- ▶ attendance record in the final year of their programme; and
- ▶ contributions to campus activities and community.

#### COMPANY AWARDS

Graduates may also be eligible for a variety of other awards sponsored by specific companies. For details of these, students should contact their programme Dean.

# Programmes





## Applied Communications



The Applied Communications faculty produces graduates with a strong foundation in theoretical and practical aspects of numerous media fields including television/radio broadcasting, journalism, design, multimedia, corporate communications, events management, and photography. They will be capable of applying critical and creative approaches to the application of conceptual production and technical skills, to achieve the highest professional standards in a rapidly evolving media industry. Graduates will develop the skills required to be self-learners through exposure to a range of learning opportunities. Applied Communication provides a blended learning environment which is student-centred and project-based; where practical project work is conceptualised and supported by theoretical knowledge. Learning will be accomplished through a variety of means including, but not limited to, lectures, student research, discussions, workshops, guest speakers, and industry visits. Upon graduating from the Faculty's programmes, students will have achieved transferable knowledge and skills appropriate to industry standards. They will also have communication skills which allow them to operate in a broad range of professional environments.

## Bachelor of Applied Science in Applied Communications (Applied Media)

The generic Applied Media major allows students to select available courses from the specialised Media and design majors on offer. This major provides the knowledge and skills needed to function in a general applied communications environment and allows students to explore a number of different specialisations

that enable them to get a broader understanding of how media and design areas engage in the job market. With the developments in media communication technologies and growth of social media, this major equips students with necessary vocational and critical skills needed in today's convergent media environment.

	Course Credits		Course Credits	
<b>Applied Communication Core Courses</b>		<b>Applied Communication 3000 Elective Courses</b>		
<b>Required Credits: 42</b>		<b>See Programme Chair for available courses</b>		
COM 1103	Introduction to Mass Communication	3		
COM 1104	Drawing	3		
COM 1105	Introduction to Media Technology	3		
COM 1133	Visual Communication	3		
COM 1203	Photography	3		
COM 1213	Arabic I	3		
COM 1223	History of Media and Design	3		
COM 2313	Project Management for Media	3		
COM 2323	Media Education	3		
COM 2403	Web Development	3		
COM 2413	Portfolio and Presentation Skills	3		
COM 3503	Arabic II	3		
COM 4806	Learning in the Workplace	6		
		Course Credits		
<b>Applied Communication 4000 Elective Courses</b>		<b>Applied Communication 2000 Elective Courses</b>		
<b>See Programme Chair for available courses</b>		<b>See Programme Chair for available courses</b>		
<b>Required Credits: 12</b>		<b>Required Credits: 6</b>		
CDA 4703	3D Animation	3		
CDA 4713	Film Analysis and Narrative Structure	3		
CDA 4723	Animation Scripting	3		
CDA 4803	VFX, Audio, Editing, Compositing	3		
CDG 4703	Studio II	3		
CDG 4713	Packaging Design	3		
CDG 4723	Sustainable/Social Design	3		
CDG 4803	Photography for Graphic Design	3		
CMC 4623	Communication Theory	3		
CMC 4703	Public Relations	3		
CMC 4713	Media Law and Ethics	3		
CMV 4803	Advanced Edit and Effects	3		
		Course Credits		
<b>Applied Communication Final Project Requirement</b>		<b>General Studies</b>		
<b>Required Credits: 6</b>		<b>Required Credits: 39</b>		
CDA 4806	Final Project - Animation	6	Art and Humanities	6
CDF 4806	Final Project - Fashion Design	6	Communication	12
CDG 4806	Final Project - Graphic Design	6	Emirati Studies	3
CMC 4806	Final Project - Corporate and Media Communication	6	Mathematics	3
CMV 4806	Final Project - Video Production	6	Physical and Biological Sciences	6
			Social and Behavioural Studies	9
				Course Credits
<b>Total Required Credits</b>	<b>120</b>	<b>Minimum Duration of Study</b>	<b>4</b>	
<b>Maximum Duration of Study</b>	<b>6</b>	<b>Programme Code</b>	<b>COMAB</b>	
<b>Cost Recovery Programme</b>	<b>No</b>	<b>Major Code</b>	<b>CAM</b>	

# Bachelor of Applied Science in Applied Communication (Animation)

The BAS in Applied Communications programme is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavours. Building on that base of fundamental skills students may also choose one of several possible majors to specialise in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended,

student-centred, collaborative learning environments which include project and problem-based approaches to teaching and learning. This major provides students the knowledge and skills to function effectively in industries in the field of design in general but specifically in the rapidly growing discipline of animation. Students will be able to create animation in both 2D and 3D for a variety of media and situations.

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Animation Core Courses</b>		
<b>Required Credits: 42</b>			<b>Required Credits: 33</b>		
COM 1103	Introduction to Mass Communication	3	CDA 3503	Storyboarding	3
COM 1113	Drawing	3	CDA 3513	Character Design	3
COM 1123	Introduction to Media Technology	3	CDA 3523	Principles of Animation II	3
COM 1133	Visual Communication	3	CDA 3603	3D Modelling	3
COM 1203	Photography	3	CDA 3613	Multimedia Scripting	3
COM 1213	Arabic I	3	CDA 4703	3D Animation	3
COM 1223	History of Media and Design	3	CDA 4713	Film Analysis and Narrative Structure	3
COM 2313	Project Management for Media	3	CDA 4723	Animation Scripting	3
COM 2323	Media Education	3	CDA 4803	VFX, Audio, Editing, Compositing	3
COM 2403	Web Development	3	CDA 4806	Final Project - Animation	6
COM 2413	Portfolio and Presentation Skills	3			
COM 3503	Arabic II	3			
COM 4806	Learning in the Workplace	6			
			<b>General Studies</b>		
			<b>Required Credits: 39</b>		
					<b>Course Credits</b>
<b>Applied Communication 2000 Elective Courses</b>			Art and Humanities		6
<b>See Programme Chair for available courses.</b>			Communication		12
<b>Required Credits: 6</b>			Emirati Studies		3
CDA 2303	Principles of Animation I	3	Mathematics		3
CDF 2303	Fashion Drawing	3	Physical and Biological Sciences		6
CDG 2303	Introduction to Graphic Design	3	Social and Behavioural Studies		9
CMC 2303	Corporate Communication I	3			
CMM 2303	Introduction to Media Communication	3			
CMV 2303	Introduction to Video Production	3			

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Programme Code</i>	COMAB
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	CDA

## Bachelor of Applied Science in Applied Communications (Corporate and Media Communication)

The BAS in Applied Communications programme is designed to produce graduates with a fundamental set of media and communication skills which will allow them to pursue media, design and other creative endeavours. Applied Communications students participate in blended, student-centred, collaborative learning environments which include project and problem-based approaches to teaching and learning. This major provides students the knowledge and skills to function effectively in industries in the field of industry journalism in general. More specifically

students can meet the challenges of the nationally developing discipline of corporate communication and the rapidly changing discipline of media communication. Students will have specific knowledge and skills in business, communication, and media in English and, degree, Arabic, which will allow them to fill a variety of roles in a variety of business and non-profit organisations involving internal and external communications. Students will be able to report on local, national and international issues in a variety of media formats.

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Corporate and Media Communication Core Courses</b>		
<b>Required Credits: 42</b>			<b>Required Credits: 33</b>		
COM 1103	Introduction to Mass Communication	3	BUS 3003	Managing People and Organisations	3
COM 1113	Drawing	3	CMC 3503	Social Media	3
COM 1123	Introduction to Media Technology	3	CMC 3603	Media Relations	3
COM 1133	Visual Communication	3	CMC 3613	Corporate Communication II	3
COM 1203	Photography	3	CMC 3623	Media and Society	3
COM 1213	Arabic I	3	CMC 3633	Digital Broadcasting	3
COM 1223	History of Media and Design	3	CMC 4623	Communication Theory	3
COM 2313	Project Management for Media	3	CMC 4703	Public Relations	3
COM 2323	Media Education	3	CMC 4713	Media Law and Ethics	3
COM 2403	Web Development	3	CMC 4806	Final Project - Corporate and Media Communication	6
COM 2413	Portfolio and Presentation Skills	3			
COM 3503	Arabic II	3			
COM 4806	Learning in the Workplace	6			
			<b>General Studies</b>		
<b>Applied Communication 2000 Elective Courses</b>			<b>Required Credits: 39</b>		
See Programme Chair for available courses.					
<b>Required Credits: 6</b>					
CDA 2303	Principles of Animation I	3	Art and Humanities		6
CDF 2303	Fashion Drawing	3	Communication		12
CDG 2303	Introduction to Graphic Design	3	Emirati Studies		3
CMC 2303	Corporate Communication I	3	Mathematics		3
CMM 2303	Introduction to Media Communication	3	Physical and Biological Sciences		6
CMV 2303	Introduction to Video Production	3	Social and Behavioural Studies		9

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	COMAB
Cost Recovery Programme	No	Major Code	CCM

# Bachelor of Applied Science in Applied Communications (Fashion Design and Merchandising)

The BAS in Applied Communications in Fashion Design and Merchandising is designed to produce graduates with a fundamental set of fashion design and business skills, which will allow them to pursue design and marketing endeavours within the fast growing fashion business in the UAE. The Fashion Design and Merchandising students participate in blended, student-centred, collaborative learning environments which include project and problem-based approaches

to teaching and learning. This major provides students the knowledge and skills in Textiles, Draping, Tailoring, Pattern Making and CAD Designing, using a range of Software and design techniques. Students will be able to meet the requirements of a variety of arenas within the fashion industry ranging from design, to production, to sales and merchandising. It also ensures that graduates satisfy the academic requirements stipulated for entrance into professional bodies.

Applied Communication Core Courses		Course Credits
<b>Required Credits: 42</b>		
COM 1103	Introduction to Mass Communication	3
COM 1113	Drawing	3
COM 1123	Introduction to Media Technology	3
COM 1133	Visual Communication	3
COM 1203	Photography	3
COM 1213	Arabic I	3
COM 1223	History of Media and Design	3
COM 2313	Project Management for Media	3
COM 2323	Media Education	3
COM 2403	Web Development	3
COM 2413	Portfolio and Presentation Skills	3
COM 3503	Arabic II	3
COM 4806	Learning in the Workplace	6

Applied Communication 2000 Elective Courses		Course Credits
See Programme Chair for available courses.		
<b>Required Credits: 6</b>		
CDA 2303	Principles of Animation I	3
CDF 2303	Fashion Drawing	3
CDG 2303	Introduction to Graphic Design	3
CMC 2303	Corporate Communication I	3
CMM 2303	Introduction to Media Communication	3
CMV 2303	Introduction to Video Production	3

Fashion Design and Merchandising Core Courses		Course Credits
<b>Required Credits: 33</b>		
CDF 3503	Fashion Design and Textile	3
CDF 3513	Fashion Draping and Pattern Making	3
CDF 3523	Fashion Design and Technology I	3
CDF 3603	Fashion Design and Trend Research	3
CDF 3623	Fashion Design and Technology II	3
CDF 4703	Fashion Design and Production	3
CDF 4713	Fashion and CAD Design	3
CDF 4723	Fashion Marketing	3
CDF 4803	Fashion Merchandising	3
CDF 4806	Final Project - Fashion Design	6

General Studies		Course Credits
<b>Required Credits: 39</b>		
Art and Humanities		6
Communication		12
Emirati Studies		3
Mathematics		3
Physical and Biological Sciences		6
Social and Behavioural Studies		9

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	COMAB
Cost Recovery Programme	No	Major Code	CDF

## Bachelor of Applied Science in Applied Communications (Graphic Design)

The BAS in Applied Communications programme is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavours. Building on that base of fundamental skills students may also choose one of several possible majors to specialise in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended, student-centred, collaborative learning environments which include project and problem-based approaches to teaching and

learning. This major provides students the knowledge and skills to function effectively in industries in the field of design in general but specifically the in-demand and highly varied discipline of graphic design. Students will be able to create graphic designs, for a variety of media that communicate with an audience to invoke a desired response. It also ensures that graduates satisfy the academic requirements stipulated for entrance into professional bodies, including the AIGA (formerly the American Institute of Graphic Artists).

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Graphic Design Core Courses</b>		
<b>Required Credits: 42</b>			<b>Required Credits: 33</b>		
COM 1103	Introduction to Mass Communication	3	CDG 3503	Typography I	3
COM 1113	Drawing	3	CDG 3513	Introduction to Design Illustration	3
COM 1123	Introduction to Media Technology	3	CDG 3603	Typography II	3
COM 1133	Visual Communication	3	CDG 3613	Studio I	3
COM 1203	Photography	3	CDG 3623	History of Graphic Design	3
COM 1213	Arabic I	3	CDG 4703	Studio II	3
COM 1223	History of Media and Design	3	CDG 4713	Packaging Design	3
COM 2313	Project Management for Media	3	CDG 4723	Sustainable/Social Design	3
COM 2323	Media Education	3	CDG 4803	Photography for Graphic Design	3
COM 2403	Web Development	3	CDG 4806	Final Project - Graphic Design	6
COM 2413	Portfolio and Presentation Skills	3			
COM 3503	Arabic II	3			
COM 4806	Learning in the Workplace	6			
			<b>Course Credits</b>		
<b>Applied Communication 2000 Elective Courses</b>			<b>General Studies</b>		
See Programme Chair for available courses.			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>					
CDA 2303	Principles of Animation I	3	Art and Humanities		6
CDF 2303	Fashion Drawing	3	Communication		12
CDG 2303	Introduction to Graphic Design	3	Emirati Studies		3
CMC 2303	Corporate Communication I	3	Mathematics		3
CMM 2303	Introduction to Media Communication	3	Physical and Biological Sciences		6
CMV 2303	Introduction to Video Production	3	Social and Behavioural Studies		9

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	COMAB
Cost Recovery Programme	No	Major Code	CDG

## Bachelor of Applied Science in Applied Communications (Video Production)

The BAS in Applied Communications programme is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavours. Building on that base of fundamental skills students may also choose one of several possible majors to specialise in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended,

student-centred, collaborative learning environments which include project and problem-based approaches to teaching and learning. This major provides students the knowledge and skills to function effectively in industries in the field of media in general but specifically the expanding discipline of video production. Students will be able to create original works in a variety of formats for a variety of situations.

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Video Production Core Courses</b>		
<b>Required Credits: 42</b>			<b>Required Credits: 33</b>		
COM 1103	Introduction to Mass Communication	3	CMV 3503	Editing	3
COM 1113	Drawing	3	CMV 3513	Production Skills I	3
COM 1123	Introduction to Media Technology	3	CMV 3606	Short Video	6
COM 1133	Visual Communication	3	CMV 3613	Production Skills II	3
COM 1203	Photography	3	CMV 4709	Documentary and Video Production	9
COM 1213	Arabic I	3	CMV 4803	Advanced Edit and Effects	3
COM 1223	History of Media and Design	3	CMV 4806	Final Project - Video Production	6
COM 2313	Project Management for Media	3			
COM 2323	Media Education	3			
COM 2403	Web Development	3			
COM 2413	Portfolio and Presentation Skills	3			
COM 3503	Arabic II	3			
COM 4806	Learning in the Workplace	6			
					Course Credits
<b>Applied Communication 2000 Elective Courses</b>			<b>General Studies</b>		
See Programme Chair for available courses.			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			Art and Humanities		6
CDA 2303	Principles of Animation I	3	Communication		12
CDF 2303	Fashion Drawing	3	Emirati Studies		3
CDG 2303	Introduction to Graphic Design	3	Mathematics		3
CMC 2303	Corporate Communication I	3	Physical and Biological Sciences		6
CMM 2303	Introduction to Media Communication	3	Social and Behavioural Studies		9
CMV 2303	Introduction to Video Production	3			

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	COMAB
Cost Recovery Programme	No	Major Code	CMV



## Business



The Faculty of Business has a mission of being committed to developing and delivering quality, student-centred Business education that provides students with the knowledge and skills to meet the evolving needs of stakeholders in the UAE. The Faculty of Business serves the needs of the region by offering sustainable programmes that provide both local and global perspectives, promote social responsibility and enhance critical thinking and professional practices. This mission is informed by and supports the continuing accreditation of the programme by Accreditation Council for Business Schools and Programs (ACBSP). The Faculty provides superior graduates capable of assuming challenging and key positions, integrating the business expertise and skills needed in a rapidly evolving society. These programmes enable graduates to meet professional requirements found in a bilingual multicultural business environment and develop employability and lifelong learning skills leading to a variety of management careers in local and international organisations within the UAE. Business graduates find their skills are highly sought after by many UAE organisations. Graduates can expect to work in a wide range of industries and organisations with the public and private sector including banks, accountancy firms, property companies, the aviation industry, oil and gas companies, the government, information technology firms, etc., or opt to become entrepreneurs.

## Diploma in Applied Business: Customer Service

The Diploma in Applied Business: Customer Service produces qualified customer service specialists who exhibit a wide range of fundamental technical and professional skills targeted at market requirements. Graduates will identify, analyse and solve problems, both within and across areas of the business world as

it relates to customer service. The programme includes courses in professional communications, as well as general education courses appropriate to the discipline. Graduates who meet GPA and English requirements can articulate 30 credits into selected BAS programmes.

Business Core Courses			Customer Service Core Courses		
<b>Required Credits: 25</b>			<b>Required Credits: 28</b>		
BSD 1013	Introduction to Organisational Operations	3	BSD 1113	Proper Business Practice	3
BSD 1023	Software Applications I	3	BSD 1123	Sales and Marketing Practices I	3
BSD 2013	Introduction to Human Resources	3	BSD 1133	Business Code of Conduct	3
BSD 2023	Software Applications II	3	BSD 1143	Arabic in Customer Service	3
BSD 2033	Basic Accounting	3	BSD 2103	Business and Society	3
BSD 2043	Practical Accounting	3	BSD 2113	Call Centre Fundamentals I	3
BSD 2067	Applied Diploma Work Placement	7	BSD 2123	Sales and Marketing Practices II	3
		Course Credits	BSD 2133	Applied Customer service Project I	2
			BSD 2143	Call Centre Fundamentals II	3
			BSD 2152	Applied Customer Service Project II	2
<b>General Studies</b>					
<b>Required Credits: 15</b>					
GCD 1022	English for Specific Purposes I	2			
GCD 1032	English for Specific Purposes II	2			
GCD 2022	English for Specific Purposes III	2			
Other General Studies		9			

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	BUSAP
Cost Recovery Programme	No	Major Code	BUC

## Diploma in Applied Business: Retailing

The Diploma in Applied Business: Retailing produces qualified graduates who exhibit a wide range of fundamental technical and professional skills targeted at retail market requirements. Graduates will identify, analyse and solve problems, both within and across areas of environment as it relates to the various

retail functions. The programme includes courses in professional communications, as well as general education courses appropriate to the discipline. Graduates who meet GPA and English requirements can articulate 30 credits into selected BAS programmes.

		Course Credits			Course Credits
<b>Business Core Courses</b>			<b>Retailing Core Courses</b>		
<b>Required Credits: 25</b>			<b>Required Credits: 30</b>		
BSD 1013	Introduction to Organisational Operations	3	BSD 1213	Working in the Retail Environment	3
BSD 1023	Software Applications I	3	BSD 1223	Marketing Principles	3
BSD 2013	Introduction to Human Resources	3	BSD 1233	Ethics in a Retail Environment	3
BSD 2023	Software Applications II	3	BSD 1243	Retail Operations	3
BSD 2033	Basic Accounting	3	BSD 1253	Arabic in a Retail Environment	3
BSD 2043	Practical Accounting	3	BSD 2213	Retail Customer Service	3
BSD 2067	Applied Diploma Work Placement	7	BSD 2222	Applied Retailing Project I	2
		Course Credits	BSD 2233	Retail Marketing	3
			BSD 2253	Applied Retailing Project II	2
			BSD 2262	Socially Responsible Retailing	3
<b>General Studies</b>					
<b>Required Credits: 15</b>					
GCD 1022	English for Specific Purposes I	2			
GCD 1032	English for Specific Purposes II	2			
GCD 2022	English for Specific Purposes III	2			
Other General Studies		9			

<i>Total Required Credits</i>	68	<i>Minimum Duration of Study</i>	2
<i>Maximum Duration of Study</i>	4	<i>Programme Code</i>	BUSAP
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	BUR

# Bachelor of Applied Science in Business Administration

The generic Business Administration major allows students who do not wish to pursue a specific career pathway to select available courses from the eight specialised Business majors. This major provides the knowledge and skills needed to function in a general

business administration environment and to perform general business related functions. It allows students to explore a number of different specialisations but does not provide an in-depth experience leading to a particular professional career.

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>General Business 4000 Level Requirement</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4113	Financial Accounting 1	3
BUS 1103	Economics for Managers	3	BUS 4213	Financial Quantitative Methods	3
BUS 1203	Software Applications for Business	3	BUS 4313	Employee Relations and UAE Labour Law	3
BUS 1303	Marketing	3	BUS 4413	Tourism and Events Management	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4513	Strategic Decisions with Management Science	3
BUS 1503	Accounting for Managers	3	BUS 4623	International Business Finance	3
BUS 2003	Business and Commercial Law	3	BUS 4713	Real Estate Concepts	3
BUS 2103	Operations Management	3	BUS 4813	Supply Chain Concepts and Practices	3
BUS 2203	Business Statistics for Managers	3	BUS 4913	Integrative Industry Project (Accounting)	3
BUS 2303	Financial Management	3	BUS 4923	Integrative Industry Project (Finance and Banking)	3
BUS 2403	Innovation and Entrepreneurship	3	BUS 4933	Integrative Industry Project (Human Resource Management)	3
BUS 3003	Managing People and Organisations	3	BUS 4943	Integrative Industry Project (Tourism and Events Management)	3
BUS 3103	International Business and Globalisation	3	BUS 4953	Integrative Industry Project (Quality and Strategic Management)	3
BUS 3203	Strategic Management and Business Policy Simulations	3	BUS 4963	Integrative Industry Project (International Business Management)	3
BUS 3406	Work Related Learning	6	BUS 4973	Integrative Industry Project (Property Development and Management)	3
			BUS 4983	Integrative Industry Project (Supply Chain Management)	3
			Course Credits		
<b>Business Administration 2000 Elective Courses</b>			<b>General Studies</b>		
<b>See Programme Chair for available courses</b>			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			Art and Humanities		
BUS 2903	Introduction to Logistics and Supply Chain Management	3	Communication		
BUS 2913	Sustaining Cultural Identity through Tourism and Events	3	Emirati Studies		
BUS 2923	Introduction to Sustainable Property Development and Management	3	Mathematics		
BUS 2933	Macroeconomics	3	Physical and Biological Sciences		
			Social and Behavioural Studies		
			Course Credits		
<b>Business Administration 3000 Elective Courses</b>					
<b>See Programme Chair for available courses</b>					
<b>Required Credits: 3</b>					
BUS 3903	Contemporary Issues in Business	3			
BUS 3913	Emotional Intelligence for Business Effectiveness	3			
BUS 3923	Management Information Systems Incorporating SAP	3			
<b>Total Required Credits</b>		<b>120</b>	<b>Minimum Duration of Study</b>		<b>4</b>
<b>Maximum Duration of Study</b>		<b>6</b>	<b>Programme Code</b>		<b>BADAB</b>
<b>Cost Recovery Programme</b>		<b>No</b>	<b>Major Code</b>		<b>BAD</b>









# Bachelor of Applied Science in Business Administration (Property Development and Management)

This Business Administration programme major provides students with the knowledge and skills needed to effectively manage in the Property Development and Management industry. Students will learn the concepts of urban planning and the basics of sustainable property development and project management underpinned by a solid understanding of the relevant legal environment. Students will also learn and apply

the principles of property valuation and property management in the unique UAE context. The students will complete a capstone, industry supported project to consolidate and integrate their knowledge and skills. The major is benchmarked against the Royal Institution of Chartered Surveyors (RICS) requirements as well as local UAE standards and practices.

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Property Development and Management Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4713	Real Estate Concepts	3
BUS 1103	Economics for Managers	3	BUS 4723	Property Valuation Methods 1	3
BUS 1203	Software Applications for Business	3	BUS 4733	Property Management	3
BUS 1303	Marketing	3	BUS 4743	Project Management for Real Estate	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4753	Property, Construction and Environment Law	3
BUS 1503	Accounting for Managers	3	BUS 4763	Property Valuation Methods 2	3
BUS 2003	Business and Commercial Law	3	BUS 4773	Urban Planning	3
BUS 2103	Operations Management	3	BUS 4783	Sustainable Property Development	3
BUS 2203	Business Statistics for Managers	3	BUS 4973	Integrative Industry Project (Property Development and Management)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organisations	3			
BUS 3103	International Business and Globalisation	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
		Course Credits			Course Credits
<b>Business Administration 2000 Elective Courses</b>			<b>Business Administration 3000 Elective Courses</b>		
See Programme Chair for available courses			See Programme Chair for available courses		
<b>Required Credits: 3</b>			<b>Required Credits: 3</b>		
BUS 2903	Introduction to Logistics and Supply Chain Management	3	BUS 3903	Contemporary Issues in Business	3
BUS 2913	Sustaining Cultural Identity through Tourism and Events	3			
BUS 2923	Introduction to Sustainable Property Development and Management	3			
		Course Credits			Course Credits
<b>General Studies</b>			<b>Required Credits: 39</b>		
			Art and Humanities		6
			Communication		12
			Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	BADAB
Cost Recovery Programme	No	Major Code	BPD







## Computer Information Science



The mission of the Computer Information Science Faculty is to provide future-focused, student-centred programmes that prepare students for the dynamic Information Systems and Information Technology sectors of the UAE. CIS programme graduates are “T-shaped professionals” with industry-ready technical and professional skills. CIS programmes provide local and global perspectives, develop analytical skills, encourage lifelong learning and promote effective and ethical management and leadership practices. As a result, HCT CIS graduates are in high demand from leading industry employers looking for talented people who have the technical, communication and team-working skills needed to enhance their organisations. All CIS programmes are continuously monitored and reviewed to ensure that the skills students acquire and the resources they use are at the cutting edge of technology and are industry-appropriate. Programmes are designed to maintain the current CIPS accreditation, and additionally to attain accreditation with ABET. CIS graduates have excellent career prospects across all sectors (private, public, governmental) within the continually growing industries of computing, networking, security and forensics, information management, multimedia technology, interactive learning, software development and applications development.

## Diploma in Applied Computer Information Science: Computer System Support and Administration

The Diploma in Applied Computer Information Science produces qualified IT technicians who exhibit a wide base of fundamental technical and professional skills, as well as major-specific skills targeted at market requirements. Graduates will identify, analyse and solve problems, both within and across areas of IT.

The programme includes courses in professional communications, as well as general education courses appropriate to the discipline. Graduates who meet GPA and English requirements can articulate 30 credits into selected BAS programmes.

		Course Credits			Course Credits
<b>Diploma in Applied CIS Core Courses</b>			<b>Computer System Support and Administration Core Courses</b>		
<b>Required Credits: 35</b>			<b>Required Credits: 18</b>		
CID 1003	Introduction to Internet Technologies	3	CID 1113	Productivity Tools	3
CID 1013	Computer Hardware and Software	3	CID 1123	Customer Service Skills	3
CID 1023	Basic Networking	3	CID 1203	Network Domain Administration	3
CID 1053	Web Design	3	CID 1213	Networking Concepts	3
CID 2013	Security Fundamentals	3	CID 2203	Network Services Administration	3
CID 2023	Databases	3	CID 2213	Local Area and Wireless Networking	3
CID 2053	Information Assurance	3			
CID 2063	Database Management Systems	3			Course Credits
CID 2087	Applied Diploma Work Placement	7	<b>General Studies</b>		
CID 2094	Applied Diploma Project	4	<b>Required Credits: 15</b>		
			CID 1062	Creative Thinking for IT Professionals	2
			CID 2002	Problem Solving for IT Professionals	2
			GCD 1022	English for Specific Purposes I	2
			GCD 1032	English for Specific Purposes II	2
			Other General Studies		7

<i>Total Required Credits</i>	68	<i>Minimum Duration of Study</i>	2
<i>Maximum Duration of Study</i>	4	<i>Programme Code</i>	CISAP
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	CSA

## Diploma in Applied Computer Information Science: E-Office Support and Administration

The Diploma in Applied Computer Information Science produces qualified IT technicians who exhibit a wide base of fundamental technical and professional skills, as well as major-specific skills targeted at market requirements. Graduates will identify, analyse and solve problems, both within and across areas of IT.

The programme includes courses in professional communications, as well as general education courses appropriate to the discipline. Graduates who meet GPA and English requirements can articulate 30 credits into selected BAS programmes.

		Course Credits			Course Credits
<b>Diploma in Applied CIS Core Courses</b>			<b>E-Office Support and Administration Core Courses</b>		
<b>Required Credits: 35</b>			<b>Required Credits: 18</b>		
CID 1003	Introduction to Internet Technologies	3	CID 1113	Productivity Tools	3
CID 1013	Computer Hardware and Software	3	CID 1123	Customer Service Skills	3
CID 1023	Basic Networking	3	CID 1303	Fundamentals of Digital Multimedia	3
CID 1053	Web Design	3	CID 1313	Advanced Productivity Tools	3
CID 2013	Security Fundamentals	3	CID 2303	Interactive Multimedia Tools and Applications	3
CID 2023	Databases	3	CID 2313	E-Document Management	3
CID 2053	Information Assurance	3			
CID 2063	Database Management Systems	3			Course Credits
CID 2087	Applied Diploma Work Placement	7	<b>General Studies</b>		
CID 2094	Applied Diploma Project	4	<b>Required Credits: 15</b>		
			CID 1062	Creative Thinking for IT Professionals	2
			CID 2002	Problem Solving for IT Professionals	2
			GCD 1022	English for Specific Purposes I	2
			GCD 1032	English for Specific Purposes II	2
			Other General Studies		7

<i>Total Required Credits</i>	68	<i>Minimum Duration of Study</i>	2
<i>Maximum Duration of Study</i>	4	<i>Programme Code</i>	CISAP
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	CSE

# Bachelor of Applied Science in Information Systems (Business Solutions)

This major is designed to produce graduates who can successfully align information technology and business processes and who have the skills to provide creative solutions to business challenges. Students are encouraged to explore and manage effective and efficient use of Information Systems, both for innovation

and for enabling enterprise-wide solutions. It provides a sound background in advanced problem-solving, information analysis and project management preparing students for immediate entry into the management of business information systems in organisations.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 48</b>			<b>See Programme Chair for available courses</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4003	Advanced Mobile Applications	3
CIS 1103	Hardware and Networking	3	CIM 4003	Multimedia Scripting	3
CIS 1203	Web Technologies	3	CSF 4003	Security and Risk Management	3
CIS 1303	Data and Information Management	3	CTT 4003	Distance and Online Education	3
CIS 1403	Fundamentals of Programming	3			
CIS 1503	Introduction to Multimedia	3			Course Credits
CIS 2003	Statistics and Probability	3	<b>Business Solutions Core Courses</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	<b>Required Credits: 27</b>		
CIS 2303	Systems Analysis and Design	3	CIB 2003	Technology Based Marketing	3
CIS 2403	Object Oriented Programming	3	CIB 3003	Human Resource Management and Systems	3
CIS 3103	Project Management	3	CIB 3103	Object Oriented Analysis and Design	3
CIS 4103	Emerging Technologies	3	CIB 3203	Accounting For Managers	3
CIS 4203	Information Technology Strategy and Governance	3	CIB 3303	E-Business Principles	3
CIS 4803	Work Related Learning	3	CIB 3403	Advanced Database Technologies	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CIB 4003	E-Business Applications Development	3
			CIB 4103	Business Finance	3
			CIB 4203	Customer Relationship Management Systems	3
		Course Credits			Course Credits
<b>IS and IT Technology 2000 Elective Courses</b>			<b>General Studies</b>		
<b>See Programme Chair for available courses</b>			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			Art and Humanities		6
BUS 2403	Innovation and Entrepreneurship	3	Communication		12
CDA 2303	Principles of Animation I	3	Emirati Studies		3
CDG 2303	Introduction to Graphic Design	3	Mathematics		3
CIA 2503	Web Applications Development	3	Physical and Biological Sciences		6
CIN 2003	Enterprise Network Services	3	Social and Behavioural Studies		9
CIN 2103	Networking Fundamentals	3			
CIN 2203	Routing Protocols	3			
CSF 3203	Intrusion Detection and Ethical Hacking	3			
CTT 2003	Principles of Learning for Instructional Technology	3			
<b>Total Required Credits</b>		<b>120</b>	<b>Minimum Duration of Study</b>		<b>4</b>
<b>Maximum Duration of Study</b>		<b>6</b>	<b>Programme Code</b>		<b>CIBAB</b>
<b>Cost Recovery Programme</b>		<b>No</b>	<b>Major Code</b>		<b>CIB</b>

# Bachelor of Applied Science in Information Systems (Security and Forensics)

This major focuses on providing future graduates with multiple skills and a strong foundation in the field of information security. It provides technical and managerial skills for assessing risk, securing information assets, identifying and responding to attacks, conducting forensic investigation and recovering from incidents

and disasters. The major prepares students to work as: requirement security specialists; security practitioners, managers and consultants; forensic investigators and IT auditors. Graduates will be able to work at all levels of Information Security, including policy, security system design, implementation and forensic investigation.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 45</b>			<b>Required Credits: 3</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4003	Advanced Mobile Applications	3
CIS 1103	Hardware and Networking	3	CIB 4003	E Business Applications Development	3
CIS 1203	Web Technologies	3	CIM 4003	Multimedia Scripting	3
CIS 1303	Data and Information Management	3	CTT 4003	Distance and Online Education	3
CIS 1403	Fundamentals of Programming	3			
CIS 1503	Introduction to Multimedia	3			Course Credits
CIS 2003	Statistics and Probability	3	<b>Security and Forensics Core Courses</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	<b>Required Credits: 30</b>		
CIS 2303	Systems Analysis and Design	3	CIN 2003	Enterprise Network Services	3
CIS 3103	Project Management	3	CSF 2903	Operating System Administration and Security	3
CIS 4103	Emerging Technologies	3	CSF 3003	Cyber Law and Ethics	3
CIS 4203	Information Technology Strategy and Governance	3	CSF 3103	Incidence Response and Disaster Recovery	3
CIS 4803	Work Related Learning	3	CSF 3203	Intrusion Detection and Ethical Hacking	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CSF 3403	Computer Forensics and Investigation	3
		Course Credits	CSF 3603	Cryptography and Network Security	3
<b>IS and IT Technology 2000 Elective Courses</b>			CSF 4003	Security and Risk Management	3
<b>Required Credits: 3</b>			CSF 4103	Web Application and E-Commerce Security	3
BUS 2403	Innovation and Entrepreneurship	3	CSF 4203	Telecommunications and WAN Security	3
CDA 2303	Principles of Animation I	3			Course Credits
CDG 2303	Introduction to Graphic Design	3	<b>General Studies</b>		
CIA 2503	Web Applications Development	3	<b>Required Credits: 39</b>		
CIB 2003	Technology Based Marketing	3	Art and Humanities		6
CIN 2103	Networking Fundamentals	3	Communication		12
CIN 2203	Routing Protocols	3	Emirati Studies		3
CIS 2403	Object Oriented Programming	3	Mathematics		3
CTT 2003	Principles of Learning for Instructional Technology	3	Physical and Biological Sciences		6
			Social and Behavioural Studies		9
<b>Total Required Credits</b>		<b>120</b>	<b>Minimum Duration of Study</b>		<b>4</b>
<b>Maximum Duration of Study</b>		<b>6</b>	<b>Programme Code</b>		<b>CSFAB</b>
<b>Cost Recovery Programme</b>		<b>No</b>	<b>Major Code</b>		<b>CSF</b>

# Bachelor of Applied Science in Information Technology (Applications Development)

This major is designed to produce graduates with the development skills required to create cutting-edge applications on multiple platforms. The major offers knowledge and skills in current software development methodologies using state of the art tools. It integrates

enterprise systems development, database technologies and mobile platforms. Graduates of this programme will be able to work as enterprise system developers, system architects, project managers, and mobile application developers.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 48</b>			<b>See Programme Chair for available courses</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIB 4003	E Business Applications Development	3
CIS 1103	Hardware and Networking	3	CIM 4003	Multimedia Scripting	3
CIS 1203	Web Technologies	3	CSF 4003	Security and Risk Management	3
CIS 1303	Data and Information Management	3	CTT 4003	Distance and Online Education	3
CIS 1403	Fundamentals of Programming	3			
CIS 1503	Introduction to Multimedia	3			Course Credits
CIS 2003	Statistics and Probability	3	<b>Applications Development Core Courses</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	<b>Required Credits: 27</b>		
CIS 2303	Systems Analysis and Design	3	CIA 2503	Web Applications Development	3
CIS 2403	Object Oriented Programming	3	CIA 3103	Database Design and Administration	3
CIS 3003	Human Computer Interaction	3	CIA 3303	Principles of Mobile Applications	3
CIS 3103	Project Management	3	CIA 4003	Advanced Mobile Applications	3
CIS 4103	Emerging Technologies	3	CIA 4103	Data Driven Web Technologies	3
CIS 4803	Work Related Learning	3	CIA 4203	Enterprise Database Applications	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CIA 4503	Advanced Object Oriented Programming	3
			CIB 3103	Object Oriented Analysis and Design	3
		Course Credits	CSF 2903	Operating System Administration and Security	3
<b>IS and IT Technology 2000 Elective Courses</b>			<b>General Studies</b>		
<b>See Programme Chair for available courses</b>			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
BUS 2403	Innovation and Entrepreneurship	3	Art and Humanities		6
CDA 2303	Principles of Animation I	3	Communication		12
CDG 2303	Introduction to Graphic Design	3	Emirati Studies		3
CIB 2003	Technology Based Marketing	3	Mathematics		3
CIN 2003	Enterprise Network Services	3	Physical and Biological Sciences		6
CIN 2103	Networking Fundamentals	3	Social and Behavioural Studies		9
CIN 2203	Routing Protocols	3			
CSF 3203	Intrusion Detection and Ethical Hacking	3			
CTT 2003	Principles of Learning for Instructional Technology	3			
<b>Total Required Credits</b>		<b>120</b>	<b>Minimum Duration of Study</b>		<b>4</b>
<b>Maximum Duration of Study</b>		<b>6</b>	<b>Programme Code</b>		<b>CIAAB</b>
<b>Cost Recovery Programme</b>		<b>No</b>	<b>Major Code</b>		<b>CIA</b>

# Bachelor of Applied Science in Information Technology (Instructional Technology and Training Management)

This major is designed to produce graduates with the knowledge and skills to analyse, design, develop, implement, and evaluate technology-driven learning environments for corporate and learning institution contexts. It prepares students to employ cutting-edge technologies to enhance the learning process and accommodate individual learning preferences. The major will prepare students to work effectively in

the corporate sector, build training programmes, create corporate staff development strategies, plan and acquire resources. This major provides students with the essential knowledge and skills to become effective trainers of technology and use technology to train. Graduates will be able to work as consultants, educational technology specialists, training managers, staff development managers and corporate trainers.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 3</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4003	Advanced Mobile Applications	3
CIS 1103	Hardware and Networking	3	CIB 4003	E Business Applications Development	3
CIS 1203	Web Technologies	3	CIM 4003	Multimedia Scripting	3
CIS 1303	Data and Information Management	3	CSF 4003	Security and Risk Management	3
CIS 1403	Fundamentals of Programming	3	Course Credits		
CIS 1503	Introduction to Multimedia	3	<b>Instructional Technology and Training Management Core Courses</b>		
CIS 2003	Statistics and Probability	3	<b>Required Credits: 27</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIB 4203	Customer Relationship Management Systems	3
CIS 2303	Systems Analysis and Design	3	CSF 2903	Operating System Administration and Security	3
CIS 2403	Object Oriented Programming	3	CTT 2003	Principles of Learning for Instructional Technology	3
CIS 3003	Human Computer Interaction	3	CTT 3103	Learning Environment Design, Support and Administration	3
CIS 3103	Project Management	3	CTT 3303	Assistive Technology	3
CIS 4103	Emerging Technologies	3	CTT 3403	Instructional Design for Computer Based Training	3
CIS 4803	Work Related Learning	3	CTT 4003	Distance and Online Education	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CTT 4203	Staff Development and Corporate Training Strategies	3
Course Credits			CTT 4303	Technology Based Assessment Design and Administration	3
<b>IS and IT Technology 2000 Elective Courses</b>			<b>General Studies</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
BUS 2403	Innovation and Entrepreneurship	3	Art and Humanities		6
CDA 2303	Principles of Animation I	3	Communication		12
CDG 2303	Introduction to Graphic Design	3	Emirati Studies		3
CIA 2503	Web Applications Development	3	Mathematics		3
CIB 2003	Technology Based Marketing	3	Physical and Biological Sciences		6
CIN 2003	Enterprise Network Services	3	Social and Behavioural Studies		9
CIN 2103	Networking Fundamentals	3	Course Credits		
CIN 2203	Routing Protocols	3	<b>General Studies</b>		
CSF 3203	Intrusion Detection and Ethical Hacking	3	<b>Required Credits: 39</b>		
<b>Total Required Credits</b>			<b>120</b>		
<b>Maximum Duration of Study</b>			<b>6</b>		
<b>Cost Recovery Programme</b>			<b>No</b>		
<b>Minimum Duration of Study</b>			<b>4</b>		
<b>Programme Code</b>			<b>CTTAB</b>		
<b>Major Code</b>			<b>CTT</b>		

## Bachelor of Applied Science in Information Technology (Interactive Multimedia Technologies)

This major is designed to produce graduates with professional skills built on a sound foundation in the fields of interactivity and multimedia powered by information technology. The Interactive Multimedia major educates students, through a hands-on approach, to become leaders and innovators in a new and interactive society based on interactive arts, multimedia, web and interface design, game design and

development. It stresses creative content development and communication through interaction, with the goal of seeking innovative ways of connecting individuals to ideas and information. The major prepares students to work as 2D and 3D graphic artists, animation experts, interactive multimedia developers, game designers and developers, and simulation specialists.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 45</b>			<b>Required Credits: 3</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4003	Advanced Mobile Applications	3
CIS 1103	Hardware and Networking	3	CIB 4003	E Business Applications Development	3
CIS 1203	Web Technologies	3	CSF 4003	Security and Risk Management	3
CIS 1303	Data and Information Management	3	CTT 4003	Distance and Online Education	3
CIS 1403	Fundamentals of Programming	3			
CIS 1503	Introduction to Multimedia	3			Course Credits
CIS 2003	Statistics and Probability	3	<b>Interactive Multimedia Technologies Core Courses</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	<b>Required Credits: 30</b>		
CIS 2303	Systems Analysis and Design	3	CDA 2303	Principles of Animation I	3
CIS 2403	Object Oriented Programming	3	CIM 2003	Graphic Design for Multimedia	3
CIS 3003	Human Computer Interaction	3	CIM 3103	Storyboarding and Animatics	3
CIS 3103	Project Management	3	CIM 3203	Programming for Multimedia	3
CIS 4103	Emerging Technologies	3	CIM 3303	2D and 3D Animation	3
CIS 4803	Work Related Learning	3	CIM 4003	Multimedia Scripting	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CIM 4103	Web Authoring and Administration	3
		Course Credits	CIM 4203	Virtual Reality and Simulation	3
			CIM 4303	VFX, Audio, Editing and Composition	3
			CSF 2903	Operating System Administration and Security	3
<b>IS and IT Technology 2000 Elective Courses</b>			<b>General Studies</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
BUS 2403	Innovation and Entrepreneurship	3	Art and Humanities		6
CIA 2503	Web Applications Development	3	Communication		12
CIB 2003	Technology Based Marketing	3	Emirati Studies		3
CIN 2003	Enterprise Network Services	3	Mathematics		3
CIN 2103	Networking Fundamentals	3	Physical and Biological Sciences		6
CIN 2203	Routing Protocols	3	Social and Behavioural Studies		9
CIS 2403	Object Oriented Programming	3			
CSF 3203	Intrusion Detection and Ethical Hacking	3			
CTT 2003	Principles of Learning for Instructional Technology	3			
<b>Total Required Credits</b>		<b>120</b>	<b>Minimum Duration of Study</b>		<b>4</b>
<b>Maximum Duration of Study</b>		<b>6</b>	<b>Programme Code</b>		<b>CIMAB</b>
<b>Cost Recovery Programme</b>		<b>No</b>	<b>Major Code</b>		<b>CIM</b>

## Bachelor of Applied Science in Information Technology (Networking)

This major is designed to produce graduates who can design, configure, implement and troubleshoot converged Campus and Enterprise networks. The major provides knowledge and skills to work in all levels of Local and Enterprise networks: edge technologies such as switched, wireless and mobile networks; LAN,

WAN and core routing technologies; network security; and server administration. Graduates of this major will be able to work as network engineers, network architects, infrastructure designers, project managers, and consultants.

		Course Credits			Course Credits
<b>Information Systems and Technologies Core Courses</b>			<b>IS and IT Technology 4000 Elective Courses</b>		
<b>Required Credits: 45</b>			<b>See Programme Chair for available courses</b>		
CIS 1003	Information Systems in Organisations and Society	3	CIA 4003	Advanced Mobile Applications	3
CIS 1103	Hardware and Networking	3	CIB 4003	E Business Applications Development	3
CIS 1203	Web Technologies	3	CSF 4003	Security and Risk Management	3
CIS 1303	Data and Information Management	3	CTT 4003	Distance and Online Education	3
CIS 1403	Fundamentals of Programming	3			
CIS 1503	Introduction to Multimedia	3			Course Credits
CIS 2003	Statistics and Probability	3	<b>Networking Core Courses</b>		
CIS 2103	Principles of Information Assurance, Security and Privacy	3	<b>Required Credits: 36</b>		
CIS 2303	Systems Analysis and Design	3	CIN 2003	Enterprise Network Services	3
CIS 3003	Human Computer Interaction	3	CIN 2103	Networking Fundamentals	3
CIS 3103	Project Management	3	CIN 2203	Routing Protocols	3
CIS 4103	Emerging Technologies	3	CIN 3003	LAN Switching	3
CIS 4803	Work Related Learning	3	CIN 3103	Wireless Networks	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CIN 3203	WAN Technologies	3
CIS 4906	Capstone Project (Integrative and Consultancy Focused)	6	CIN 3303	Network Security	3
		Course Credits	CIN 4006	Advanced Routing	6
			CIN 4106	Advanced Switching	6
			CSF 2903	Operating System Administration and Security	3
<b>IS and IT Technology 2000 Elective Courses</b>			<b>General Studies</b>		
<b>See Programme Chair for available courses</b>			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
BUS 2403	Innovation and Entrepreneurship	3	<b>Art and Humanities</b>		
CDA 2303	Principles of Animation I	3	<b>Communication</b>		
CDG 2303	Introduction to Graphic Design	3	<b>Emirati Studies</b>		
CIA 2503	Web Applications Development	3	<b>Mathematics</b>		
CIB 2003	Technology Based Marketing	3	<b>Physical and Biological Sciences</b>		
CIS 2403	Object Oriented Programming	3	<b>Social and Behavioural Studies</b>		
CSF 3203	Intrusion Detection and Ethical Hacking	3	<b>Art and Humanities</b>		
CTT 2003	Principles of Learning for Instructional Technology	3	<b>Communication</b>		
CTT 2003	Principles of Learning for Instructional Technology	3	<b>Emirati Studies</b>		
			<b>Mathematics</b>		
			<b>Physical and Biological Sciences</b>		
			<b>Social and Behavioural Studies</b>		
<b>Total Required Credits</b>		126	<b>Minimum Duration of Study</b>		4
<b>Maximum Duration of Study</b>		6	<b>Programme Code</b>		CINAB
<b>Cost Recovery Programme</b>		No	<b>Major Code</b>		CIN



## Education



The HCT's Teacher Education programmes were developed specifically for the UAE's teaching needs. The HCT B.Ed. was developed in collaboration with one of the world's leading universities - the Melbourne Graduate School of Education at the University of Melbourne, Australia. The Melbourne Graduate School of Education continues to benchmark the HCT B.Ed. to international standards, certifying that the HCT programme is equivalent to an Australian undergraduate bachelor of education degree. The Classroom Assistant Applied Diploma is accredited by the Scottish Qualifications authority. Prepared with up-to-date knowledge of educational theory, HCT education students practice the skills they learn at their campus in actual classroom situations with intensive practicum placements each semester. The B.Ed. programme features up to 155 days of practicum, culminating in a 10 week internship in the final semester. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers as educators, and ensures they are "ready to teach" upon graduation. HCT teacher education graduates are working in a wide range of educational settings across the UAE. With a willingness to embrace change, HCT education graduates are making strong contributions to continuous quality improvement in education, and are helping lead in the development of the nation.

## Diploma in Classroom Assistant

The mission of the Diploma Classroom Assistant programme is to produce graduates with skills to work as entry-level classroom assistants in an educational

environment. Graduates will have basic knowledge and skills in classroom teacher support at the primary school level.

	Course Credits
<b>Core courses</b>	
<b>Required Credits: 89</b>	
CLAS N1100 Lifespan Development 1	4
CLAS N1110 Computer Skills	4
CLAS N1200 Lifespan Development 2	4
CLAS N1210 Creating, Managing and Organising Resources	4
CLAS N2100 Supporting Learning in the Classroom	4
CLAS N2110 Effective Classroom Displays	4
CLAS N2200 Guiding Children's Behaviour	4
CLAS N2210 Understanding Learning Challenges	4
ENGL N1155 English I	8
ENGL N1255 English II	8
ENGL N2155 English III	7
PPDV N1155 Personal and Professional Development I	1
PPDV N1255 Personal and Professional Development II	1
PPDV N2155 Personal and Professional Development III	1
PPDV N2255 Personal and Professional Development IV	1
PRAC N1100 Apprenticeship 1: Introduction to Observation	6
PRAC N1200 Apprenticeship 2: Role of Classroom Assistant	7
PRAC N2110 Apprenticeship 3: Whole School and Classroom Climate	8
PRAC N2210 Apprenticeship 4: Professionalism	9

<i>Total Required Credits</i>	89	<i>Minimum Duration of Study</i>	2
<i>Maximum Duration of Study</i>	4	<i>Programme Code</i>	CLASDP
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	CLAS









## Engineering Technology and Science



The Faculty of Engineering Technology and Science has a mission to provide high-quality, hands-on technical education, enabling graduates to continually meet the engineering needs and challenges of United Arab Emirates and beyond. The reputation and academic integrity of engineering programmes at HCT are high, with all degrees internationally accredited by the American Engineering Technology Accreditation Commission of ABET ( <http://www.abet.org>). The Faculty aims to produce graduates effective in the design and practical application of engineering technology solutions, with the ability to lead effectively, work and communicate in an engineering team. Graduates are able to follow standard engineering ethical practices and expand their knowledge and competencies through continuing education or other lifelong learning experiences, as well as serving the community, whether locally, nationally or internationally. Employment prospects for HCT Engineering Technology graduates are very strong and cover many local and international industrial sectors including aviation, computing, construction, consulting, defence, energy, governance, healthcare, manufacturing, oil and gas and telecommunications.

## Diploma in Applied Engineering Technology: (Aircraft Maintenance)

The programme prepares students for positions as aviation category 'A' licence holders who are effective in the practical application of aircraft maintenance and basic repair. Graduates will be competent to; effectively work and communicate in a team; utilise standard practices for industrial ethics, health, safety, and environment; be successfully employed in the

aviation maintenance engineering industry or accepted into a bachelor programme; expand knowledge and capabilities through continuing education or other lifelong learning opportunities; and serve the community, whether locally, nationally, or globally.

		Course Credits			Course Credits
<b>Aircraft Maintenance Core Courses</b>			<b>General Studies</b>		
<b>Required Credits: 53</b>			<b>Required Credits: 15</b>		
ETD 1103	Aviation Physics	3	ETD 2104	Human Factors	3
ETD 1104	Aviation Mathematics	4	GCD 1022	English for Specific Purposes I	2
ETD 1114	Theory of Flight	4	GCD 1032	English for Specific Purposes II	2
ETD 1123	Digital Techniques/Electronic Instruments Systems	3	Other General Studies		9
ETD 1123	Electrical Fundamentals	3			
ETD 1125	Materials and Hardware (EASA Mod 6)	5			
ETD 2103	Gas Turbine Engine	3			
ETD 2106	Maintenance Practices	6			
ETD 2112	Propellers	2			
ETD 2114	Legislation	4			
ETD 2119	Turbo Aerodynamics: Structure and Systems	9			
ETD 2007	Engineering Diploma Work Placement	7			

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	ENTAP
Cost Recovery Programme	No	Major Code	ETA

## Diploma in Applied Engineering Technology: (Chemical)

The programme prepares students for positions as technicians who are effective in the practical application of engineering technology solutions; effectively work and communicate in a team; utilise standard practices for industrial ethics, health, safety, and environment; are successfully employed in an engineering technology industry or accepted into a bachelor programme;

expand knowledge and capabilities through continuing education or other lifelong learning opportunities; and serve the community, whether locally, nationally or globally.

		Course Credits			Course Credits
<b>Engineering Technology Core Courses</b>			<b>Chemical Engineering Elective Courses</b>		
<b>Required Credits: 26</b>			<b>Required Credits: 9</b>		
ETD 1022	Technical Mathematics I	2	ETD 2233	Chemical Laboratory Equipment	3
ETD 1032	Technical Mathematics II	2	ETD 2243	Troubleshooting Techniques	3
ETD 1042	Engineering Measurement and Workshop	2	ETD 2253	Corrosion Inspection and Monitoring	3
ETD 1051	Introduction to Engineering Technology	1	ETD 2263	Corrosion Control in Industry	3
ETD 1062	Introduction to CAD	2	ETD 2273	Petroleum and Petrochemical Industries	3
ETD 1072	Applied Physics I	2	ETD 2283	Water Treatment Systems	3
ETD 2000	Engineering Diploma Work Placement	7	ETD 2293	Utilities Systems	3
ETD 2022	Technical Mathematics III	2			
ETD 2032	Applied Physics II	2			Course Credits
ETD 2042	Applied Diploma Project	2	<b>General Studies</b>		
ETD 2052	Industrial Health and Safety	2	<b>Required Credits: 15</b>		
		Course Credits	Required English Courses		
<b>Chemical Engineering Core Courses</b>			GCD 1022	English for Specific Purposes I	2
<b>Required Credits: 18</b>			GCD 1032	English for Specific Purposes II	2
ETD 1203	General Chemistry	3	GCD 2022	English for Specific Purposes III	2
ETD 1213	Chemical Engineering Fundamentals	3	Other General Studies		
ETD 1223	Introduction to Corrosion	3			9
ETD 2203	Material and Energy Balance	3			
ETD 2213	Process Operations	3			
ETD 2223	Process Instrumentation and Control	3			

<i>Total Required Credits</i>	68	<i>Minimum Duration of Study</i>	2
<i>Maximum Duration of Study</i>	4	<i>Programme Code</i>	ENTAP
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	ETC

## Diploma in Applied Engineering Technology: (Electrical)

The programme prepares students for positions as technicians who are effective in the practical application of engineering technology solutions; effectively work and communicate in a team; utilise standard practices for industrial ethics, health, safety, and environment; are successfully employed in an engineering technology

industry or accepted into a bachelor programme; expand knowledge and capabilities through continuing education or other lifelong learning opportunities; and serve the community, whether locally, nationally or globally.

		Course Credits			Course Credits
<b>Engineering Technology Core Courses</b>			<b>Engineering Technology Elective Courses</b>		
<b>Required Credits: 26</b>			<b>Required Credits: 9</b>		
ETD 1022	Technical Mathematics I	2	TD 1413	Pneumatic and Hydraulics	3
ETD 1032	Technical Mathematics II	2	ETD 2343	Distributed Control Systems	3
ETD 1042	Engineering Measurement and Workshop	2	ETD 2363	Thermodynamics	3
ETD 1051	Introduction to Engineering Technology	1	ETD 2373	Maintenance of Rotary Equipment	3
ETD 1062	Introduction to CAD	2	ETD 2383	Motor Controls and Drives	3
ETD 1072	Applied Physics I	2	ETD 2413	Sensors and Actuators	3
ETD 2007	Engineering Diploma Work Placement	7	ETD 2423	Industrial Automation and Process Control	3
ETD 2022	Technical Mathematics III	2	ETD 2913	Power Electronics	3
ETD 2032	Applied Physics II	2	ETD 2923	Generation and Transmission	3
ETD 2042	Applied Diploma Project	2	ETD 2933	Distribution Systems	3
ETD 2052	Industrial Health and Safety	2	ETD 2943	System Protection	3
		Course Credits			Course Credits
<b>Electrical Engineering Core Courses</b>			<b>General Studies</b>		
<b>Required Credits: 18</b>			<b>Required Credits: 15</b>		
ETD 1303	Electrical Measurements	3	Required English Courses		
ETD 1313	Circuit Fundamentals	3	GCD 1022	English for Specific Purposes I	2
ETD 1323	Digital Applications	3	GCD 1032	English for Specific Purposes II	2
ETD 2303	Programmable Logic Controllers	3	GCD 2022	English for Specific Purposes III	2
ETD 2313	Power Systems	3	Other General Studies		
ETD 2323	Electrical Machines	3			

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	ENTAP
Cost Recovery Programme	No	Major Code	ETE

## Diploma in Applied Engineering Technology: (Instrumentation)

The programme prepares students for positions as technicians who are effective in the practical application of engineering technology solutions; effectively work and communicate in a team; utilise standard practices for industrial ethics, health, safety, and environment; are successfully employed in an engineering technology

industry or accepted into a bachelor programme; expand knowledge and capabilities through continuing education or other lifelong learning opportunities; and serve the community, whether locally, nationally or globally.

		Course Credits			Course Credits
<b>Engineering Technology Core Courses</b>			<b>Instrumentation and Control Elective Courses</b>		
<b>Required Credits: 26</b>			<b>Required Credits: 9</b>		
ETD 1022	Technical Mathematics I	2	ETD 1323	Digital Applications	3
ETD 1032	Technical Mathematics II	2	ETD 2313	Power Systems	3
ETD 1042	Engineering Measurement and Workshop	2	ETD 2373	Maintenance of Rotary Equipment	3
ETD 1051	Introduction to Engineering Technology	1	ETD 2323	Electrical Machines	3
ETD 1062	Introduction to CAD	2	ETD 2343	Distributed Control Systems	3
ETD 1072	Applied Physics I	2	ETD 2383	Motor Controls and Drives	3
ETD 2009	Engineering Diploma Work Placement	7	ETD 2433	Applied Electronics	3
ETD 2022	Technical Mathematics III	2	ETD 2443	Engineering Laboratory Analysis	3
ETD 2032	Applied Physics II	2			
ETD 2042	Applied Diploma Project	2			
ETD 2052	Industrial Health and Safety	2			
			Course Credits		
<b>Instrumentation and Control Core Courses</b>			<b>General Studies</b>		
<b>Required Credits: 18</b>			<b>Required Credits: 15</b>		
ETD 1303	Electrical Measurements	3	Required English Courses		
ETD 1313	Circuit Fundamentals	3	GCD 1022	English for Specific Purposes I	2
ETD 1413	Pneumatic and Hydraulics	3	GCD 1032	English for Specific Purposes II	2
ETD 2303	Programmable Logic Controllers	3	GCD 2022	English for Specific Purposes III	2
ETD 2413	Sensors and Actuators	3	Other General Studies		
ETD 2423	Industrial Automation and Process Control	3			9

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	ENTAP
Cost Recovery Programme	No	Major Code	ETI

## Diploma in Applied Engineering Technology: (Mechanical)

The programme prepares students for positions as technicians who are effective in the practical application of engineering technology solutions; effectively work and communicate in a team; utilise standard practices for industrial ethics, health, safety, and environment; are successfully employed in an engineering technology

industry or accepted into a bachelor programme; expand knowledge and capabilities through continuing education or other lifelong learning opportunities; and serve the community, whether locally, nationally or globally.

		Course Credits			Course Credits
<b>Engineering Technology Core Courses</b>			<b>Mechanical Engineering Elective Courses</b>		
<b>Required Credits: 26</b>			<b>Required Credits: 9</b>		
ETD 1022	Technical Mathematics I	2	ETD 1413	Pneumatic and Hydraulics	3
ETD 1032	Technical Mathematics II	2	ETD 2303	Programmable Logic Controllers	3
ETD 1042	Engineering Measurement and Workshop	2	ETD 2343	Distributed Control Systems	3
ETD 1051	Introduction to Engineering Technology	1	ETD 2363	Thermodynamics	3
ETD 1062	Introduction to CAD	2	ETD 2383	Motor Controls and Drives	3
ETD 1072	Applied Physics I	2	ETD 2413	Sensors and Actuators	3
ETD 2009	Engineering Diploma Work Placement	7	ETD 2423	Industrial Automation and Process Control	3
ETD 2022	Technical Mathematics III	2	ETD 2533	Power Plant Engineering	3
ETD 2032	Applied Physics II	2	ETD 2543	Alternative Energy	3
ETD 2042	Applied Diploma Project	2	ETD 2553	Refrigeration and Air Conditioning (HVAC)	3
ETD 2052	Industrial Health and Safety	2			
			Course Credits		
<b>Mechanical Engineering Core Courses</b>			<b>General Studies</b>		
<b>Required Credits: 18</b>			<b>Required Credits: 15</b>		
ETD 1503	CAD Mechanical	3	Required English Courses		
ETD 1513	Mechanical Engineering Fundamentals	3	GCD 1022	English for Specific Purposes I	2
ETD 1523	Welding and Metal Cutting	3	GCD 1032	English for Specific Purposes II	2
ETD 2503	Fabrication and Machining	3	GCD 2022	English for Specific Purposes III	2
ETD 2513	Material Testing and Selection	3	Other General Studies		
ETD 2523	Maintenance of Mechanical Systems	3			9

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	ENTAP
Cost Recovery Programme	No	Major Code	ETM

## Higher Diploma in Applied Aviation Maintenance Technology (Airframe and Aeroengines)

The programme prepares students for positions as aviation category 'B1.1' (Airframe and Aeroengines) licensed maintenance engineers who are able to work

in a team to practically apply aviation maintenance engineering technology solutions with consideration of the industry ethics, health, safety, and environment.

Aviation Maintenance Technology Core Courses		Course Credits
<b>Required Credits: 29</b>		
AHM 1104	Aviation Mathematics (Mod 1 B1 and B2)	4
AHM 1204	Aviation Physics (Mod 2 B1 and B2)	4
AHM 1309	Electrical Fundamentals (Mod 3 B1 and B2)	9
AHM 1803	Basic Aerodynamics (Mod 8: B1 and B2)	3
AHM 2005	Aviation Legislation (Mod 10B1 and B2)	5
AHM 2904	Human Factors (Mod 9 B1 and B2)	4
Aviation Maintenance Technology English Courses		Course Credits
<b>Required Credits: 6</b>		
AHE 1102	Aviation English Technology I	2
AHE 2202	Aviation English Technology II	2
AHE 2302	Aviation English Technology III	2

Aviation Maintenance Technology Core Courses		Course Credits
<b>Required Credits: 98</b>		
AHA 1404	Electronic Fundamentals (Mod 4 B1)	4
AHA 1504	Digital Techniques/ Electronic Instrument Systems (Mod 5 B1)	4
AHA 1615	Materials and Hardware (Mod 6 B1)	15
AHA 2511	Gas Turbine Engine (Mod 15 B1)	11
AHA 2705	Propeller (Mod 17 B1)	5
AHA 2715	Maintenance Practices (Mod 7 B1)	15
AHA 3144	Turbine Aeroplane Aerodynamics, Structures and Systems (Mod 11A) (B1.1) *1 yr course	44

<i>Total Required Credits</i>	133	<i>Minimum Duration of Study</i>	3
<i>Maximum Duration of Study</i>	5	<i>Programme Code</i>	ENAHD
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	HAA

## Bachelor of Applied Science in Aviation Maintenance Technology (Airframe and Aeroengines)

The Aviation Maintenance Engineering programmes prepare students with the technical and managerial skills required for positions in the Aviation Industry. Graduates are certified as Licensed Aircraft Maintenance Engineers by national authorities; graduates need to complete their On-Job-Training (OJT) with local aircraft maintenance organisations.

Note: 6 General Studies credit units are covered by AMTAA Core Courses.

		Course Credits			Course Credits
<b>Aviation Maintenance Technology Core Courses</b>			<b>Airframe and Aeroengines 4000 Elective Courses</b>		
<b>Required Credits: 115</b>			<b>Required Credits: 4</b>		
EAA 1403	Electronic Fundamentals (Mod 4 B1)	3	See Programme Chair for available courses		
EAA 1503	Digital Techniques/ Electronic Instrument Systems (Mod 5 B1)	3	Select 2 4000 level courses		
EAA 1612	Materials and Hardware (Mod 6 B1)	12			
EAA 2509	Gas Turbine Engine (Mod 15 B1)	9			
EAA 2712	Maintenance Practices (Mod 7 B1)	12			
EAA 3136	Turbine Aeroplane Aerodynamics, Structures and Systems (Mod 11A) (B1.1) *1 yr course	36	<b>General Studies</b>		
EAA 3704	Propeller (Mod 17 B1)	4	<b>Required Credits: 39</b>		
EAM 1103	Aviation Mathematics	3	Art and Humanities		6
EAM 1203	Aviation Physics	3	Communication		12
EAM 1306	Electrical Fundamentals	6	Emirati Studies		3
EAM 2003	Basic Aerodynamics (Mod 8)	3	Mathematics		3
EAM 2903	Human Factors (Mod 9 B1 and B2)	3	Physical and Biological Sciences		6
EAM 2023	Aviation Legislation (Mod 10B1 and B2)	3	Social and Behavioural Studies		9
EMM 4003	Advanced Human Factors	3			
EMM 4103	Total Quality Management in Aviation	3			
EMM 4203	Aviation Operations Management	3			
EMM 4303	Aviation Project Management	3			
EMM 4403	Human Resources and Relations Management	3			

Total Required Credits	152	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	EAAAB
Cost Recovery Programme	No	Major Code	EAA

## Bachelor of Applied Science in Aviation Maintenance Technology (Avionics)

The Aviation Engineering programmes prepare students with the technical and managerial skills required for positions in the Aviation Industry. Graduates are certified as Licensed Aircraft Maintenance Engineers by national and international authorities; graduates need to complete their On-Job-Training (OJT) with local aircraft maintenance organisations.

**Note:** 6 General Studies credit units are covered by AMTA Core Courses.

		Course Credits			Course Credits
<b>Aviation Maintenance Technology (Avionics) Core Courses</b>			<b>Avionics 4000 Elective Courses</b>		
<b>Required Credits: 115</b>			<b>Required Credits: 4</b>		
EAM 1103	Aviation Mathematics	3	Select 2 4000 level courses		4
EAM 1203	Aviation Physics	3			
EAM 1306	Electrical Fundamentals	6			
EAM 2003	Basic Aerodynamics (Mod 8)	3			
EAM 2903	Human Factors (Mod 9 B1 and B2)	3			
EAM 2023	Aviation Legislation (Mod 10B1 and B2)	3			
EAV 1409	Electronic Fundamentals (Mod 4 B2)	9			
EAV 1509	Digital Techniques/ Electronic Instrument Systems (Mod 5 B2)	9			
EAV 2608	Materials and Hardware (Mod 6 B2)	8			
EAV 2708	Maintenance Practices (Mod 7 B2)	8			
EAV 2405	Propulsion (Mod 14 B2)	5			
EAV 3340	Aircraft Aerodynamics, Structures and Systems (Mod 13) (B2) *1 yr course	40			
EMM 4003	Advanced Human Factors	3			
EMM 4103	Total Quality Management in Aviation	3			
EMM 4203	Aviation Operations Management	3			
EMM 4303	Aviation Project Management	3			
EMM 4403	Human Resources and Relations Management	3			
EMM 4403	Human Resources and Relations Management	3			
			<b>General Studies</b>		
			<b>Required Credits: 39</b>		
			Art and Humanities		6
			Communication		12
			Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

<i>Total Required Credits</i>	152	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Programme Code</i>	EAVAB
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	EAV

# Bachelor of Applied Science in Biomedical Engineering Technology

The programme focuses on the application of engineering principles to medical and biological problems. It prepares students for positions as engineers in the healthcare sector and related medical facilities. The programme includes courses in design, development and implementation of medical equipment and devices to meet needs in healthcare delivery applications.

Graduates will be equipped with multidisciplinary skills in the application of electrical, electronics, mechanical and biology to biomedical systems and instrument design.

**Note:** 9 General Studies credit units are satisfied by Biomedical ET Core courses.

		Course Credits			Course Credits
<b>Biomedical Engineering Core Courses</b>			<b>Biomedical Engineering 4000 Elective Courses</b>		
<b>Required Credits: 62</b>			<b>Required Credits: 12</b>		
EBT 1103	Bio Anatomy and Physiology	3	EBT 4903	Modelling and Simulation of Biomedical Systems	3
EBT 1303	Chemistry for Biomedical Engineering	3	EBT 4913	Digital Signal Processing	3
EBT 2003	Medical Electronics	3	EBT 4923	Design of Medical Devices I	3
EBT 2053	Biomedical Instrumentation	3	EBT 4933	Design of Medical Devices II	3
EBT 2503	Biomaterials	3			
EBT 3002	Clinical Engineering and Safety Management	3			Course Credits
EBT 3003	Biomechanics	3	<b>Mathematics and Science Required Courses</b>		
EBT 3013	Diagnostic and Therapeutic Equipment	3	<b>Required Credits: 24</b>		
EBT 3503	Rehabilitation Engineering	3	LSM 1113	Statistical Mathematics	3
EBT 3553	Medical Imaging Systems	3	MTH 1103	Pre Calculus	3
EEC 2013	Digital Circuits	3	MTH 1203	Calculus I	3
EEC 2033	Microcontroller Systems	3	MTH 2103	Calculus II	3
EEC 2073	Electrical Engineering Fundamentals	3	MTH 2503	Linear Algebra and Differential Equations	3
EEC 3073	Signals and Systems	3	MTH 3013	Calculus III	3
EEC 4043	Control Systems	3	PHY 1103	Physics I	3
EGN 1203	Introduction to Programming	3	PHY 1203	Physics II	3
EGN 3202	Engineering Economics	2			Course Credits
EGN 3332	Health Safety and Environment	2	<b>General Studies</b>		
EMC 2023	Statics and Dynamics	3	<b>Required Credits: 39</b>		
EMC 2053	Fluid Mechanics	3	Art and Humanities		6
ERK 3002	Work Placement	2	Communication		12
EGN 4002	Design Project I	2	Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	128	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	EBTAB
Cost Recovery Programme	No	Major Code	EBT



# Bachelor of Applied Science in Civil Engineering Technology

The programme deals with the planning and design of buildings, bridges, transportation systems with particular attention to protection of the environment. It prepares students for positions as engineers with the technical and managerial skills necessary to enter careers in the planning, design, construction, operation and maintenance of infrastructure in a sustainable environment. Graduates will have the ability to analyse and design systems, specify project methods and

materials, perform cost estimates and analyses, and manage technical tasks in support of municipalities and regions, as well as globally. This programme is accredited by the Engineering Technology Accreditation Commission of ABET.

**Note:** 9 General Studies credit units are satisfied by Civil ET Core courses.

		Course Credits			Course Credits
<b>Civil Engineering Core Courses</b>			<b>Civil Engineering 4000 Elective Courses</b>		
<b>Required Credits: 66</b>			<b>See Programme Chair for available courses</b>		
<b>Required Credits: 12</b>					
ECV 1003	Applied Drafting and CAD: Civil	3	ECV 4803	Concrete Design II	3
ECV 1103	Construction Materials	3	ECV 4813	GIS Applications in Civil Engineering	3
ECV 2003	Soil Mechanics	3	ECV 4903	Road Design and Construction	3
ECV 2013	Engineering Mechanics	3	ECV 4923	Construction Contract Management	3
ECV 2023	Fluid Mechanics and Hydraulics	3	ECV 4963	Solid Waste Management	3
ECV 2033	Strength of Materials	3	ECV 4973	Research Methods in Engineering	3
ECV 2043	Foundation Engineering	3	ECV 4993	Transportation Planning	3
ECV 2053	Site Surveying	3			
ECV 2072	Chemistry for Civil Engineering	2			Course Credits
ECV 3003	Highway Engineering	3	<b>Mathematics and Science Required Courses</b>		
ECV 3013	Waste Water Engineering	3	<b>Required Credits: 21</b>		
ECV 3023	Quantity Surveying and Estimating	3	LSM 1113	Statistical Mathematics	3
ECV 3033	Structural Analysis	3	MTH 1103	Pre Calculus	3
ECV 3053	Water Resources and Supply	3	MTH 1203	Calculus I	3
ECV 3063	Concrete Design	3	MTH 2103	Calculus II	3
ECV 3073	Civil Engineering Construction	3	MTH 2503	Linear Algebra and Differential Equations	3
ECV 3263	Steel Design	3	MTH 3013	Calculus III	3
ECV 4002	Civil Project I	2	PHY 1103	Physics I	3
ECV 4022	Civil Project II	2			Course Credits
ECV 4053	Environmental Engineering	3	<b>General Studies</b>		
EGN 1103	Engineering Measurements and CAD Introduction	3	<b>Required Credits: 39</b>		
EGN 3102	Project Management	2	Art and Humanities		6
EGN 3202	Engineering Economics	2	Communication		12
ERK 3002	Work Placement	2	Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	129	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	ECVAB
Cost Recovery Programme	No	Major Code	ECV

# Bachelor of Applied Science in Electrical Engineering Technology

The programme deals with the generation, transmission, distribution and control of electric energy systems and related equipment. This programme prepares the students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, application, installation, manufacturing, operation and maintenance of power systems. Students gain hands-on experience in instrumentation, electrical machines and power electronics. Graduates are well

prepared for analysis, applied design, development and implementation of electrical systems. This programme is accredited by the Engineering Technology Accreditation Commission of ABET.

**Note:** 9 General Studies credit units are satisfied by Electrical ET Core courses.

		Course Credits			Course Credits
<b>Electrical Engineering Core Courses</b>			<b>Electrical Engineering 4000 Elective Courses</b>		
<b>Required Credits: 63</b>			<b>See Programme Chair for available courses</b>		
EEC 1003	Electric Circuits I	3	EEL 4803	Electrical Drives	3
EEC 2003	Electric Circuits II	3	EEL 4813	Electrical Maintenance Operations	3
EEC 2013	Digital Circuits	3	EEL 4913	Renewable Energy Systems	3
EEC 2033	Microcontroller Systems	3	EMT 4023	Programmable Logic Controllers	3
EEC 2053	Electronics I	3			
EEC 3003	Instrumentation and Control	3			Course Credits
EEC 3073	Signals and Systems	3	<b>Mathematics and Science Required Courses</b>		
EEC 4043	Control Systems	3	<b>Required Credits: 24</b>		
EEL 2003	Power Electronics	3	LSM 1113	Statistical Mathematics	3
EEL 2023	Power Generation and Transmission	3	MTH 1103	Pre Calculus	3
EEL 2043	Principles of Machines and Power	3	MTH 1203	Calculus I	3
EEL 3003	Electrical Machines	3	MTH 2103	Calculus II	3
EEL 3013	Electrical Power Distribution	3	MTH 2503	Linear Algebra and Differential Equations	3
EEL 3023	System Protection and Coordination	3	MTH 3013	Calculus III	3
EEL 4413	Power Systems Analysis	3	PHY 1103	Physics I	3
EGN 1103	Engineering Measurements and CAD Introduction	3	PHY 1203	Physics II	3
EGN 2003	Computer Programming	3			Course Credits
EGN 3102	Project Management	2	<b>General Studies</b>		
EGN 3202	Engineering Economics	2	<b>Required Credits: 39</b>		
EGN 3332	Health Safety and Environment	2	Art and Humanities		6
EGN 4002	Design Project I	2	Communication		12
EGN 4022	Design Project II	2	Emirati Studies		3
ERK 3002	Work Placement	2	Mathematics		3
ERK 3002	Work Placement	2	Physical and Biological Sciences		6
			Social and Behavioural Studies		9

<i>Total Required Credits</i>	129	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Programme Code</i>	EELAB
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	EEL



# Bachelor of Applied Science in Mechanical Engineering Technology

The programme deals with the manipulation of energy through useful mechanical devices and the application of thermodynamics and heat transfer systems. It prepares students for positions as Engineers with the knowledge, problem solving ability, and managerial skills to enter careers in the design, installation, manufacturing, testing and maintenance of mechanical systems. Students will gain expertise in mechanical design, turbomachinery and process control. Graduates

will typically have strengths in the analysis, applied design, development and implementation of mechanical systems and processes. This programme is accredited by the Engineering Technology Accreditation Commission of ABET.

**Note:** 9 General Studies credit units are satisfied by Mechanical ET Core courses.

		Course Credits			Course Credits
<b>Mechanical Engineering Core Courses</b>			<b>Mechanical Engineering 4000 Elective Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 12</b>		
EEC 2073	Electrical Engineering Fundamentals	3	EEL 4913	Renewable Energy Systems	3
EGN 1103	Engineering Measurements and CAD Introduction	3	EMC 4123	Gas Turbines	3
EGN 3033	Heat Transfer	3	EMC 4143	Production Planning and Control (PPC)	3
EGN 3102	Project Management	2	EMC 4963	Power Plant Engineering	3
EGN 3202	Engineering Economics	2	EMC 4973	Computer Integrated Manufacturing	3
EGN 3332	Health Safety and Environment	2	EMT 4923	Mechanical Vibrations	3
EGN 4002	Design Project I	2	Course Credits		
EGN 4022	Design Project II	2	<b>Mathematics and Science Required Courses</b>		
EMC 2003	Computer Aided Drafting	3	<b>Required Credits: 24</b>		
EMC 2013	Materials Selection and Testing	3	LSM 1113	Statistical Mathematics	3
EMC 2023	Statics and Dynamics	3	MTH 1103	Pre Calculus	3
EMC 2033	Manufacturing Technology	3	MTH 1203	Calculus I	3
EMC 2043	Mechanics of Materials	3	MTH 2103	Calculus II	3
EMC 2053	Fluid Mechanics	3	MTH 2503	Linear Algebra and Differential Equations	3
EMC 3003	Industrial Plant Maintenance	3	MTH 3013	Calculus III	3
EMC 3013	Fabrication and Welding	3	PHY 1103	Physics I	3
EMC 3023	Thermodynamics I	3	PHY 1203	Physics II	3
EMC 3053	Thermodynamics II	3	Course Credits		
EMC 3063	Mechanical Design I	3	<b>General Studies</b>		
EMC 3163	Process Control: Mechanical	3	<b>Required Credits: 39</b>		
EMC 4003	Turbomachinery	3	Art and Humanities		6
EMC 4043	Refrigeration and Air Conditioning System	3	Communication		12
ERK 3002	Work Placement	2	Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	129	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	EMCAB
Cost Recovery Programme	No	Major Code	EMC

# Bachelor of Applied Science in Mechatronic Engineering Technology

The programme combines the fields of mechanical and electronic systems for applications in automation, robotics and manufacturing plants. The programme prepares students for positions as Engineers with the technical and managerial skills necessary to enter careers in the design, installation, manufacturing and maintenance of mechatronic systems. Students gain practical knowledge in manufacturing technology,

programmable logic controllers and instrumentation and control systems. Graduates will have skills in the analysis, applied design, development and implementation of mechatronic systems.

**Note:** 9 General Studies credit units are satisfied by Mechatronic ET Core courses.

		Course Credits			Course Credits
<b>Mechatronic Engineering Core Courses</b>			<b>Mechatronic Engineering 4000 Elective Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 12</b>		
EEC 2073	Electrical Engineering Fundamentals	3	EEL 4913	Renewable Energy Systems	3
EEC 2033	Microcontroller Systems	3	EMT 4803	CNC Technology	3
EEC 3003	Instrumentation and Control	3	EMT 4943	Embedded Systems and Interfacing	3
EGN 1103	Engineering Measurements and CAD Introduction	3	EMT 4973	Advanced Robotics	3
EGN 2003	Computer Programming	3	Course Credits		
EGN 3102	Project Management	2	<b>Mathematics and Science Required Courses</b>		
EGN 3202	Engineering Economics	2	<b>Required Credits: 24</b>		
EGN 3332	Health Safety and Environment	2	LSM 1113	Statistical Mathematics	3
EGN 4002	Design Project I	2	MTH 1103	Pre Calculus	3
EGN 4022	Design Project II	2	MTH 1203	Calculus I	3
EMC 2003	Computer Aided Drafting	3	MTH 2103	Calculus II	3
EMC 2033	Manufacturing Technology	3	MTH 2503	Linear Algebra and Differential Equations	3
EMC 2043	Mechanics of Materials	3	MTH 3013	Calculus III	3
EMC 2223	Fluid Power	3	PHY 1103	Physics I	3
EMT 2003	Applied Mechanics	3	PHY 1203	Physics II	3
EMT 2023	Electromechanical Systems	3	Course Credits		
EMT 2033	Electronics Systems and Circuits	3	<b>General Studies</b>		
EMT 3013	Thermofluid Systems	3	<b>Required Credits: 39</b>		
EMT 3103	Engineering Materials	3	Art and Humanities		6
EMT 4003	Robotics Technology	3	Communication		12
EMT 4013	Industrial Control Systems	3	Emirati Studies		3
EMT 4023	Programmable Logic Controllers	3	Mathematics		3
ERK 3002	Work Placement	2	Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	129	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	EMTAB
Cost Recovery Programme	No	Major Code	EMT

## Health Sciences



Health Sciences is emerging as one of the UAE's largest growth areas. Student learning takes place in classrooms, laboratories, clinics, and hospital settings where training covers the knowledge, skills, attitudes, and behaviours expected of a modern health science professional. The HCT Health Sciences programmes and courses are designed to meet the highest academic and industry standards and in consequence our graduates are highly sought after by employers. Health Sciences graduates can expect to work in a number of different areas including hospitals, government, laboratories, education, and a large range of private and semi-private health-related organisations.

## Diploma in Applied Health Sciences: Healthcare Administration

The Diploma in Healthcare Administration prepares graduates to contribute to the administrative and technical support required by healthcare organisations in the UAE. Graduates will possess skills in communication, customer service and information

technology as well as general office administration skills suitable for entry level positions in the health care industry and will support the enhancement of health care services in the UAE.

		Course Credits			Course Credits
<b>Diploma in Health Sciences Core Courses</b>			<b>Healthcare Administration Core Courses</b>		
<b>Required Credits: 38</b>			<b>Required Credits: 15</b>		
BSD 1013	Introduction to Organisational Operations	3	BSD 2013	Introduction to Human Resources	3
CID 2022	Databases	3	HSD 2113	Biostatistics	3
HSD 1003	Anatomy and Physiology I	3	HSD 2123	Software Application for Health I	3
HSD 1013	Introduction to Healthcare Systems	3	HSD 2133	Software Application for Health II	3
HSD 1023	Medical Terminology I (Bilingual)	3	HSD 2143	Arabic Computing and Communication	3
HSD 1032	Health Information Systems	2			
HSD 1043	Anatomy and Physiology II	3			Course Credits
HSD 1053	Health Information Coding I (Introduction)	3	<b>General Studies</b>		
HSD 1063	Medical Terminology II (Bilingual)	3	<b>Required Credits: 15</b>		
HSD 2003	Anatomy and Physiology III	3	GCD 1022	English for Specific Purposes I	2
HSD 2012	LBD Integrative Project	2	GCD 1032	English for Specific Purposes II	2
HSD 2027	Work Related Learning	7	GCD 2022	English for Specific Purposes III	2
			Other General Studies		9

Total Required Credits	68	Minimum Duration of Study	2
Maximum Duration of Study	4	Programme Code	HSCAP
Cost Recovery Programme	No	Major Code	HAS



## Bachelor of Applied Science in Community Health

The Bachelor of Applied Science in Community Health degree is a four-year post-foundations programme. This professional-oriented degree provides specialised health knowledge and understanding and develops intellectual abilities, practical skills, transferable skills and individual personal qualities. Graduates of the programme will be excellent communicators, proficient in working in a team and with the community. To meet these professional demands, graduates need strong skills in programme planning, implementation and evaluation, underpinned by sound knowledge of theories and models related to health behaviour and learning. Learners integrate theory and practice during

the four years of the programme and complete their course work with a professional internship/practicum in order to consolidate theory and practice, as well as carry out a capstone graduate project. Graduates are ready to begin careers in both private and public healthcare systems in the UAE, and pursue further studies in public and community health.

**Note:** 6 General Studies credit units are satisfied by Community Health Core Courses.

		Course Credits			Course Credits
<b>Community Health Core Courses</b>			<b>Community Health Field Courses</b>		
<b>Required Credits: 69</b>			<b>Required Credits: 24</b>		
COM 1123	Introduction to Media Technology	3	HED 3904	Community Health/Practicum	6
HCL 4303	Global Trends in Healthcare Systems and Issues	3	HED 3944	Patient Education/Preceptorship	6
HED 1103	Understanding Diseases	3	HED 4924	Occupational Health/Practicum	6
HED 1203	Introduction to Health Promotion	3	HED 4954	Health Education Internship/Capstone Project/Practicum	6
HED 2003	Maternal and Child Health	3			
HED 2103	Prevention and Control of Diseases	3			Course Credits
HED 2203	Foundations of Health Behaviour	3	<b>Required Science Courses</b>		
HED 3003	Models of Needs Assessment	3	<b>Required Credits: 6</b>		
HED 3103	Advanced Public Communication	3	LSN 1103	Anatomy and Physiology I	3
HED 3153	Community Mental Health	3	LSN 1203	Anatomy and Physiology II	3
HED 3203	Technical Arabic Communication	3			
HED 3253	Planning Health Promotion	3			Course Credits
HED 3303	Teaching School Health	3	<b>General Studies</b>		
HED 3353	Implementing Health Promotion	3	<b>Required Credits: 39</b>		
HED 3403	Evaluation of Health Care	3	Art and Humanities		6
HED 3503	Occupational Health	3	Communication		12
HED 4003	Advanced Management in Health Care	3	Emirati Studies		3
HED 4103	Health Aspects of Aging	3	Mathematics		3
HED 4403	Research Methods I	3	Physical and Biological Sciences		6
HED 4453	Research Methods II	3	Social and Behavioural Studies		9
HIM 3003	Biostatistics	3			
HIM 3303	Epidemiology	3			
HSC 1003	Introduction to Health Care Systems	3			

Total Required Credits	132	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	HEDAB
Cost Recovery Programme	No	Major Code	HED

## Bachelor in Dental Hygiene

The Bachelor of Applied Science in Dental Hygiene is a four-year post-foundations programme preparing graduates for professional dental hygiene practice. Graduates are educated to provide quality dental hygiene care with a patient centred focus. The programme stresses knowledge of the chemical, biological, social and clinical sciences that underlie dental hygiene and contribute to an understanding of the relevance of that knowledge to provide health promotion, preventive and curative services to patients

in a variety of health continuum circumstances. The programme also focuses on helping the students in developing analytical thinking, problem-solving and communication skills in an ethical and responsible manner.

**Note:** 6 General Studies credit units are satisfied by Dental Hygiene Core Courses.

		Course Credits			Course Credits
<b>Dental Hygiene Core Courses</b>			<b>Dental Hygiene Practice Courses</b>		
<b>Required Credits: 67</b>			<b>Required Credits: 20</b>		
HDH 1203	Chemistry for Dental Hygiene	3	HDH 3923	Dental Hygiene Practice I	4
HDH 1303	Organic and Bio Chemistry for Dental Hygienists	3	HDH 3955	Dental Hygiene Practice II	6
HDH 2003	Head and Neck Anatomy	3	HDH 4925	Dental Hygiene Practice III	6
HDH 2006	Preclinical Dental Hygiene	6	HDH 4953	Dental Hygiene Practice IV	4
HDH 2103	Oral Histology	3			
HDH 2203	Dental Anatomy and Occlusion	3			Course Credits
HDH 2303	General and Oral Pharmacology	3	<b>Required Science Courses</b>		
HDH 2403	General and Oral Pathology	3	<b>Required Credits: 6</b>		
HDH 3003	Dental Radiology Theory and Practice	3	LSN 1103	Anatomy and Physiology I	3
HDH 3103	Community Dental Health I	3	LSN 1203	Anatomy and Physiology II	3
HDH 3203	Dental Hygiene Theory I	3			
HDH 3403	Dental Hygiene Theory II	3			Course Credits
HDH 3503	Applied Nutrition in Dental Practice	3	<b>General Studies</b>		
HDH 3603	Law and Ethics for Dental Hygiene	3	<b>Required Credits: 39</b>		
HDH 4003	Epidemiology and Preventive Dentistry	3	Art and Humanities		6
HDH 4103	Dental Hygiene Theory III	3	Communication		12
HDH 4203	Management and Supervision of Dental Practice	3	Emirati Studies		3
HDH 4403	Scholarship and Research for Evidence Based Practice	3	Mathematics		3
HDH 4503	Dental Hygiene Theory IV	3	Physical and Biological Sciences		6
HDH 4903	Community Dental Health II	4	Social and Behavioural Studies		9
HSC 2503	Microbiology	3			

Total Required Credits	126	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	HDHAB
Cost Recovery Programme	No	Major Code	HDH



## Bachelor in Healthcare Administration and Leadership

The Bachelor of Healthcare Administration and Leadership is a four-year post-Foundations degree. Graduates acquire knowledge and develop skills in health care finance, accounting, human resources, marketing and quality management. In year four, students consolidate theory and practice via a capstone project or an end-of-term work preceptorship. Graduates will be able to behave professionally and communicate effectively, individually and as a team, using a variety of methods. Graduates will demonstrate a practical yet competitive level of knowledge, skills and values in an evolving healthcare environment to meet the needs of the Emirati society. They will apply health management theories to solve healthcare

administration and management problems. In addition to that, graduates will acquire the ability to analyse the challenges progressing healthcare organisations face in attaining international accreditation and they will be ready to begin careers in both private and public sector healthcare systems in the UAE, and/or pursue further studies in management and leadership.

**Note:** 6 General Studies credit units are satisfied by Healthcare Administration and Leadership required courses.

		Course Credits			Course Credits
<b>Healthcare Administration and Leadership Core Courses</b>			<b>Preceptorship Courses</b>		
<b>Required Credits: 54</b>			<b>Required Credits: 12</b>		
HCL 1113	Software Applications for Health	3	HCL 3903	Healthcare Preceptorship	4
HCL 1413	Healthcare Information Systems	3	HCL 4906	Healthcare Administration Preceptorship/ Capstone Project	8
HCL 2203	Introduction to Financial Management in Healthcare	3			
HCL 2503	Billing and Reimbursement	3			Course Credits
HCL 2603	Health Care Law and Ethics	3	<b>Business and General Education Required Courses</b>		
HCL 2703	Overview of Health Challenges	3	<b>Required Credits: 24</b>		
HCL 2713	Workflow Management for Healthcare	3	BUS 1003	Management and Leadership	3
HCL 2773	Health Care Customer Relationship Management	3	BUS 1503	Accounting for Managers	3
HCL 2803	Introduction to Health Informatics	3	BUS 3003	Managing People and Organisations	3
HCL 3003	Electronic Records Processing for Healthcare	3	BUS 4313	Employee Relations and UAE Labour Law	3
HCL 4003	Research Methods in Health Care	3	BUS 4513	Strategic Decisions with Management Science	3
HCL 4103	Health Care Policies	3	LSC 3013	Professional Communications	3
HCL 4113	Process Quality Management	3	LSN 1103	Anatomy and Physiology I	3
HCL 4203	Biostatistics and Epidemiology	3	LSN 1203	Anatomy and Physiology II	3
HCL 4303	Global Trends in Healthcare Systems and Issues	3			Course Credits
HIM 2103	Applied Pathophysiology for Health Information Management	3	<b>General Studies</b>		
HSC 1003	Introduction to Health Care Systems	3	<b>Required Credits: 39</b>		
HSC 1803	Medical Terminology for Health Sciences	3	Art and Humanities		6
			Communication		12
			Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

<i>Total Required Credits</i>	123	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Programme Code</i>	HCLAB
<i>Cost Recovery Programme</i>	No	<i>Major Code</i>	HCL





## Bachelor of Science in Nursing

The Bachelor of Nursing programme is a four-year post-foundations programme preparing graduates for professional nursing practice. Graduates are educated to provide evidence based nursing care with a patient centred focuses. The programme stresses knowledge of the biological, social and clinical sciences that underlie nursing practice including health promotion, prevention and restorative care. Students undertake both theory and clinical education in the areas of medical surgical, paediatric (children), maternal child, mental health and community nursing. Students undertake studies in

evidence based practice, research, and scholarship as well as an understanding of global health trends and health policy development. The programme promotes the development of analytical thinking, problem-solving abilities, communication skills, professional ethics, social responsibility, professional citizenship, the ability to adapt to changes and respond to challenges in nursing and a commitment to lifelong learning.

**Note:** 6 General Studies credit units are satisfied by Nursing Core Courses.

		Course Credits			Course Credits
<b>Nursing Core Courses</b>			<b>Nursing Clinical Courses</b>		
<b>Required Credits: 25</b>			<b>Required Credits: 73</b>		
HNR 1002	Concepts and Processes of Professional Nursing	2	HNR 1905	Integrated Nursing Therapeutics I - Fundamentals	5
HNR 1101	Introduction to Nursing Healthcare Terminology	1	HNR 1925	Integrated Nursing Therapeutics II - Gerontology	5
HNR 1201	Health Promotion Skills Across the Lifespan I	1	HNR 2906	Integrated Nursing Therapeutics III - Medical Surgical Nursing	6
HNR 1602	Introduction to Pharmacology	2	HNR 2925	Integrated Nursing Therapeutics IV - Mental Health Nursing	5
HNR 1702	Microbiology for Nursing	2	HNR 2943	Consolidated Clinical Practice I	3
HNR 2201	Health Promotion Skills Across the Life Span II	1	HNR 2948	Integrated Nursing Therapeutics V - Women and Family Health	8
HNR 2402	Pathophysiology and Therapeutics I	2	HNR 3907	Integrated Nursing Therapeutics VI - Community Health	7
HNR 2802	Pathophysiology and Therapeutics II	2	HNR 3927	Integrated Nursing Therapeutics VII - Emergency Care	7
HNR 3603	Introduction to Nursing Research and Statistics for Evidence Based Practice	3	HNR 3943	Consolidated Clinical Practice II	3
HNR 3622	Nursing Scholarship and Evidence Based Project I	2	HNR 4905	Integrated Nursing Therapeutics VIII - Critical Care	5
HNR 3653	Leadership in Health Care	3	HNR 4915	Transition to Professional Nursing Practice	15
HNR 4623	Directed Studies in Nursing	3	HNR 4921	Clinical Nursing Practice Option	1
HNR 4901	Nursing Scholarship and Evidence Based Project II	1	HNR 4943	Consolidated Clinical Practice III	3
<b>Required Science Courses</b>			<b>General Studies</b>		
<b>Required Credits: 6</b>			<b>Required Credits: 39</b>		
LSN 1103	Anatomy and Physiology I	3	Art and Humanities		6
LSN 1203	Anatomy and Physiology II	3	Communication		12
			Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	137	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	HNRAB
Cost Recovery Programme	No	Major Code	HNR

## Bachelor in Pharmacy

The Bachelor of Pharmacy programme is a four-year post-foundations programme preparing graduates as Pharmacists for professional practice in different areas of Pharmacy. Graduates are educated to provide quality pharmaceutical care with a patient centred focus. The programme stresses knowledge of the biological, chemical, pharmaceutical, clinical and social sciences that underpins pharmacy, an understanding of the relevance of that knowledge to patient care and pharmaceutical problem solving and the skills to apply that knowledge to specific pharmaceutical care circumstances. The programme provides students with

a firm foundation for lifelong learning by promoting the development of analytical thinking, problem-solving abilities, communication skills, technical skills, intellectual leadership potential and a commitment to professional ethics, social responsibility, professional citizenship and the ability to adapt to changes and respond to challenges in pharmaceutical healthcare delivery.

**Note:** 6 General Studies credit units are satisfied by Pharmacy Core Courses.

	Course Credits		Course Credits		
<b>Pharmacy Core Courses</b>		<b>Preceptorship Courses</b>			
<b>Required Credits: 63</b>		<b>Required Credits: 22</b>			
HPH 1204	Foundation Chemistry for Pharmacy	4	HPH 3904	Community Pharmacy Preceptorship I	5
HPH 1504	Introduction to Pharmacy	4	HPH 3954	Clinical Pharmacy Preceptorship I	5
HPH 2002	Pharmaceutical Microbiology	2	HPH 4904	Clinical Pharmacy Preceptorship II	5
HPH 2004	Biological Organic Chemistry	4	HPH 4924	Community Pharmacy Preceptorship II	5
HPH 2103	Immunology	3	HPH 4952	Industrial Pharmacy Preceptorship	2
HPH 2204	Medicinal Chemistry I	4			
HPH 2303	Pharmaceutics I	3			
HPH 2405	Pharmacology	5			
HPH 3013	Pathophysiology and Therapeutics I	3			
HPH 3023	Medicinal Chemistry II	3			
HPH 3033	Pharmaceutics II	3			
HPH 3103	Pharmaceutics III	3			
HPH 3123	Pharmaceutical Analysis	3			
HPH 3163	Pathophysiology and Therapeutics II	3			
HPH 4003	Bio-Technology	3			
HPH 4013	Complementary Medicine	3			
HPH 4023	Clinical Biochemistry and Toxicology	3			
HPH 4073	Pathophysiology and Therapeutics III	3			
HPH 4102	Pharmaceutical Care	2			
HPH 4112	Research Project for Pharmacy	2			
					<b>Course Credits</b>
			<b>Required Science Courses</b>		
			<b>Required Credits: 6</b>		
			LSN 1103	Anatomy and Physiology I	3
			LSN 1203	Anatomy and Physiology II	3
					<b>Course Credits</b>
			<b>General Studies</b>		
			<b>Required Credits: 39</b>		
			Art and Humanities		6
			Communication		12
			Emirati Studies		3
			Mathematics		3
			Physical and Biological Sciences		6
			Social and Behavioural Studies		9

Total Required Credits	124	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	HPRAB
Cost Recovery Programme	No	Major Code	HPR

# Bachelor in Social Work

The Bachelor of Social Work programme prepares the student for entry level professional social work practice. The four year programme provides graduates with theoretical and practical skills required to work as a professional social worker. Social workers help individuals, families, groups and communities to resolve problems and improve their capacity for social functioning. Social work practice utilises a social justice framework, counselling and advocacy skills and emphasises the importance of working

with disadvantaged and marginalised individuals, groups and communities. Social workers address barriers, inequalities and injustices faced by many groups and sub-groups in the community. Social work education includes a knowledge base that examines human behaviour and complex social interactions. The programme incorporates extensive supervised professional fieldwork experience in relevant social work settings.

		Course Credits			Course Credits
<b>Social Work Core Courses</b>			<b>Preceptorship Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 18</b>		
HSW 1003	Introduction to Social Work	3	HSW 3913	Social Work Practicum I	3
HSW 1023	Basic Counselling Skills	3	HSW 3963	Social Work Practicum II	3
HSW 1033	Social Diversity and Justice	3	HSW 4916	Social Work Practicum III	6
HSW 1203	Social Work in the UAE	3	HSW 4966	Social Work Practicum IV	6
HSW 1213	Abnormal and Clinical Psychology - Psychopathology	3			
HSW 1243	Foundation in Case Work	3			Course Credits
HSW 2023	Advanced Counselling in Social Work	3	<b>General Studies</b>		
HSW 2033	Laws and Ethics in Social Work in the UAE	3	<b>Required Credits: 39</b>		
HSW 2043	Populations at Risk 1: Family and Children	3	Art and Humanities		6
HSW 2223	Foundation in Community Organisation	3	Communication		12
HSW 2233	Foundation in Group Work	3	Emirati Studies		3
HSW 2243	Populations at Risk 2 : Aging, Special Needs	3	Mathematics		3
HSW 3033	Advanced Group Work	3	Physical and Biological Sciences		6
HSW 3043	Advanced Case Work	3	Social and Behavioural Studies		9
HSW 3223	Social Work Action and Advocacy	3			
HSW 3513	Family Systems and Counselling	3			
HSW 4013	Research Methodologies for Social Work	3			
HSW 4023	Advanced Community Organisation	3			
HSW 4213	Capstone Research Project	3			
HSW 4223	Social Work Administration	3			
HSW 4233	International Social Work-United Nations and other International agencies	3			

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Programme Code	HSWAB
Cost Recovery Programme	No	Major Code	HSW

## General Studies



The General Studies Unit is designed to prepare students for future success through curricular extensions in Bachelor programmes. General Studies support the Bachelor degrees by providing breadth through introducing students to ideas which will prepare students for a lifetime of continuing education. The General Studies courses cover Art and Humanities, Communication, Emirati Studies, Mathematics, Physical and Biological Sciences and Social and Behavioural Studies to offer students a broad base of knowledge which they can draw upon throughout their lives.

## Course Offerings in General Studies

DESCRIPTION: The General Studies Program courses do not make up a separate credential or degree but form a set of courses that all Bachelor-seeking students must complete. General Studies complement core courses

allow students to learn about ideas with which they otherwise might not come into contact. As a graduation requirement, all Bachelors students are required to take a minimum of 39 credit units of General Studies.

		Course Credits
<b>Art &amp; Humanities</b>		
<b>Required Credits: 6</b>		
LSF 2083	Introduction to Journalism	3
LSF 2203	Art Appreciation	3
LSF 2543	History & Practice of Photography	3
LSH 2103	Foundations for Reasoning	3
LSH 2113	Foundations of Leadership	3
LSH 2123	Introduction to Hispanic Culture, History and Language	3
LSH 2133	Introduction to Japanese Language and Society	3
LSH 2203	Critical Thinking	3
LSH 2223	Introduction to Ethics	3
LSH 2343	Ethical Issues	3
LSH 2803	Historical Perspectives of the Arab World	3
LSH 2813	Modern History of the Gulf	3
LSH 2823	Modern History of the Middle East	3
LSH 2903	Community Service Learning	3
LSH 2913	Drama Appreciation	3

		Course Credits
<b>Communication</b>		
<b>Required Credits: 12</b>		
LSC 1003	Applied German Communications	3
LSC 1103	Academic Reading and Writing 1	3
LSC 1203	Creative Writing	3
LSC 1303	Introduction to Literature	3
LSC 1503	Academic Spoken Communication	3
LSC 2103	Academic Reading and Writing 2	3
LSC 2113	English for Classroom Management	3
LSC 2123	English for Engineering Technology	3
LSC 2133	English for Health Sciences	3
LSC 2143	English for Computer Users	3
LSC 2153	English for The Media	3
LSC 2163	English for Business Studies	3
LSC 2173	English for Aviation	3
LSC 3003	Professional Arabic	3
LSC 3013	Professional Communications	3

		Course Credits
<b>Emirati Studies</b>		
<b>Required Credits: 3</b>		
LSG 1003	Islam and Globalisation	3
LSG 1013	Emirati Studies	3

		Course Credits
<b>Mathematics</b>		
<b>Required Credits: 3</b>		
LSM 1003	Applied Mathematics	3
LSM 1053	College Algebra	3
LSM 1103	Technical Mathematics	3
LSM 1113	Statistical Mathematics	3
LSM 1123	Quantitative Reasoning	3

		Course Credits
<b>Physical &amp; Biological Science</b>		
<b>Required Credits: 6</b>		
LSN 1003	Human Sciences I	3
LSN 1013	Human Sciences II	3
LSN 1023	Human Biology	3
LSN 1043	Introduction to Geology	3
LSN 1103	Anatomy & Physiology I	3
LSN 1113	Introduction to Sustainability	3
LSN 1123	Science, Technology and Civilisation	3
LSN 1203	Anatomy & Physiology II	3
LSN 1213	Personal Health & Physical Education	3
LSN 1223	Chemistry	3
LSN 1263	Physics	3
LSN 1303	Health and Wellness	3
LSN 2003	Archaeology: Preserving Cultures	3
LSN 2313	Scientific Principles	3
LSN 2433	Ecology	3
LSN 2503	Introduction to Nutrition	3

		Course Credits
<b>Social &amp; Behavioral Studies</b>		
<b>Required Credits: 9</b>		
LSS 1233	Human Growth & Development	3
LSS 1243	Introduction to Social Sciences	3
LSS 2003	Creating Your Future	3
LSS 2013	The World of Work	3
LSS 2053	Cultural Diversity	3
LSS 2063	Culture, Climate, and Values	3
LSS 2093	Intercultural Intelligence	3
LSS 2103	Personal Finance	3
LSS 2203	Psychology	3
LSS 2313	Economics	3
LSS 2323	Economics of the UAE	3
LSS 2333	Sociology	3
LSS 2533	Research Methods	3
LSS 3003	Sports, Leisure, and Society	3

Total Required Credits	39	Minimum Duration of Study	2
Maximum Duration of Study	6	Programme Code	
Cost Recovery Programme	No	Major Code	

## Foundations



The Foundations Studies Programme supports students needing assistance in meeting Bachelor degree admission. The Foundations Studies Programme consists of four levels of English preparation and two levels of mathematics. Depending on a student's entry level scores, a student may spend between one semester (entering at the highest level) and four semesters (entering at the lowest level) preparing to meet degree admission criteria. To exit Foundations, students must earn an IELTS overall band 5.0 no band below 4.5, or an accepted equivalence. Students that do not meet Foundation entry requirements can study the Pre-Foundations courses.

## Course Offerings in Foundations

Pre- Foundation Courses		Course Credits	Foundation English Courses		Course Credits
FND 0010	Pre Foundation English I	16	FND 1016	Foundations English Level I	16
FND 0020	Pre Foundation English II	16	FND 2016	Foundations English Level II	16
			FND 3016	Foundations English Level III	16
			FND 4016	Foundations English Level IV	16
Foundation Mathematics Courses		Course Credits			
FND M010	Foundation Mathematics I	5			
FND M020	Foundation Mathematics II	5			

# APPENDICES



## Appendix A: Glossary

### **ACADEMIC ACCOMMODATION:**

Variations to academic procedures and requirements provided for students with Special Needs.

### **ACADEMIC CENTRAL SERVICES (ACS):**

The HCT entity tasked with providing academic leadership to ensure the quality of teaching, learning, evaluation, curriculum and assessment by working in cooperation and collaboration with the colleges.

### **ACADEMIC DISMISSAL:**

Termination from the HCT for academic reasons.

### **ACADEMIC HONESTY:**

An expectation that students will conduct their academic activities fairly and honestly with particular emphasis on avoiding cheating and plagiarism.

### **ACADEMIC PROGRAMME:**

A list of course requirements that must be successfully completed in order to be eligible for an HCT credential.

### **ACADEMIC AND STUDENT REGULATIONS:**

The official record of any standard, statement or procedure of general applicability adopted by the Governing Council or the Chancellor that addresses compliance with fiscal, academic, research, human relations, or other management standards and requirements imposed by federal or emirate laws or implementing regulations.

### **ACADEMIC STANDING:**

An indicator of a student's progress in a programme, normally based on Grade Point Average (GPA).

### **ACADEMIC YEAR:**

The Academic Year at the HCT is from September 1st to August 31st of the following year.

### **ACTIVE STUDENT STATUS:**

A student who has been admitted into a programme of study including the Foundations Programme and is registered in the relevant courses in an HCT programme at an HCT college.

### **ADMITTED STUDENT:**

A student who has received notice that he/she meets the HCT entry requirements, and has been approved for admission to a specific college. This does not guarantee registration into courses in a specific programme of study.

### **ALTERNATIVE ASSESSMENT:**

An assessment activity to be completed by a student who has shown that extenuating circumstances adversely affected their performance in the relevant, original assessment or their ability to attend the original assessment on its scheduled date. All grades are possible for an alternative assessment.

### **ARTICULATION AGREEMENT:**

An agreement developed between the HCT and another institution that determines course/programme equivalencies and outlines procedures for students to transfer between the institutions.

### **COLLEGE:**

An individual physical campus within the HCT system to which a student may be admitted.

### **CHEATING:**

A deliberate attempt to gain marks or academic credit dishonestly, or helping someone else to gain marks or academic credit dishonestly.

### **COLLEGE ASSESSMENT:**

Assessments that are prepared, administered and marked within individual colleges.

### **COMMON EDUCATIONAL PROFICIENCY ASSESSMENT (CEPA).**

Tests developed and supervised by the National Admissions and Placement Office (NAPO) for all 12 year grade students seeking higher education in the UAE. CEPA (English) is used to determine eligibility for placement into Associate and Bachelor's degree courses. CEPA (Math) is a compulsory part of the application process, and students without a CEPA (Math) score are not eligible for higher education courses.

**CONTACT PERIOD:**

A contact period of a course may be delivered in one or a combination of delivery modes. At the HCT, delivery modes for contact periods include:

- Face to face instruction,
- Laboratory/workshop,
- Clinical or work preceptorship (Health Sciences Division only),
- Practicum (Education Division only),
- Clinical practicum (Health Sciences Division only) and
- Work experience.

**CO-REQUISITE COURSES:**

Courses that must be taken together in the same semester.

**COURSE:**

A defined set of learning outcomes which a student must successfully complete as part of a programme of study.

**COURSE OUTLINE:**

A document defining the learning outcomes and other related information which make up an HCT course.

**CREDENTIAL:**

An Applied Diploma, Higher Diploma, Bachelor or Master Degree awarded on successful completion of the relevant programme.

**CREDIT (COURSE CREDIT):**

Credit is granted in recognition that a course of studies has been successfully completed, and as an indication of the amount of learning. The amount of credit awarded is based on the requirement for learning outcomes, irrespective of the type of learning, the place or other context in which the learning takes place, or the way in which learning is assessed. Course credit is measured in semester hours. A semester hour is 16 guided learning hours.

**CUMULATIVE GRADE POINT AVERAGE (CGPA):**

A numerical value derived from final grades on all courses attempted at all credential levels.

**DIRECT ENTRY STUDENT:**

A student who is determined by the HCT college director as academically exceptional and able to enter directly into the first year of a Bachelor Programme.

**DISMISSAL:**

Termination from the HCT for non-academic reasons.

**DURATION OF STUDY:**

Duration of study is the maximum time a student is allowed to complete a particular programme or major. The duration of study is calculated from the date of first registration in the relevant programme major and includes all absent periods.

**ENROLLMENT:**

The act of placing an admitted student into an academic programme for which they meet all of the programme entry requirements. An enrolled student is a student who has been admitted to a programme of study including the Foundations Programme and is registered in the relevant courses in an HCT programme at an HCT College.

**EQUIVALENT:**

Courses in HCT programme structures at the same or more advanced credential level may be considered equivalent for the purpose of meeting programme compliance for graduation where comparisons of the learning outcomes, general subject matter, depth and breadth of coverage of the subject matter, as well as the assessment methods, instruments, and standards is assessed to be equivalent.

**EXEMPTION:**

Exemption grades are awarded in instances of documented prior learning where a student has successfully completed courses covering the same or a more advanced content area at an equivalent or higher credential level within the Higher Colleges of Technology.

**FACE-TO-FACE INSTRUCTION:**

The contact time is dedicated to face-to-face interaction.

**GOVERNMENT SECONDARY-SCHOOL CERTIFICATE (GSC):**

A Certificate awarded by the UAE Ministry of Education to all government secondary school graduating students. A GSC or equivalent is normally required for admission to the HCT.

**GRADE POINT AVERAGE (GPA):**

A numerical value derived from final grades on all courses attempted which is recorded on the student's transcript.

**GRADUATE OUTCOMES:**

The knowledge, skills and attributes that the HCT expects its students to possess and be able to demonstrate when they graduate from an HCT academic programme.

**GRADE REPORT:**

An unofficial transcript that shows the student's grades in all courses taken to date.

**GUIDELINES:**

Any supporting information intended to assist the implementation of a policy or regulation.

**INACTIVE STUDENT STATUS:**

A student is accorded inactive status on the 21st teaching and the last teaching day of a semester, before the official census count date, if there are no records of his current registration in any courses.

**INTERNATIONAL ENGLISH LANGUAGE TESTING SERVICE (IELTS):**

IELTS Academic Module is an international English test that is an admission criterion for degree programmes.

**LABORATORY/WORKSHOP:**

The contact time in a laboratory or workshop is dedicated to the investigation, exploration and hands-on practice of the knowledge, skills and practical techniques learned in the face-to-face lessons.

**LEARNING OUTCOME:**

A statement to describe what a student knows or can do on successful completion of a learning activity or course.

**NON-CURRENT NATIONAL APPLICANTS:**

Non-current national graduates from government and private secondary schools not in the current academic year may also be considered for admission. Non-current applicants must have completed grade 12, passed the GSC exams or hold equivalent qualifications, and have completed the Common Education Proficiency Assessment (CEPA) within one year of the date of admission. Admission is based on space availability and requires the approval of the relevant College Director.

**PERIOD:**

A process intended to assure that an assessment mark or grade is fair and reliable and that assessment criteria have been applied consistently.

**POLICY:**

A written statement of rule that has general applicability to all members of the HCT community and addresses basic values of the HCT, mandates or constrains certain actions or contains specific requirements for compliance and requires formal approval by the Vice

Chancellor or the Policy Council.

**PLAGIARISM:**

Deliberately presenting another person's work as one's own without acknowledging the original source.

**PRACTICUM:**

A mentored working experience, defined by a course code and typically assessed as A B C D F which is included in Cumulative Grade Point Average (CGPA), that is a graduation requirement for some HCT programmes.

**PREREQUISITE COURSES:**

Courses that must be successfully completed before attempting specific higher level courses.

**PROCEDURE:**

A set of guidelines, process or set of steps approved by the relevant Executive Officer for that division or department which, if followed, implements a policy or regulation.

**PROGRAMME ENTRY REQUIREMENTS:**

The minimum academic requirements as defined for entry into a particular academic programme.

**PROGRAMME GPA:**

The programme grade point average is calculated based on all courses taken at a specific credential level.

**PROGRAMME LENGTH:**

The number of academic years defined for each of the credentials awarded by the HCT.

**PROGRAMME MAJOR:**

A focus of study within an Academic Faculty that when successfully completed leads to a specific credential.

**PROGRAMME REGULATIONS:**

Requirements as specified in individual HCT programmes that applicants or students must meet in order to gain admission into the programme and meet compliance to graduate from them.

**REASONABLE ACCOMMODATION:**

Accommodations within the human, financial, physical and safety resources of each Campus and/or of the HCT system.

**REGISTERED STUDENT:**

A student who has been admitted into a specific programme of study and is registered in the relevant courses at a HCT College.

**SECTION:**

A particular offering of a specific course into which students are registered.

**SEMESTER:**

A designated period of time lasting a maximum of 20 weeks. There are two semesters per academic year and an optional summer session.

**SEMESTER GPA:**

The semester grade point average is calculated on the basis of all the courses that a student has taken at the HCT in a particular semester. Only grades that count in GPA hours are included. The semester GPA will not change if a student fails a course in one semester, then repeats and passes it in another semester. Only the successful attempt is counted in the Programme and the cumulative GPA.

**SPECIAL NEEDS:**

A situation under which, through permanent or temporary, total or partial impairment, or dysfunctions of a physical, sensory, mental, communicational, educational or psychological nature may cause an individual to experience challenges to his/her learning.

**SPECIFIC PROGRAMME REQUIREMENTS:**

Specific academic requirements applicable to individual academic programmes which must not contravene the general programme requirements.

**STUDENT:**

Any individual entered into the HCT Student Record System.

**SUCCESSFUL COMPLETION OF COURSE:**

When a student has demonstrated, through the assessment methods prescribed by the course instructor, the achievement, to the minimum level defined for the course based on the HCT Grading policy, of all the learning outcomes which make up a course.

**SUSPENSION:**

A required temporary absence from the HCT.

**SYSTEM:**

The System of the Higher Colleges of the Technology.

**TEST OF ENGLISH AS A FOREIGN LANGUAGE (TOEFL):**

An international English test administered to determine language proficiency.

**TRANSFER CREDIT:**

Transfer Credit is the recognition of documented prior learning demonstrating successful completion of credits for course(s) that match or exceed the standard of the HCT course at institutions of higher learning other than the Higher Colleges of Technology.

**TRANSCRIPT:**

An official report issued to other educational institutions and/or employers that shows the student's grades in all courses taken to date.

**WORK EXPERIENCE:**

Supervised work experience underpins and enhances the theoretical knowledge and practical skills learned in face-to-face lessons and/or laboratory and workshops. It helps students develop their personal work ethics, guides them in their career choice, and prepares them for an active role in the UAE workplace.

## Appendix B: Course Descriptions

### AHM 1104 - AVIATION MATHEMATICS (MOD 1 B1 & B2)

Aviation technology is governed by the laws of physics. All aircraft systems must obey the laws of physics, and therefore must obey the laws of mathematics which relate to physics. In order to design and build aircraft and aircraft systems, as well as maintain those systems, engineers need to have a good foundation in mathematics. This course introduces and applies mathematical concepts that are essential for engineers in the field of aircraft maintenance, as required by GCAA CAR 66 Module 1. Topics covered include: arithmetic, algebra and geometry.  
CREDITS: 4.00

### AHM 1204 - AVIATION PHYSICS (MOD 2 B1 & B2)

This course is designed to develop fundamental principles of physics relevant to aviation technology, as required under GCAA CAR 66. Topics covered include: matter, statics, kinetics, dynamics, fluid dynamics, thermodynamics, optics, wave motion and sound.  
CREDITS: 4.00

### AHM 1309 - ELECTRICAL FUNDAMENTALS (MOD 3 B1 & B2)

This common course is delivered to all aviation students to furnish the needed background. It provides knowledge of electrical fundamentals and characteristics and the production and utilisation of electrical power. This course meets all the requirements of CAR 66 Module 3.  
CREDITS: 9.00

### AHM 1803 BASIC AERODYNAMICS (MOD 8: B1 & B2)

Aerodynamics is the study of objects moving through the air. In effect, aerodynamics is concerned with the aircraft, the relative wind and the atmosphere. This common course is delivered to all aviation diploma and higher diploma students in semester two, and furnishes the basic knowledge of aerodynamics required for entry into GCAA CAR Module 11 and 13 courses. This course meets the requirements of GCAA CAR Module 8.  
CREDITS: 3.00

### ANIM N300 - CHARACTER DESIGN

Provides the student's with the skills to design a variety of characters that meets the requirements of the script, scene, genre and storyline.  
CREDITS: 4.00

### ANIM N301 - STORYBOARDING

Students learn the concepts and theories of applied storyboarding techniques used to communicate the essential elements of shot, scene and storyline.  
CREDITS: 4.00

### ANIM N302 - 3D MODELLING

In this course the students learn to model three-dimensional objects, and simple characters, using a variety of techniques in the Autodesk Maya environment.  
CREDITS: 4.00

### ANIM N303 - INTRODUCTION TO 3D ANIMATION

Covers the basic structure of the 3D animation production pipeline. The emphasis of the course is primarily on creation of the animation performance of simple objects and characters using applied animation principles in a 3D environment.  
CREDITS: 8.00

### ANIM N304 - CHARACTER ANIMATION 1 AND ACTING FOR ANIMATION

Designed to build solid skills in character performance for application within individual shots and scenes and for direct application in short film production.  
CREDITS: 8.00

### BMAC N200 - FINANCIAL ACCOUNTING I

Introduces the basic financial accounting principles including the role of accounting in business, financial statements and the accounting cycles. This course provides students with the skills to prepare financial statements and then use them to make effective management decisions with emphasis on interpreting financial statements and using examples from

several UAE and international organisations. Ethical considerations and management in the global context are integrated into these topics.

CREDITS: 4.00

### **BMAC N250 - FINANCIAL AND MANAGEMENT ACCOUNTING**

Enables students to prepare financial statements and use them to make effective management decisions. Emphasis is placed on interpretation of financial statements, using examples from several UAE and international companies. Ethical considerations and management in the global context are integrated into these topics.

CREDITS: 4.00

### **BMAC N300 - FINANCIAL ACCOUNTING II**

BMAC N300 continues and builds upon Financial Accounting topics introduced in BMAC N200 and BMAC N250. The course provides the students with the knowledge of how to identify and apply the concepts and the principles of accounting. Other topics on balance sheet items covered in more detail are long term assets, short and long term liabilities and accounting for corporations.

CREDITS: 8.00

### **BMAC N310 - MANAGEMENT ACCOUNTING I**

Develops accounting analysis skills useful for managerial decision making purposes. Topics include target profit, product costing, JIT and ABC, segmented reporting, cost allocation, and decision analysis. The course introduces students to the evolving role that managerial accounting has played, and is expected to play, in servicing the informational needs of managers in the planning, organising and controlling functions.

CREDITS: 8.00

### **BMAC N350 - MANAGEMENT ACCOUNTING II**

Builds on the material covered in previous courses. This is an advanced course covering the following topics: Total quality management (TQM), mixed costs, balanced scorecard, transfer pricing, budgeting, and capital expenditure decisions. Students in this course gain the knowledge of the accounting techniques internal management uses to aid in planning, directing, controlling and decision-making activities.

CREDITS: 4.00

### **BMAC N400 - INTERMEDIATE FINANCIAL ACCOUNTING**

Examines important topics, such as the FASB's Conceptual Framework, that serve as a foundation for a more detailed study of financial statements. The course provides an overview of the balance sheet, its financial disclosures and limitations. It also considers important issues in dealing with income statement content, presentation, disclosure and the timing of revenue recognition.

CREDITS: 4.00

### **BMAC N410 - MANAGEMENT ACCOUNTING ISSUES**

This course is for graduates of the Accounting Higher Diploma programme who have continued into the Bachelor of Applied Science. The course builds upon the material covered in Management Accounting I and II. This is an advanced course, covering the nature of management control systems and its influence on human behaviour.

CREDITS: 4.00

### **BMAC N450 - ADVANCED FINANCIAL ACCOUNTING**

Most managerial decisions are based on financial information that accountants develop. Thus, this course studies the accounting reports produced for financial decision making. It provides the students with the necessary knowledge to succeed in the modern world of accounting. The emphasis throughout is on financial accounting concepts and their application to problems arising in UAE and international business organisations.

CREDITS: 4.00

### **BMAC N460 - AUDIT**

Designed to provide students with a basic understanding of the auditing aspects of accounting. These include the objectives of an audit, and the auditor's duty. In addition, this course examines the role of auditing in the assessment of the reliability of financial information within the context of the UAE.

CREDITS: 4.00

### **BMAC N470 - GOVERNMENT ACCOUNTING**

Enables students to understand government fiscal activities that impact the economy; government financial reporting models; the government's power, as the major purchaser of goods and services, to

impose levies, taxes and investments. Government activities are examined closely through mechanisms, such as budgets and appropriations. The course covers the fundamentals of fund accounting as well as basic financial statements.

CREDITS: 4.00

### **BMAC N480 - BUSINESS TAXATION**

Emphasises tax concepts and issues. The course explains the principles and the professional standards governing the tax systems. In addition, it provides an approach to the taxation of individuals and a more in-depth study of the taxation of different business entities. This course particularly focuses on technical details to provide a foundation for future practice in taxation and consulting.

CREDITS: 4.00

### **BMET N200 - INTRODUCTION TO BIOMEDICAL ENGINEERING**

Introduces biomedical technology as applied prevention, diagnosis and treatment of human disease and the maintaining and improving of the quality of life.

CREDITS: 4.00

### **BMET N250 - BIOMATERIALS**

Introduces techniques and skills of biomaterial technology as applied to real life situations. Developing materials for use in medicine is a challenging interdisciplinary process and requires an understanding of material bulk and surface properties, the various biological responses to the materials, the clinical context of their use, manufacturing processes, cost, sterilisation, packaging, and regulatory issues.

CREDITS: 4.00

### **BMET N300 - PROJECT**

Focuses on planning, designing, implementing, testing and analysing a biomedical engineering project. The student is guided by faculty and is required to meet deadlines and milestones for the integration and application of technological, organisational, communication and interpersonal skills.

CREDITS: 4.00

### **BMET N305 - BIOMEDICAL INSTRUMENTATION**

Introduces the principles, applications and design of medical instrumentation commonly used in hospitals and clinics.

CREDITS: 4.00

### **BMET N360 - BIOMEDICAL SIGNAL PROCESSING AND ANALYSIS**

This course introduces signal processing techniques for analysing common physiological signals as a means of clinical diagnosis and patient monitoring. The properties of bioelectric and biomechanical signals are analysed using filtering, event detection and estimation, waveform analysis, frequency characterisation, and pattern classification.

CREDITS: 4.00

### **BMET N400 - PROJECT**

Includes planning, designing, implementing, testing and analysing a biomedical engineering project of the student's choice in consultation with the academic supervisor. The student will be guided by a faculty member and is required to meet deadlines and milestones. The project is practical in nature with emphasis on learning by doing (LBD).

CREDITS: 8.00

### **BMET N402 - CONTROL SYSTEMS**

Introduces methods for analysis and control of linear time-invariant feedback systems using Bode diagrams, root locus, pole placement, and observer techniques. The course presents analytical methods to determine, assess and set the control system stability and response time with considerations of the system damping.

CREDITS: 4.00

### **BMET N405 - BIOINFORMATICS**

Introduces basic genetics and the application of computational techniques to search biological databases to compare sequences and protein structures.

CREDITS: 4.00

### **BMET N410 - DESIGN OF MEDICAL DEVICES I**

Presents the design of biomedical devices from conception to delivery, using industry examples. It presents pertinent issues in the design process and explores the best practices in material selection, safety, prototyping, premarket testing and validation, liability, and learning from failure. Students are introduced to new concepts in hardware and software design, including the use of computer-aided tools to predict and document safety-related design issues.

CREDITS: 4.00

### **BMET N450 - MODELLING AND SIMULATION OF BIOMEDICAL SYSTEMS**

Introduces computer-based methods for implementing

mathematical functions to model the operation of various cellular and physiological systems. In particular, students use software packages to apply presented theoretical analyses and algorithms to model the input/output relational characteristics of common biological and physiological processes, such as cellular population growth, ion transport, action potential propagation, cardiac pressure signal, heart rate control, and insulin-glucose control systems.

CREDITS: 4.00

#### **BMET N455 - DIGITAL SIGNAL PROCESSING**

Introduces the theoretical and practical aspects of digital signal processing as applied to biomedical signals using a software package. It reviews analogue to digital and digital to analogue conversion techniques as well as the sampling theorem. Difference equations, correlation, convolution, Fourier analysis, and Z-transform are examined. Finite and Infinite Impulse Response (FIR and IIR) filters are designed for common physiological signals, such as the electrocardiogram (ECG), electroencephalogram (EEG), and arterial blood pressure (ABP) signals.

CREDITS: 4.00

#### **BMET N460 - DESIGN OF MEDICAL DEVICES II**

Strengthens the skills developed in Design of Medical Devices I through software applications in the field of healthcare and biomedical engineering. The course introduces virtual instrumentation applications (such as LABVIEW and Bio Bench) to empower students to conceive, develop, and implement a wide variety of research-based applications and executive information tools. These applications fall into several categories, including clinical research, equipment testing and quality assurance, data management and performance improvement.

CREDITS: 4.00

#### **BMET N465 - CLINICAL ENGINEERING AND SAFETY MANAGEMENT**

Covers engineering, scientific, and legal aspects of safety. It covers changes in engineering and science, law and regulatory demands, and the attitude of workers and the public. The course examines the ability of technology to respond to change. Students gain knowledge about the complex, and potentially hazardous situations in their work environment, how individuals and government work together to better inform and protect workers.

CREDITS: 4.00

#### **BMET N470 - TELEMEDICINE APPLICATIONS**

This course describes the developments in the delivery of remote healthcare and explains the main features of telemedicine and telecare. Students learn how information technology is used to enhance healthcare delivery in general practice, acute and secondary care as well as to communities.

CREDITS: 4.00

#### **BMFS N150 - INTRODUCTION TO FINANCIAL SERVICES**

Introduces the students to the financial services industry, the organisations and institutions that comprise the industry, financial instruments used, the financial markets and enables students to usefully apply these concepts. The course also introduces the student to Islamic banking and the insurance industry. Particular emphasis is placed on the application of this knowledge to the financial industry as it relates to the UAE. Finally, the course introduces and develops an understanding of regulatory issues, the central bank, and future trends in the industry.

CREDITS: 4.00

#### **BMFS N230 - PERSONAL FINANCIAL MANAGEMENT**

Provides the students with the basic understanding of the importance of managing their own finances and the process to do so. The course looks into the financial needs of an individual, as well as the products and services available to individuals from the industry, ranging from basic deposit and borrowing products to insurance, investment, real estate and retirement planning.

CREDITS: 4.00

#### **BMFS N300 - FINANCIAL MANAGEMENT FUNDAMENTALS**

Designed to give students the necessary exposure to the various tools used in analysing and evaluating the financial performance of businesses and of small, medium and large sized companies. Students learn how to calculate and analyse the various liquidity, profitability and debt utilisation ratios.

CREDITS: 4.00

#### **BMFS N310 - MARKETING FOR FINANCIAL SERVICES**

Introduces the financial services and banking student to the basics of marketing in the context of the financial services industry. Marketing financial services is a

specialised area of marketing, and therefore emphasises the application of marketing tools and techniques in financial services and banking.

CREDITS: 4.00

### **BMFS N320 - FINANCIAL SERVICES FOR CORPORATE CLIENTS**

Studies the various financial services offered by corporate banks and other financial services providers to small, medium and large corporate clients. Students examine the range of deposit products, insurance services and the various sources of short, medium and long term finance available to corporate clients from the various bank and non-bank financial institutions.

CREDITS: 4.00

### **BMFS N330 - INTERNATIONAL TRADE AND FINANCE**

Introduction to the world of international trade and finance, the foreign exchange market and FOREX exposure management. Students identify the risks underlying international trade, the various exchange rate systems around the world, the major factors that affect foreign exchange rates, the main hedging techniques offered by banks to manage FOREX exposure, and the INCO terms/documents used by the contracting parties involved in international trade.

CREDITS: 4.00

### **BMFS N350 - BANKING MANAGEMENT SIMULATION**

Gives the student the opportunity to manage a bank in a simulated environment. Students conduct in-depth analysis of the performance of their bank in a changing, competitive and economic environment using computer simulations. Students learn to make strategic management decisions in the areas of lending and deposit rates, investments, marketing of services, human resources and financial management.

CREDITS: 8.00

### **BMFS N360 - INVESTMENT MANAGEMENT**

Provides an overview of the basic concepts, tools and strategies used in investment management. Students will review the wide range of financial markets and investment instruments, examine risk and return calculations, learn about Mutual Funds, Hedge Funds, ETFs and modern hedging strategies.

CREDITS: 4.00

### **BMFS N362 - LAW RELATING TO FINANCIAL SERVICES AND BANKING IN THE UAE**

Study of law and the basic areas of law, in particular pertaining to commercial law as it relates to financial services and banking in the UAE. The course builds upon a basic understanding of the law to result in the application of the specific laws that relate to Financial Services and Banking courses.

CREDITS: 4.00

### **BMFS N400 - ADVANCED FINANCIAL ANALYSIS**

Designed to ensure that students develop the skills necessary to analyse and interpret the wide range of financial ratios that can be calculated from both the financial and management accounts, which are presented by large, medium and small sized corporations, to corporate bankers and other financial services institutions.

CREDITS: 4.00

### **BMFS N410 - INSURANCE**

Provides an overview of the global and local insurance industry. The various roles of the insurance industry in the development of the global and local economy are explored, at both a macro and micro level. Particular emphasis is placed on applying this knowledge to the challenges and opportunities facing the insurance industry as a result of globalisation and the changes this will bring to the local insurance market.

CREDITS: 4.00

### **BMFS N450 - INVESTMENT ANALYSIS**

Introduces students to the fundamentals of investment analysis. The course focuses on real world examples including the US, UK, European and UAE equity and debt markets, as well as other world equity and debt markets. The concept of logical portfolio building using a mixture of risk-free and risky assets will be explained. Students are encouraged to perform their own analysis on selected issues and to follow current investment articles in the financial press.

CREDITS: 4.00

### **BMFS N460 - LENDING AND SECURITIES**

Provides students with the skills necessary to make decisions about the provision of facilities and financial packages for corporate customers based on their financial statements and risk weighted valuations of the security offered in support of their requests. Students

learn about both the direct security from the lender and the collateral security from corporate groups and director guarantors in support of the overall request for facilities and financial packages.

CREDITS: 4.00

### **BMFS N470 - ISLAMIC BANKING AND INSURANCE**

An introduction to the study of Islamic Banking and insurance and a basic knowledge of the conventional banking system. Basic micro and macro economics are prerequisite for this course. Students are introduced to the basic fundamentals of Islamic economics and shown how these have influenced the development of Islamic banking and insurance institutions and instruments.

CREDITS: 4.00

### **BMGN N100 - BUSINESS PROCESSES AND CRITICAL THINKING**

Teaches the basics of business through critical analysis of business scenarios and independent research. Business basics in the fields of economics, management, human resources, marketing, accounting and entrepreneurship are introduced using practical applications and scenarios which reflect business activities in the UAE and internationally.

CREDITS: 4.00

### **BMGN N150 - INTRODUCTION TO MANAGEMENT**

An overview of relevant principles and practices as applied in organisations. The course describes managerial roles and functions with descriptions of different organisational structures, different leading methods and styles, and controlling and planning issues. The course aims to enable students to comprehend the basics of management and then apply this knowledge to practical situations through analysis of current events and developing management issues, both locally and international.

CREDITS: 4.00

### **BMGN N250 - ORGANISATIONAL BEHAVIOUR**

Introduction to the reasons behind, and issues relating to, people's behaviour within an organisation and the processes of organisational change. The course defines organisational behaviour and its importance. It then proceeds to explore motivation, leadership, group behaviour, cultural issues, organisational change and conflict and power in organisations. These issues are

looked at within the context of organisations generally and those within the UAE specifically. Applications of organisational improvement will synthesise the principles.

CREDITS: 4.00

### **BMGN N300 - E-COMMERCE**

The Internet is being used in consumer-business, business-business, and intra-business applications. This course identifies how technologies allow businesses to overcome the barriers of geographic boundaries to market, produce, and deliver products and services electronically, and how it has also given rise to virtual organisations.

CREDITS: 4.00

### **BMGN N310 - COMMERCIAL LAW AND PRACTICES IN THE UAE**

Introduces the study of law and the basic areas of law, in particular pertaining to commercial law in the UAE. The course builds upon a basic understanding of the law to result in the application of more specific laws to commercial enterprises and workplace situations. Students develop the ability to recognise competing and conflicting legal interests, rights and obligations in various commercial fact situations, understand basic dispute resolution methods analyse fact situations and apply the appropriate law.

CREDITS: 4.00

### **BMGN N320 - LEADERSHIP AND TEAM BUILDING**

Develops the learner's own management and leadership skills as well as developing the skills and knowledge needed to manage and lead people and teams in an organisation. The course covers the theory and practical application of the leadership function, motivation, conflict resolution, performance evaluation and team building. The learner is provided the opportunity to study the theories and to apply those theories through projects and research.

CREDITS: 4.00

### **BMGN N340 - MANAGEMENT INFORMATION SYSTEMS**

Focuses on the role of computer-based information systems in business organisations from a management perspective. The strategic nature of an information system is emphasised in relation to other business systems. Students learn that managers must also

understand the major parts of an information system, their general interrelationships and appropriate terminology in order to communicate business requirements successfully with IT professionals. Students also learn how managers analyse data using off-line and on-line software tools.

CREDITS: 4.00

### **BMGN N350 - BUSINESS TACTICS**

Requires students to undertake decision making on a competitive basis, about marketing, production and finance. The course comprises a business decision simulation via a computerised simulation of a specific market's performance. Teams and individuals compete to achieve the best results by analysing and managing the information provided by each stage of the computer's simulation.

CREDITS: 8.00

### **BMGN N400 - TOTAL QUALITY MANAGEMENT**

An integrated approach to total quality management (TQM). Students draw on what they have learned in courses such as marketing, economics, organisational behaviour and statistics. The class models best practice by focusing on internal and external customer requirements, continuous improvement, the use of teams and data-based decision making.

CREDITS: 4.00

### **BMGN N410 - INTERNATIONAL BUSINESS**

Examines the international business environment, specifically as it relates to the management of international companies. Students describe and apply the principles of managing an international business, compare the social, political and business cultures around the world, examine world trade issues and their impact on international business, analyse the complexities and different modes of entering the international market and design a strategic plan for doing business internationally from within the UAE.

CREDITS: 4.00

### **BMGN N430 - STATISTICAL ANALYSIS**

Introduces the use of statistical techniques in solving business problems. The course emphasises how descriptive and inferential statistics can be applied to business environments. Students will identify the procedures by which data are collected, organised, presented, analysed and interpreted.

CREDITS: 4.00

### **BMGN N450 - MANAGEMENT STRATEGY AND POLICY**

This course, as a capstone to management courses, takes an integrated approach to the teaching of the subject and to assessing the students. It imparts understanding of the framework of the strategic management process; analyses strategy formulation; analyses strategy implementation in the context of designing organisational structures and control systems; examines social and ethical responsibilities of business strategy and expects students to apply their knowledge analytically and creatively to the analysis of case studies.

CREDITS: 4.00

### **BMGN N460 - OPERATIONS MANAGEMENT**

Covers a range of principles and practices of organising, manufacturing and service operations with a special focus on operations in the UAE. Students recognise common and unique aspects of the UAE operating environment, determine how the manufacture of goods and provision of services fits into an organisation's overall strategy and design manufacturing and service processes and plan their implementation. A management viewpoint with an emphasis on pattern recognition and problem solving is built throughout the course.

CREDITS: 4.00

### **BMGN N470 - PROJECT MANAGEMENT**

Provides the necessary tools and information to manage and control projects and their resources. Project management is defined, project phases and goals are identified and stakeholder impact is discussed. It covers a range of principles and practices in the initiation, planning, staffing, coordinating and completing of a project within the triple constraints of schedule, budget and performance.

CREDITS: 4.00

### **BMGN N480 - ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT**

Students learn how to identify business opportunities and assess feasibility to start up and manage a small business. During the course students create a business plan suitable for presentation to a funding source.

CREDITS: 4.00

### **BMGN N490 - INDUSTRY PROJECT**

Extends and deepens the business skills and knowledge the student has gained through their degree programme,

by applying them to an actual workplace problem or opportunity. Students must develop, manage and complete a project presented to them by a member of the industry. The project must be pre-approved by their instructor and the industry contact. The student is expected to complete the project to a professional standard and within the project schedule established

CREDITS: 4.00

### **BMHR N300 - HUMAN RESOURCE MANAGEMENT**

This course helps students understand how organisations can gain sustainable competitive advantage through people. Students are exposed to basic HR concepts and strategies that help in the selection, retention and development of 'human capital'. This course provides a functional understanding of HR principles to enable students see how HR affects all employees, the organisation, the community and the larger society.

CREDITS: 4.00

### **BMHR N310 - GLOBAL CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY**

A general introduction to corporate governance and corporate social responsibility (CSR) from international, historical, institutional and commercial perspectives. This subject is essentially concerned with the ethical administration and moral responsibility of corporations. Students are exposed to general principles of CSR, business and politics, multinational corporations and government relationships, Industrial pollution and environmental policy and institutional investor participation in governance.

CREDITS: 4.00

### **BMHR N320 - MANAGING ORGANISATIONAL CHANGE**

The aim of this course is to enable students to understand 'change' in relation to the complexities of organisational life. This course takes both a theoretical and practical approach to the issues of organisational change. Aspects of organisational development are also explored in order to provide techniques for change diagnosis and interventions. Students are exposed to the issues of leading change, resistance to change and identification of strategies for managing the change in this course

CREDITS: 4.00

### **BMHR N360 - TRAINING AND DEVELOPMENT**

Students gain an understanding of the roles and benefits of training and development, and a working knowledge of the training cycle. Participants demonstrate the ability to design, develop, deliver and evaluate training. Students also gain an understanding of the various options available in training as well as a conceptual framework to manage the training function.

CREDITS: 4.00

### **BMHR N400 - HR PLANNING AND RECRUITMENT**

HR Planning and Recruitment looks at human resource planning and recruitment as part of the organisational level strategic planning process. It covers the formulation of a strategic human resource plan that links the human resource function with the direction of business units and the organisation as a whole. The course includes identifying key issues and developing, implementing and evaluating a strategic human resource plan.

CREDITS: 4.00

### **BMHR N410 - CAREER PLANNING AND DEVELOPMENT**

This course helps students to understand how organisational performance is enhanced by managing the talent effectively. Participants in the course will review resources from a variety of theoretical and pragmatic perspectives, and able to answer why career management is vital to organisation's success, how to identify and develop the management talent, what policies will help in the career progression of employees and finally how to develop a successful career plan for employees.

CREDITS: 4.00

### **BMHR N420 - HUMAN RESOURCE SYSTEMS**

Focuses on the application of computerised human resources information systems (HRIS) in the work of human resource professionals. An understanding of how an HRIS increases the effectiveness of the human resource function in an organisation and enables HR to become a strategic partner in the company will be covered. The course provides a hands-on opportunity to use HRIS software.

CREDITS: 4.00

### **BMHR N430 - PERFORMANCE MANAGEMENT**

Designed to help students who want to make human resource management a career. The course examines

the development of performance management systems, setting them in their historical context, and discussing the great importance attached to them today. It focuses on the application of performance management processes, methods to assess the organisation's performance, reasons for under-performance and the role of compensation in team and individual performance.

CREDITS: 4.00

### **BMHR N450 - ORGANISATIONAL DEVELOPMENT AND MANAGEMENT**

Organisational Management and Development involves the study and practical application of organisational science, management and behaviour within the modern business. Students will enhance their ability to develop organisational excellence and act as change agents by examining innovative models of leadership, organisation culture, globalisation, workforce and team management and managing change. Students will have the opportunity to apply their educational experiences to real-life situations faced in the workplace.

CREDITS: 4.00

### **BMHR N470 - INDUSTRIAL RELATIONS**

The study of industrial relations looks at how organisations manage people, and the wider social and economic context in which they operate. Students determine the role of the economic, social and political environments on the employment philosophy of the company. Students also learn the importance of collective bargaining, the changing nature of work and some ethical issues associated with industrial relations while discussing industrial relations and its impact on different organisational structures.

CREDITS: 4.00

### **BMKT N200 - MARKETING FUNDAMENTALS**

Introduces basic marketing concepts and functions, as well as the importance of marketing. The course focuses on defining the role of marketing, market opportunities, function of marketing research, examining product/service strategies, understanding the elements of the marketing mix, and examining the role of the Internet in marketing.

CREDITS: 4.00

### **BMKT N301 - MARKETING MANAGEMENT**

Focuses on managing a firm's marketing functions.

The course makes use of seminars, current marketing case studies and computer simulations that depict real global market environments. Students learn to develop a comprehensive marketing plan for a product or a service. As they do, they analyse the relationship between marketing management and strategic business planning and analyse the corporate strategic planning process. The student also identifies marketing opportunities and measures potential market demand for a new product.

CREDITS: 4.00

### **BMKT N310 - MARKETING RESEARCH**

Covers the role of marketing research in marketing decision making and provides students with the knowledge and skills required to enable them to undertake their own qualitative and quantitative research. Emphasis is placed on marketing research within the context of the UAE business environment and the use of the internet as a research tool. Students also learn how to design, record and analyse data using SPSS.

CREDITS: 4.00

### **BMKT N350 - MANAGING THE PROMOTIONAL MIX**

Designed to provide students with a comprehensive understanding of the key areas of advertising and promotion as part of an integrated approach to marketing communications. Pupils develop the ability to determine specific promotional activities in response to target audience and other stakeholders characteristics, and to apply and justify appropriate promotional mixes within a strategic and tactical framework.

CREDITS: 4.00

### **BMKT N400 - MARKETING MANAGEMENT**

Focuses on managing a firm's marketing functions. The course makes use of seminars, current marketing case studies and computer simulations that depict real global market environments. Students learn to develop a comprehensive marketing plan for a product or a service. As they do, they analyse the relationship between marketing management and strategic business planning and analyse the corporate strategic planning process. The student also identifies marketing opportunities and measures potential market demand for a new product.

CREDITS: 4.00

**BMKT N401 - CONSUMER BEHAVIOUR**

Provides students with an in-depth understanding of the various processes and influences involved in the way consumers make purchasing decisions. From a sound theoretical basis, students undertake a consumer behaviour research project which may be related to their field of work. This course also provides an opportunity to investigate various cultural issues in purchasing behaviour in the UAE/Middle East context.  
CREDITS: 4.00

**BMKT N410 - MARKETING SIMULATION AND APPLICATION**

This course comes after all basic marketing courses have been completed. Students use the 'MARKSTRAT' simulation to put into practice a wide range of marketing principles including segmentation, positioning, use of research, target marketing, product development, distribution and pricing strategies, promotional strategies, competitor analysis and market planning. Students develop strategic and planning skills which guide the many tactical decisions that need to be made. The simulation is designed to match live market conditions, and gives the student a real sense of what it is like to be a marketing manager.  
CREDITS: 4.00

**BMKT N420 - RETAIL AND DISTRIBUTION**

An in-depth understanding of retail marketing strategy and distribution/supply chain strategy. In addition to case study and other classroom and online work, students gain a practical insight into retail marketing, as it relates to the UAE, through a major project of a local major retailer. Students also investigate the legal environment for developing distribution channels in the UAE, to help them in any entrepreneurial pursuits they may wish to undertake. They also analyse and evaluate aspects of online retail and distribution.  
CREDITS: 4.00

**BMKT N440 - LOGISTICS AND SUPPLY MANAGEMENT**

Examines logistics and supply management systems that provide the physical supply of raw materials and parts to a firm and the distribution of products and services to its customers. Students examine and discuss the importance of ensuring accuracy in demand and supply planning activities, best practices for collaboration and control across supply networks, order and inventory management procedures, warehouse management

techniques including inbound and outbound logistics, as well as shipping and customer returns.  
CREDITS: 4.00

**BMKT N450 - INTERNATIONAL MARKETING**

Builds on previous marketing courses by allowing students to apply their marketing knowledge to the more complex international environment, with its inherent unique challenges and pitfalls.  
CREDITS: 4.00

**BMKT N460 - INDUSTRIAL AND SERVICE SECTOR MARKETING**

A combined study of business to business marketing and services, marketing concepts and practices. In the first part of the course, students investigate organisational buying behaviour, business market segmentation and business marketing strategies. In the second half of the course students gain an in-depth understanding of the unique challenges inherent to marketing quality services. Students undertake research on the changing nature of services marketing and the effect of information technology on the convergence of manufacturing and service industries.  
CREDITS: 4.00

**BMQM N410 - STATISTICAL METHODS IN QUALITY ANALYSIS**

Provides students with skills related to the advanced statistical techniques used for the description and analysis of business problems. The subject is essentially concerned by developing the skills of the students in statistical analysis and decision-making, testing of hypotheses, linear and non-linear, ANNOVA, statistical quality control, acceptance sampling, correlation and regression techniques.  
CREDITS: 4.00

**BMQM N420 - MEASURING CUSTOMER SATISFACTION**

Includes information on how to develop a system to monitor the voice of the customer on a continual basis, as well as how to use customer data to increase market share. Included in the course are various tools for gathering customer data such as focus groups, surveys and complaint tracking. Other topics include: handling customer complaints; responding to angry customers; measuring customer satisfaction by surveys; sampling techniques; survey designs; effectiveness of the various survey techniques; analysis of the responses;

interviewing techniques; customer satisfaction; and quality assurance.

CREDITS: 4.00

### **BMQM N430 - QUALITY PLANNING, IMPLEMENTATION AND AUDIT**

An analysis of critical quality planning practices and how to implement evaluations and audits as part of a quality assurance programme. This course provides an overview of techniques to plan, organise, monitor and control the improvement of quality. Students learn to view quality from a variety of functional perspective and in the process, gain a better understanding of the problems associated with improving quality, the quality tools utilised and the international environments related to quality.

CREDITS: 4.00

### **BMQM N440 - LEAN PRODUCTION AND SIMILAR OPTIMISATION TECHNIQUES**

Overview of the issues facing production environments. It explores the key concepts of quality management, waste reduction and supply chain management. Students are encouraged to draw on their own personal work experience and to analyse local and international work environments.

CREDITS: 4.00

### **BMQM N450 - ISO STANDARDS FOR INDUSTRY AND SERVICES**

Provides basic knowledge of International Organisation for Standardisation's (ISO) standards and other publications. It covers practical skills relating to the interpretation of requirements, planning, implementing, sustaining and the integration of management systems according to different models. Learners, as prospective executive representatives for management systems, learn the concept of the process and system approach, along with its impact on continuous improvement within an organisation.

CREDITS: 4.00

### **BMQM N460 - INTERNATIONAL AND UAE QUALITY AWARD SYSTEMS**

An opportunity for students to develop the frameworks of understanding in regards to quality award systems. Students discuss terminologies and the purpose of quality awards while studying selected methodologies of quality awards and how to prepare an organisation for a selected quality award.

CREDITS: 4.00

### **BMRE N400 - REAL ESTATE CONCEPTS**

Provides students with a general introduction to the valuation methods and developments in real estate globally, and allows them to explore the career and entrepreneurship opportunities within the field. The course covers some of the major developments in real estate globally and real estate development in UAE, which has put the industry in the spotlight, including nationals being able to buy and sell property and non-nationals being able to purchase property in designated areas in the UAE.

CREDITS: 4.00

### **BMTE N301 - FUNDAMENTALS OF TOURISM, TRAVEL AND EVENTS**

Tourism, travel and events are often viewed as almost separate fields of study. This introductory course is designed to provide students with an understanding of the uniqueness of each as well as the inter-relationships and interdependence that exist between these fields. In addition, this course develops awareness of the benefits sought from destinations by travellers and investigates the complexity and impacts of global tourism.

CREDITS: 4.00

### **BMTE N302 - INTRODUCTION TO EVENT MANAGEMENT (FESTIVALS AND SPECIAL EVENTS)**

An introduction to the emerging field of event management. Students learn that festivals and special events have long played an important role in human society and make a very considerable contribution to a country's economic and cultural development. Whether they be personal celebrations, conferences, exhibitions, festivals, carnivals or fairs, societies the world over have enjoyed organising and attending events.

CREDITS: 4.00

### **BMTE N310 - AIRLINE MANAGEMENT**

Focuses on management and operational perspectives of the airline industry with specific focus on new airline business models and the growth of strategic alliances and partnerships. This course also introduces the student to the functions of IATA (International Air Transport Association) and ICAO (International Civil Aviation Organisation), airport management and essential travel formalities (e.g. passport, visa requirements). Students will also examine the role IATA and ICAO play in promoting the safety, welfare and convenience of international passengers and airlines globally.

CREDITS: 4.00

### **BMTE N311 - MANAGEMENT OF TOURISM AND HOSPITALITY OPERATIONS**

Introduces students to the management of vital operations in tourism and hospitality organisations, and prepares students for management roles in these increasingly uncertain industrial environments. The focus is on developing an understanding of key functions of different departments in the tourism and hospitality organisation. Students study the essential activities of planning, delivery and control systems for the production of goods and services in the Tourism and Hospitality industry.

CREDITS: 4.00

### **BMTE N320 - SUSTAINABLE TOURISM PRACTICES**

Builds upon the material covered in Fundamentals of Tourism, Travel and Events Management (BMTE 301) and further develops knowledge and skills in the area of Sustainable Tourism Practices. It examines arguments concerning tourism development and the impacts of tourism on all stakeholders and considers practices that allow for sustainable tourism development.

CREDITS: 4.00

### **BMTE N330 - TOURISM PROMOTIONS MANAGEMENT**

Builds on material covered in Marketing Fundamentals and students apply and further develop knowledge and skills specifically directed at Tourism/Event Promotions Management. The focus is on tourism event marketing, the promotional mix and the problems posed by the complexity of the product and its intangibility, heterogeneity, perishability and inseparability.

CREDITS: 4.00

### **BMTE N331 - EVENT LOGISTICS AND SPONSORSHIP MANAGEMENT**

Explores a variety of operational issues which are significant for effective event management. Key issues explored will include event logistics and problem solving, operational issues in facilities and staff management, event proposals and bids. This course also explores sponsorship issues and develops key skills in sponsorship research and design and sponsorship management.

CREDITS: 4.00

### **BMTE N332 - TOURISM, TECHNOLOGY AND INNOVATION**

Provides an understanding of the nature of innovation

and technology related to the growth, success and future development of tourism within Dubai and on an international scale. The tourism industry (and its related fields) are now expecting its employees to have a fundamental understanding of a variety of innovative technological methods and their application within the various industry sectors.

CREDITS: 4.00

### **BMTE N402 - SPECIAL INTEREST TOURISM**

Investigates the unique and rapidly developing field of special interest tourism (SIT). It provides an overview of each aspect that SIT contributes to industry development and is designed to enable the student to plan, manage and promote, through targeted marketing a range of special interest activities by acquiring, interpreting and applying topical theory and practice.

CREDITS: 4.00

### **BMTE N457 - DESTINATION MARKETING**

Builds on marketing knowledge already gained by the student and applies it to the marketing of a tourist destination.

CREDITS: 4.00

### **BSD 1013 - INTRODUCTION TO ORGANISATIONAL OPERATIONS**

Introduces computer terminology, hardware, software, operating systems, and information systems relating to the business environment with emphasis on the retail environment. The main focus is on understanding the functions of the different software for personal and organisational productivity, including word processing, spread sheets, databases, presentations, graphics, statistical packages and business-oriented utilisations of the Internet and mobile communications technology. It provides an overview of the integrated software packages most often used in the workplace.

CREDITS: 3.00

### **BSD 1023 - SOFTWARE APPLICATIONS I**

Focuses on the retail business applications of software for personal and organisational productivity, including word processing, spread sheets, databases, presentations, graphics, statistical packages and business-oriented utilisations of the Internet and mobile communications technology. It provides an overview of how to use computers to communicate and solve management problems in contemporary business environments.

CREDITS: 3.00

**BSD 1103 - BASIC FINANCE**

Explores the fundamentals of financial practices and the impacts on personal and professional environments. Students will understand the basic principles of financial terms, general banking concepts, and principles associated with credit and loan processes.

CREDITS: 3.00

**BSD 1113 - PROPER BUSINESS PRACTICE**

Proper Business Practices focuses on providing students a solid foundation in business ethics. Students will explore examples of the impact of proper and improper business practices on society, both locally and globally. And will examine and discuss the affect that such practices have on their daily lives.

CREDITS: 3.00

**BSD 1123 - SALES AND MARKETING PRACTICES I**

Introduces the basic concepts of sales and marketing including planning, implementation and control of sales and marketing activities, and customer services essentials. Students will be exposed to the various concepts as it relates to a face-to-face sales environment, and a telesales environment.

CREDITS: 3.00

**BSD 1133 - BUSINESS CODE OF CONDUCT**

Students will learn and apply the concepts of the business code of conduct and corporate social responsibility through research, interviews and case studies. The purpose of this course is to give students a general grounding in the importance of proper code of conduct along with effective corporate social responsibility policy.

CREDITS: 3.00

**BSD 1143 - ARABIC IN CUSTOMER SERVICE**

CREDITS: 3.00

**BSD 1213 - WORKING IN THE RETAIL ENVIRONMENT**

Students will gain an understanding of the nature of working in a retail environment. They will learn basic retail practices and how each member of a the retail environment contributes to the success of the business. They will also gain an understanding of the important role of the internal and external customer.

CREDITS: 3.00

**BSD 1223 - MARKETING PRINCIPLES**

Introduces the basic concepts of marketing. It develops

an understanding of the process of marketing in the contemporary business environment. Students will be introduced to the factors of what makes one marketing campaign successful, while another will fail. Where possible they will be expected to trial various marketing process and procedures for a real world understanding.

CREDITS: 3.00

**BSD 1233 - ETHICS IN A RETAIL ENVIRONMENT**

Introduces business ethics in a retail environment. Codes of conduct are studied and ethical dilemmas are explored. Students will be exposed to case studies, simulations, videos, and group discussions to give them a practical understanding of the importance of proper ethical practice and code of conduct in a retail environment.

CREDITS: 3.00

**BSD 1243 - RETAIL OPERATIONS**

Covers basic retailing operations with an emphasis on inventory management, merchandising, and retail technologies. Through a hands on practical approach, students will become comfortable with the normal routine operations that are required for most retail transactions. They will be able to troubleshoot basic issues related to the specific area of study.

CREDITS: 3.00

**BUS 1003 - MANAGEMENT AND LEADERSHIP**

Gives students an understanding of how the concept of leadership and management has been understood by practicing managers and behavioural scientists. Students will learn the basic functions of management, management levels and skills, model of communication, individual and group decision making, role of leaders in managing the change, leadership theory, concepts and practical issues related to both the UAE and the wider business environment.

CREDITS: 3.00

**BUS 1103 - ECONOMICS FOR MANAGERS**

Introduces the basic concepts of Microeconomics with an emphasis on their application in business decisions and market structures. It focuses on the mechanism of demand and supply, price elasticity of demand, costs of production and the basic characteristics of market structures. Students are expected to use the theoretical concepts covered and apply them to UAE businesses and their industries.

CREDITS: 3.00

**BUS 1203 - SOFTWARE APPLICATIONS FOR BUSINESS**

Introduces computer terminology, hardware, software, operating systems, and information systems relating to the business environment. It focuses on business applications of software for personal and organisational productivity, including word processing, spread sheets, databases, presentations, graphics, statistical packages and business-oriented utilisations of internet and mobile communications technology. It outlines integrated software packages most used in the workplace and how to use computers to communicate and solve management problems in contemporary business environments.

CREDITS: 3.00

**BUS 1303 - MARKETING**

Introduces the basic concepts of Marketing. It develops an understanding of the overall process of Marketing including the research; planning; implementation and control of marketing activities in the contemporary business environment. The main emphasis is on the practical application of marketing concepts covered in the course, using UAE consumer products as examples where possible.

CREDITS: 3.00

**BUS 1403 - BUSINESS ETHICS AND CORPORATE GOVERNANCE**

Introduction to business ethics. Codes of conduct are studied and ethical dilemmas are explored. The purpose is to impart on students the importance of critical assessment of situations that are ethically ambiguous or contain ethical dilemmas. This course also introduces corporate social responsibility (CSR) and governance from local and international perspectives, as they relate to business and politics, industrial pollution, environmental policy, and institutional investor participation. The ethical administration and moral responsibility of corporations is studied.

CREDITS: 3.00

**BUS 1503 - ACCOUNTING FOR MANAGERS**

Introduction to accounting as the language of business. Students will learn terminology, accounting principles, the fundamentals of double entry, the accounting process from journals to financial statements, and how financial statements communicate information about performance and position to users external to the business. Included also is an introduction to managerial accounting with ratio analysis, cost classification, Cost Volume Profit Analysis (CVP) and Operating Budgets.

CREDITS: 3.00

**BUS 2003 - BUSINESS AND COMMERCIAL LAW**

Provides an insight into the fundamental principles of law including contract and tort and the foundations of UAE law including the Civil Code and the Judicial System. The course then focuses on the business aspects of law including an introduction to company formation; financial control and workplace issues. The course will develop an understanding of how law may control business operations and the procedures for resolving conflict and seeking appropriate redress.

CREDITS: 3.00

**BUS 2103 - OPERATIONS MANAGEMENT**

Provides a detailed study of the management of an organisation's chain of value adding activities, from procurement of resources and transformation into manufactured goods and service outputs, through distribution to customers. The major areas include operations strategy and the various tools and techniques of operations management, quality, work, product and service design, process selection and facilities layout, capacity and location planning and related issues and models.

CREDITS: 3.00

**BUS 2203 - BUSINESS STATISTICS FOR MANAGERS**

Designed to develop students' ability to assess and critically interpret statistics and business information and apply them in changing business environments. It places a strong emphasis on developing a clear theoretical understanding of various analytical tools including descriptive statistics; probability; hypothesis testing and correlation and regression analysis; and an appreciation of the application of analytical tools to business decision contexts. These skills and competencies provide a foundation for professional practice and further study in the major's degree.

CREDITS: 3.00

**BUS 2303 - FINANCIAL MANAGEMENT**

An overview of financial management basics for financial decision making. This course covers the fundamentals of financial management to support both short and long-term financial decisions of the firm. The course includes topics related to sources of short-term and long-term financing, financial statement analysis, time value of money, capital budgeting and working capital management.

CREDITS: 3.00

### **BUS 2403 - INNOVATION AND ENTREPRENEURSHIP**

Develops the concepts and skills of how to start and run new ventures, and discusses challenges entrepreneurs face in a rapidly changing economic environment. Informed by industry and local entrepreneurs the course discusses how to develop a business plan and financial feasibility study and synthesises knowledge students have gained from their management, business law and ethics courses. This course is anchored on the capstone project that requires students to engage with industry and the business environment to create and defend a comprehensive business proposal for a new idea.

CREDITS: 3.00

### **BUS 2903 - INTRODUCTION TO LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

Examines fundamental concepts of supply chain management (SCM) and logistics that together underpin corporate strategies aimed at achieving business performance goals. The course introduces logistics and SCM principles, processes and strategies from a managerial perspective, and examines them within a framework that requires cross-functional integration of key business processes within the firm and across the network of firms comprising the supply chain. Emphasis is on analysing supply chain issues and aligning logistics and SCM strategies with business performance goals.

CREDITS: 3.00

### **BUS 2913 - SUSTAINING CULTURAL IDENTITY THROUGH TOURISM AND EVENTS**

Provides insight into the Tourism and Event Industries and the importance of maintaining cultural identity. Globalisation of tourism and events brings prosperity to the destination but a growing concern is how to maintain distinctiveness and uniqueness of the destination's cultural identity. This course emphasises the need for destination visioning and strategic planning to enable the tourism and event industries to flourish while maintaining the integrity and sustainability of cultural heritage and traditions.

CREDITS: 3.00

### **BUS 2923 - INTRODUCTION TO SUSTAINABLE PROPERTY DEVELOPMENT AND MANAGEMENT**

Provides students with a general introduction to the processes and professional activities involved in sustainable property development and management.

It allows students to explore the career and entrepreneurship opportunities within this professional area. The course includes general international principles of property appraisal; linkages to the general economy; the local development process; property marketing; property law and aspects of property and facilities management.

CREDITS: 3.00

### **BUS 2933 - MACROECONOMICS**

An introduction to the basic concepts and tools of macroeconomic analysis. It begins with a demonstration of the measurement of key concerns in macroeconomics: GDP, unemployment and the price level. The second part of the course provides analytical models for exploring economic performance and long run growth. The third part analyses the nature of business cycles and fiscal and monetary policies.

CREDITS: 3.00

### **BUS 3003 - MANAGING PEOPLE AND ORGANISATIONS**

Designed to help students understand the linkage between organisations, Human Resource Management (HRM) and business success. To do this, students will be exposed to the principles of organisational behaviour and the fundamentals of HRM. Students will be introduced to the concepts of organisation structure and design, power and politics, motivation and job satisfaction, recruitment and selection, employee development and reward management, and the role of HRM in gaining sustainable competitive advantage for the organisation.

CREDITS: 3.00

### **BUS 3103 - INTERNATIONAL BUSINESS AND GLOBALISATION**

This course gives students an understanding of how the global context of the business environment impacts upon managerial processes. Understanding business in an international context enables students to appreciate the interrelationships between global business and the environmental, social, technical, legal and regulatory frameworks that influence business operations.

CREDITS: 3.00

### **BUS 3203 - STRATEGIC MANAGEMENT AND BUSINESS POLICY SIMULATIONS**

This is the capstone course in the Business Administration discipline. Through case studies it analyses the nature of competitive advantage, and the various strategies

available for firms to develop sustainable business growth in a global environment. The course features a complex business simulation game in which students can show, by making a series of inter-related decisions, their ability to apply business administration concepts in practice for the benefit of an imaginary company.

CREDITS: 3.00

### **BUS 3406 - WORK RELATED LEARNING**

The employer will provide instruction in various areas to prepare students for entry level employment in their field. A range of workplace specific topics will be covered. Students will be required to complete a reflective assignment on the training they receive at their workplace, and to complete workplace and college based tasks.

CREDITS: 6.00

### **BUS 3913 - EMOTIONAL INTELLIGENCE FOR BUSINESS EFFECTIVENESS**

Gives students the tools needed to be emotionally intelligent in the workplace. It is designed to help students understand the linkage between Emotional Intelligence and business success. To do this, students will be exposed to the core principles of Emotional Intelligence which will enable them to manage their own impulses, communicate with others effectively, manage change well and solve problems. Students will learn best practices in developing/leveraging E.I. abilities; being aware of self and others, understanding emotions, and emotional management.

CREDITS: 3.00

### **BUS 3923 - MANAGEMENT INFORMATION SYSTEMS INCORPORATING SAP**

Focuses on the application of technology-based information systems in organisations as tools for achieving operational efficiency. Students study how information systems support development and management of products and services and the decision making process to achieve competitive advantage. Students are also introduced to different processes of information management in SAP. The major parts of information systems and their inter-relationships are evaluated to justify the effective utilisation of the systems.

CREDITS: 3.00

### **BUS 4113 - FINANCIAL ACCOUNTING I**

Provides students with the knowledge of how to identify and apply the concepts and principles of accounting for

merchandising business. It also provides an overview of some of the balance sheet items. Specific topics include classification and valuation of long term assets and current assets such as cash, accounts receivables and inventories. The course also examines concepts and procedures for recording and reporting shareholders equity transactions in a corporate environment.

CREDITS: 3.00

### **BUS 4123 - AUDITING**

This course provides students with a basic understanding of the overall purpose and objectives of audit and basic concept and functions of Accounting Information System (AIS). The course then gives students the opportunity to analyse different audit areas including professional standards and ethical responsibilities of auditors, audit risk and materiality, risk assessments for internal control, internal control for cash receipts and disbursement cycle, audit evidence and reporting on audited financial statements.

CREDITS: 3.00

### **BUS 4133 - MANAGERIAL ACCOUNTING 1**

Introduces a business-management approach to the use of accounting information for internal reporting and decision-making. Major topics include profit planning and control measures. It provides in-depth knowledge on cost accounting by focusing on its role in internal reporting and the resulting decision-making processes. Students will evaluate the basic costing systems employed in the management accounting profession; pricing and profitability concepts and principles; determine how cost allocations, product quality, and investment decisions are applied by management accountants.

CREDITS: 3.00

### **BUS 4143 - IFRS**

Enables students to have an overview of IFRS on its structure and requirement in the current financial reporting environment. The course also gives an opportunity to the students to apply International Financial Reporting Standards to selected items of the balance sheet. This course is designed to identify, measure, classify, present and disclose financial information according to IFRS.

CREDITS: 3.00

### **BUS 4153 - FINANCIAL ACCOUNTING II**

Examines important topics that serve as a foundation for a more detailed study of financial statements. It

provides the students with the necessary knowledge to succeed in the modern world of accounting. This course studies the applications of accounting for investments that companies make in stock and debt securities of other companies and account for the different forms of leases which can be used in organisations and timing and criteria of revenue recognition

CREDITS: 3.00

### **BUS 4163 - TAXATION**

Emphasises tax concepts and issues. The course explains the principles and professional standards governing the tax systems. In addition, it provides an approach to the taxation of individuals and a more in-depth study of the taxation of different business entities. This course particularly focuses on technical details to provide a foundation for future practice in taxation and consulting. This course is designed to provide an overview of tax computation and tax compliance and understand the rules to determine taxable income for individuals and business.

CREDITS: 3.00

### **BUS 4173 - MANAGERIAL ACCOUNTING II**

Develops analytical skills useful for managerial decision making. The course introduces students to the evolving role managerial accounting is expected to play in servicing the informational needs of managers in planning, organising and controlling functions. It helps students become proficient in structuring business decisions systematically and identifying the information relevant to a decision.

CREDITS: 3.00

### **BUS 4183 - CORPORATE FINANCE**

Provides students with the necessary exposure to the various tools used in analysing and evaluating the financial performance of business in terms of risk and return. Students also learn how to calculate and analyse the various performance ratios and examine the key issues that affect dividend policies. They are also introduced to the concepts of cost of capital, risk and uncertainty in capital budgeting decisions and elements of international finance.

CREDITS: 3.00

### **BUS 4213 - FINANCIAL QUANTITATIVE METHODS**

Systematically builds upon students' knowledge of Excel and its application to financial concepts. It critically explores the time value of money; risk and

return relationships and bond and stock valuations. Students will explore and apply the capital asset pricing model and develop and analyse diversified investment portfolios.

CREDITS: 3.00

### **BUS 4223 - RETAIL FINANCE AND BANKING**

The goal of this course is to expose the students to the dynamic environment of the retail finance and banking industry. It introduces them to the financial needs of retail clients and the retail banking and insurance products matching these needs. The course also explores advanced marketing techniques, customer relationship management, service quality and customer complaints techniques as applicable to finance and banking.

CREDITS: 3.00

### **BUS 4233 - FINANCIAL ASSETS AND MARKETS**

The goal of this course is to provide the basic role of financial markets, the types of financial assets and how they are traded. This course examines valuation techniques, derivatives and alternative investments and their associated trading strategies to achieve risk return objectives. From an overview of equity and capital markets, it explains the importance of capital markets for the economy and corporations.

CREDITS: 3.00

### **BUS 4243 - INTERNATIONAL TRADE AND FINANCE**

Distinguishes international finance from domestic finance and introduces students to the international financial environment, the foreign exchange market and foreign exchange exposure management. This course examines the international monetary system, the balance of payments, the main factors affecting foreign exchange rates and the microstructure of international trade.

CREDITS: 3.00

### **BUS 4253 - LAW, ETHICS AND PROFESSIONAL STANDARDS**

Provides students an opportunity to critically examine legal and ethical issues pertaining to the banking and financial services industry. The course will focus on the application of legal and ethical principles to current industry risk management concerns such as mobile banking, Basel III capital requirements, money laundering, bribery, and executive compensation and

corporate governance. Students will compare risk management and compliance programmes in order to identify best practices in mitigating the ethical and legal risks associated with such concerns.

CREDITS: 3.00

### **BUS 4263 - CORPORATE FINANCE AND BANKING**

The primary objective of this course is to provide a framework for assessing the role of banking in corporate finance. The approach is rigorous and analytical. Firstly, it analyses issues in the cost of capital assessment, capital budgeting decisions, financing decisions, working capital management and cash flow management which are faced by financial managers in corporations. Then, it critically examines how various banking products satisfy the financial needs of corporations.

CREDITS: 3.00

### **BUS 4273 - WEALTH AND RISK MANAGEMENT**

Examines the various factors that impact investment risk and returns. It explores the characteristics of financial instruments and applies modern portfolio theory to enable students to provide financial solutions to meet the investment, retirement, protection, estate and tax planning needs of their clients and determine how these solutions can help deal with both expected and unplanned events.

CREDITS: 3.00

### **BUS 4283 - ISLAMIC FINANCE AND BANKING**

Distinguishes Islamic finance and banking from conventional finance and banking and introduces the students to the principles of Islamic finance, sources of Sharia Law and the role of the Sharia Supervisory Board. It also explores the characteristics of common Islamic banking and Islamic insurance (Takaful) products in comparison to their conventional alternatives. Finally, the course introduces Sukuks (Islamic bonds) and examines their evolving role in financing corporations.

CREDITS: 3.00

### **BUS 4313 - EMPLOYEE RELATIONS AND UAE LABOUR LAW**

Builds upon an earlier study of the principles of law, in particular the legal relationship between employers and individual employees; and the common law aspects of that relationship, including contracts and tort. The course focuses on the application of laws specific to

commercial enterprises and workplace situations. Students will develop skills to: recognise competing and conflicting legal interests, rights and obligations in various commercial contexts; understand methods of legal dispute settlement; analyse factual situations and apply the appropriate law.

CREDITS: 3.00

### **BUS 4323 - CAREER DEVELOPMENT AND PLANNING**

This course helps students understand how organisational performance is improved by managing the workforce efficiently and effectively. It includes a critical analysis of the value of career development theories in HR planning. Students will develop decision-making skills through strategic thinking in both local and global perspectives. Students will be exposed to concepts related to: mentoring, coaching, replacement charts, skill inventories, career paths, succession planning, PAQ (position analysis questionnaires), and career development strategies related to plateaued staff.

CREDITS: 3.00

### **BUS 4333 - RECRUITMENT AND SELECTION**

Develops students' knowledge and skills of the recruitment and selection process in human resource management and the importance of ensuring that the best people are selected to work in organisations. Throughout the course students will learn: the underpinning recruitment and selection processes and the relationship with the overall management of the organisation.

CREDITS: 3.00

### **BUS 4343 - TRAINING AND DEVELOPMENT**

Gives students an understanding of the role of training and development in maintaining a motivated, up to date workforce. It enables students to compare the way the training and development function is structured in different organisations and to explore the training delivery techniques used in different training programmes. Students will use the training cycle to design, develop, deliver and evaluate training.

CREDITS: 3.00

### **BUS 4353 - INTERNATIONAL HUMAN RESOURCE MANAGEMENT**

Examines the opportunities and challenges associated with managing employees in international and

cross-cultural contexts. International recruitment, selection, preparation, placement, management development, performance management, reward and remuneration in international, multi-national and trans-national corporations are studied. The implications of internationalisation and globalisation on human resource management (HRM), differences between domestic and international HRM, and challenges associated with managing the workforce in foreign locations are explored.

CREDITS: 3.00

### **BUS 4363 - MANAGING ORGANISATIONAL CHANGE**

Provides students with an understanding of the nature of change, driving forces of change, theories and models of organisation change and the process of organisational change within the theoretical frameworks of organisation culture, power, politics, resistance to change and leadership. It examines both a theoretical and practical approach to the issues of change diagnosis and strategies to manage and implement the change.

CREDITS: 3.00

### **BUS 4373 - STRATEGIC HUMAN RESOURCE MANAGEMENT**

This course gives students the opportunity to study the strategic-level human resource management challenges facing businesses, including long term human resource planning; managing workforce diversity; implementing downsizing strategies, creating outsourcing solutions and managing the workforce in knowledge based economies. It enables students to take a critical view of ethical decision-making approaches and best practices in the region for attracting, retaining and developing employees and management from a strategic perspective.

CREDITS: 3.00

### **BUS 4383 - PERFORMANCE MANAGEMENT**

Students will compare traditional and contemporary approaches to performance management. Students will learn about the design and implementation of performance management systems, and the role of compensation, incentives and rewards in performance management. This course also gives students the opportunity to examine performance management systems in various organisations, and to consider the underlying aims of such systems.

CREDITS: 3.00

### **BUS 4413 - TOURISM AND EVENTS MANAGEMENT**

Emphasises the special importance of events in the tourism industry. It provides an overview of the tourism industry and the functions of events in the tourism context. The course introduces the students to a wide range of operational and management issues associated with the processes involved in the planning, managing and staging of events. It will also provide students with the skills to develop a comprehensive proposal to stage a tourism-related event.

CREDITS: 3.00

### **BUS 4423 - TOURISM AND EVENTS MARKETING**

Provides an applied approach to the strategic function of marketing in the context of tourism and events. It is designed to offer a comprehensive coverage of events and sponsorship strategies. It provides students with the skills and knowledge to effectively execute research, targeting and positioning as well as evaluating an event.

CREDITS: 3.00

### **BUS 4433 - MEETINGS, INCENTIVES, CONFERENCES AND EXHIBITIONS (MICE)**

Focuses on the operational aspects of Meetings, Incentives, Conferences and Exhibitions (M.I.C.E) events management. Students will learn to integrate project management, event marketing, food and beverage management, financial management, risk management and technical support. They will be exposed to the theory and principles associated with planning and hosting a business event.

CREDITS: 3.00

### **BUS 4443 - SPECIAL INTEREST TOURISM**

Investigates the unique and rapidly developing field of special interest tourism (SIT). The course introduces students to a diverse group of specialist tourism activities. It provides an overview of each aspect that SIT contributes to industry development. The course is designed to enable students to plan, manage and promote a business venture, which includes targeted marketing a range of special interest activities by acquiring, interpreting and applying topical theory and practice.

CREDITS: 3.00

### **BUS 4453 - INTERNATIONAL EVENTS MANAGEMENT**

Explores the rapidly expanding field of international

events management. It provides an understanding of the social and cultural impacts on stakeholders; integration of business disciplines and exploration of the dynamic and challenging management environments that the management of international events demands. This course offers students the practical knowledge required to stage international events effectively.

CREDITS: 3.00

### **BUS 4463 - CULTURE AND HERITAGE TOURISM**

Investigates the relationship between culture, heritage and tourism by examining the complexities of cultural heritage tourism. The course explores the principles and concepts of cultural and heritage tourism using international and local examples. It is designed to critically examine the practices necessary for identifying, developing and managing as well as sustaining cultural and heritage tourist attractions.

CREDITS: 3.00

### **BUS 4473 - SUSTAINABLE TOURISM**

Critically examines the principles of sustainable tourism with reference to environmental, economic, and socio-cultural aspects of tourism development. The course provides students with an understanding of how environmental resources constitute a key element in tourism development, and how tourism planners, in order to provide long-term socio-economic benefits, should conserve their built and living cultural heritage and traditional values.

CREDITS: 3.00

### **BUS 4483 - GLOBAL TOURISM: POLICY AND PLANNING**

Critically evaluates the planning strategies and policy frameworks designed to encourage more sustainable forms of global tourism. Students will examine public and private sector roles in the tourism planning and policy formulation process as well as the constraints relating to tourism development in specific settings. It places particular emphasis on critically assessing the tourism policy-making processes used to guide tourism development from environmental, sociocultural and economic perspectives.

CREDITS: 3.00

### **BUS 4513 - STRATEGIC DECISIONS WITH MANAGEMENT SCIENCE**

An interdisciplinary course that promotes efficient methods for solving different types of resource

allocation, general optimisation and queuing or simulation problems. It presents various quantitative decision analysis tools to support complex strategic planning decisions. The course gives students opportunities to analyse real business situations and scenarios, explore a range of management science techniques and make decisions to solve typical business problems.

CREDITS: 3.00

### **BUS 4533 - INTERNATIONAL QUALITY MANAGEMENT SYSTEM**

Evaluates the components of quality systems and the theoretical and philosophical concepts of quality models. It examines why quality management is fundamental to strategic management and how innovation can improve the performance of any organisation. The course focuses on evaluating various strategies for senior managers to improve organisational performance.

CREDITS: 3.00

### **BUS 4543 - QUALITY MANAGEMENT TOOLS**

Introduces the students to qualitative and quantitative analytical tools used in a quality management system. Students will be given the opportunity to study international quality management systems and how efficiently these tools are used to support strategic decision making in managing organisations. The students will identify problems with workflows within various parts of real organisations. It then develops the students ability to use appropriate quality management tools and to measure their effectiveness towards quality improvement from a strategic perspective.

CREDITS: 3.00

### **BUS 4583 - ISO STANDARDS AND EXCELLENCE**

Provides an overview of the ISO family of international standards. Students are required to engage with industry to develop quality management systems in accordance with ISO standards. It also compares various organisational performance, benchmarking, quality awards and other measures of excellence, such as the Baldrige Quality Award, Khalifa Quality Award and Dubai Quality Award.

CREDITS: 3.00

### **BUS 4623 - INTERNATIONAL BUSINESS FINANCE**

Demonstrates how the international financial environment affects businesses with international operations. Students learn about the theory and practice

of international corporate financial management including foreign exchange markets, exchange rate determination, international parity conditions and the management of foreign exchange risk and exposure. It gives an insight into the motives and challenges of businesses pursuing portfolio investment and foreign direct investment. It also examines requirements related to repatriation of capital and profits from international operations.

CREDITS: 3.00

### **BUS 4643 - CROSS CULTURAL RELATIONS MANAGEMENT**

Adopts a multi-disciplinary approach to introduce students to important issues and challenges in managing cultural diversity in international markets. It uses conceptual and theoretical frameworks to explain how cultures differ and how such differences impact businesses. Students learn about cross-cultural communication and marketing, negotiation and conflict resolution, managing multi-cultural workforces and the dynamics of multi-cultural teams. This course also gives an insight to the impact of cultural heterogeneity/homogeneity on innovation and global business opportunities.

CREDITS: 3.00

### **BUS 4653 - INTERNATIONAL MARKETING FOR GLOBAL COMPETITIVENESS**

Demonstrates how international marketing enhances the global competitiveness of a business. Students will learn how marketing related factors make a business more competitive in dynamic global markets. International marketing principles are applied to product, service and country specific situations. Marketing skills and contingencies that are required for a business to strategically move into a foreign country are developed.

CREDITS: 3.00

### **BUS 4663 - INTERNATIONAL TRADE**

Gives students an understanding of the current international trade environment. Students learn about the theory of international trade; the practice of trade policies; international trade and economic development; world trading arrangements, and issues concerning an open economy. The course also enables students to assess how trade related factors and changes in the international trade environment impact business opportunities and strategies. It will give

students' knowledge on why international trade is a key component in the performance of businesses and nation states.

CREDITS: 3.00

### **BUS 4673 - INTERNATIONAL LAW**

An insight to the legal aspect of international business and how it impacts businesses with international operations. It provides an introduction to the basic tenets of legal systems in world markets and the settlement of legal disputes. Students learn about the fundamental components of law in international business transactions, including how the legal framework of the WTO impacts businesses. This course also gives students the opportunity to study the impact of the international legal environment on FDI.

CREDITS: 3.00

### **BUS 4683 - MIDDLE EAST DEVELOPMENT AND LOGISTICS**

Presents insights into the inter dependence between development, infrastructure and logistics in the Middle East. The course enables students to analyse factors that influence development, growth and competitiveness, including the importance of trade logistics. It allows students to consider the impacts of trade logistics, and evaluate the current development strategies. This course gives students the opportunity to offer ideas on how governments can promote regional business development through trade logistics.

CREDITS: 3.00

### **BUS 4713 - REAL ESTATE CONCEPTS**

Provides students with an understanding of the core concepts in real estate and their application in the UAE. It introduces fundamentals such as measurement of property and the professional regulations; standards and behaviours expected by clients. Allowing exploration of the career and entrepreneurship opportunities within the field; it illustrates the significance of developments in real estate in the UAE and the responsibilities for sustainable development; pro-active management; and accurate valuations.

CREDITS: 3.00

### **BUS 4723 - PROPERTY VALUATION METHODS 1**

An exploration of the theory and practice of property valuation and an understanding of the concepts of value and worth. The course will develop a detailed understanding of the principal valuation methodologies

and how and when they should be applied to appropriate property types and market contexts.

CREDITS: 3.00

### **BUS 4733 - PROPERTY MANAGEMENT**

This course provides the required knowledge for both the effective strategic management and day to day maintenance of a property. The course will consider leasing and marketing activities and ways to coordinate and oversee the safe, secure, and environmentally-sound operations and maintenance of these assets in a cost effective manner.

CREDITS: 3.00

### **BUS 4743 - PROJECT MANAGEMENT FOR REAL ESTATE**

Provides the necessary tools and information to manage and control real estate projects and their resources. Project management is defined, project phases and goals are identified and stakeholder impact is discussed. It covers a range of principles and practices in the initiation, planning, staffing, coordinating and completing of a project within the triple constraints of schedule, budget and performance.

CREDITS: 3.00

### **BUS 4753 - PROPERTY, CONSTRUCTION AND ENVIRONMENT LAW**

Builds upon the students' understanding of legal concepts and provides a clear understanding of the law related to the development, sales, leasing and management of property and an introduction to the associated Islamic and Western banking solutions for the financing of projects.

CREDITS: 3.00

### **BUS 4763 - PROPERTY VALUATION METHODS II**

Extends the knowledge gained from the Property Valuation Methods I course and critically examines the application of methods to a range of asset types; market contexts and client contexts including valuations for lending purposes; investment and development. The course will examine in detail the application of the profits and investment methods of valuation to a variety of asset types.

CREDITS: 3.00

### **BUS 4773 - URBAN PLANNING**

Provides students with a clear understanding of the fundamental concepts and theories of urban planning.

Examining the evolving structure of cities; how they are designed and developed; and the impact this has upon maximising the highest and best use from both a commercial and social perspective.

CREDITS: 3.00

### **BUS 4783 - SUSTAINABLE PROPERTY DEVELOPMENT**

Introduces the core concepts of sustainable development and ways in which planners and developers must accommodate evolving policy; changing customer expectations and technical solutions. A key element of the course is the application of these concepts to real local projects which will explain the process of undertaking a highest and best use analysis of a development site to optimise the social, environmental and financial return from the site. This course will underpin the integrated project for this major.

CREDITS: 3.00

### **BUS 4813 - SUPPLY CHAIN CONCEPTS AND PRACTICES**

This introductory course focuses on the key functions, decisions and players involved in contemporary supply chains. It allows students to explore how decisions must be made to coordinate the movement of products and services effectively and efficiently in the supply chain to manage customer service expectations. It uses the concept of the value chain as a lens to examine how each element is critical to the creation of value for the business, customers and other stakeholders in the supply chain.

CREDITS: 3.00

### **BUS 4823 - LOGISTICS AND TRANSPORTATION 1**

Introduces students to logistics and transportation. Students will be given the opportunity to explore the roles and practices of logistics and transportation in the supply chain. The functions of transportation, warehousing, material handling, packaging, cold chains, security, insurance and economics in logistics will be examined. The course also provides students with a framework of how logistics and transportation can optimise supply chain efficiency and improve customer satisfaction.

CREDITS: 3.00

### **BUS 4833 - MANUFACTURING IN SUPPLY CHAIN**

Focuses on the influence of manufacturing on the supply chain. It provides students fundamental

knowledge of common manufacturing systems, and methods of manufacturing planning and control. This course allows students to explore how manufacturing decisions affect supplier service and customer service levels in the supply chain. It also enables students to use manufacturing decision-making models in the development of solutions to overcome supply chain challenges.

CREDITS: 3.00

### **BUS 4843 - SUPPLY CHAIN STRATEGY AND MANAGEMENT**

Examines how supply chain strategies are developed, their interrelationships and their impact on business competitive advantage. Students will learn about a framework to strategically manage supply chains in today's rapidly changing markets. Students also learn how recent developments and best practices in supply chain management have supported the achievement of improved supply chain performance.

CREDITS: 3.00

### **BUS 4853 - LOGISTICS AND TRANSPORTATION II**

Focuses on the management of transportation and logistics to achieve supply chain objectives. It allows students to consider the cost implications of logistics and transportation in making products available to customers. It enables students to develop solutions and make decisions for the supply chain involving the efficient integration of suppliers, manufacturers and retail stores with logistics and transportation, encompassing firms activities from the strategic level through the tactical to the operational level.

CREDITS: 3.00

### **BUS 4863 - PROCUREMENT AND INVENTORY MANAGEMENT**

Examines how businesses make buying decisions as well as manage their buying processes within the supply chain. In addition the course gives insights into inventory management and how inventory decisions affect buying practices. Students will be exposed to practices including sourcing, procurement and supply management; inventory classification; approaches to managing inventory; cost analysis; and the use of information systems to make decisions.

CREDITS: 3.00

### **BUS 4873 - SUPPLY CHAIN RISK MANAGEMENT**

Develops students ability to view and manage the supply chain from a risk management perspective. It

explores how a coordinated approach involving all stakeholders can reduce supply chain vulnerability. Students will learn how to identify and analyse the risk of failure points within the supply chain, and how to quantify risks via metrics. This course also develops skills in flexible planning to manage, control, share and avoid supply chain risks attributed to unforeseen events, differing business norms, changing regulatory and economic environments or shifts in customer demand.

CREDITS: 3.00

### **BUS 4913 - INTEGRATIVE INDUSTRY PROJECT (ACCOUNTING)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills.

CREDITS: 3.00

### **BUS 4923 - INTEGRATIVE INDUSTRY PROJECT (FINANCE AND BANKING)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills.

CREDITS: 3.00

### **BUS 4933 - INTEGRATIVE INDUSTRY PROJECT (HUMAN RESOURCE MANAGEMENT)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills.

CREDITS: 3.00

### **BUS 4943 - INTEGRATIVE INDUSTRY PROJECT (TOURISM AND EVENTS MANAGEMENT)**

Designed as a framework within which projects can be

accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills. CREDITS: 3.00

#### **BUS 4953 - INTEGRATIVE INDUSTRY PROJECT (QUALITY AND STRATEGIC MANAGEMENT)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills. CREDITS: 3.00

#### **BUS 4963 - INTEGRATIVE INDUSTRY PROJECT (INTERNATIONAL BUSINESS MANAGEMENT)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills. CREDITS: 3.00

#### **BUS 4973 - INTEGRATIVE INDUSTRY PROJECT (PROPERTY DEVELOPMENT AND MANAGEMENT)**

This course is designed as a framework within which projects can be accommodated to meet defined learning outcomes. It is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills. CREDITS: 3.00

#### **BUS 4983 - INTEGRATIVE INDUSTRY PROJECT (SUPPLY CHAIN MANAGEMENT)**

Designed as a framework within which projects can be accommodated to meet defined learning outcomes. It

is designed to collapse artificial boundaries between subjects and give opportunities for the application and critical review of theory and custom in a practical environment. Informed and supported where possible by industry it will provide high level authentic learning and develop consultancy and client management skills. CREDITS: 3.00

#### **BUSI N1150 - BUSINESS ESSENTIALS**

Encompasses a study of the world of business. It provides opportunities for students to explore businesses at a local, regional and global level. The students are introduced to the business environment and basic business functions and processes in a realistic and practical manner.

CREDITS: 4.00

#### **BUSI N1170 - INTEGRATED PROJECT I**

Integrative Project I is the driver of the Semester 1 Applied Business and Technology Diploma programme. It integrates the skills and knowledge acquired in BUSI 1150 and ITDP 104. Students are given the opportunity to learn and apply soft and hard skills within authentic business learning contexts.

CREDITS: 4.00

#### **BUSI N1190 - BUSINESS TECHNOLOGY I**

This Semester 1 course is an integration of BUSI 1150, 1170 and ITDP 104. Students are given the opportunity to learn and apply skills within authentic business learning contexts. The focus is on customer service skills and business communications. Through the use of technology students are enabled to apply productivity tools as employed within the business environment.

CREDITS: 12.00

#### **BUSI N1250 - BUSINESS ESSENTIALS II**

Further develops the basic skills and knowledge acquired in Semester 1 and introduces a number of new business concepts and skills. The focus is on the application of these skills in a business setting.

CREDITS: 4.00

#### **BUSI N1260 - SOFTWARE ESSENTIALS II**

Further develops skills acquired in Semester 1 by increasing the student's knowledge of hardware and software applications and advancing their ability to identify and solve basic computer problems.

CREDITS: 4.00

**BUSI N1270 - INTEGRATIVE PROJECT II**

Integrative Project II is the driver of the Semester 2 Applied Business and Technology Diploma programme. It builds on skills and knowledge acquired in Semester 1 and is the vehicle for integrating skills and knowledge acquired in BUSI 1250 and BUSI 1260. Students learn and apply soft and hard skills within authentic business learning contexts.

CREDITS: 4.00

**BUSI N1290 - BUSINESS TECHNOLOGY II**

This course includes the total integration of BUSI 1250, 1260 and 1270. It provides the opportunity for students to develop an understanding of possible career paths through learning about the internal organisation and functioning of a business. Students advance their knowledge and skills in the use of software applications and other technology tools for communication within authentic business settings.

CREDITS: 12.00

**BUSI N2150 - BUSINESS ESSENTIALS III**

Applies and extends the basic skills and knowledge acquired in semesters one and two of the Applied Business and Technology Diploma programme.

CREDITS: 4.00

**BUSI N2160 - INFORMATION AND COMMUNICATION TECHNOLOGY**

Supports the Business Core I and Advanced Integrative Project courses by advancing the student's information and communication technology (ICT) skills in the identification, evaluation, selection and use of ICT to assist solving business problems. Students research and acquire knowledge of ICT products that are applied in today's business settings.

CREDITS: 4.00

**BUSI N2170 - INTEGRATIVE PROJECT III**

This course comprises the third level of the integrative project courses in the Diploma of Applied Business and Technology. The course focuses on applying the knowledge and skills from BUSI 2150 and 2160 in authentic and vocationally-focused business projects.

CREDITS: 4.00

**BUSI N2190 - BUSINESS TECHNOLOGY III**

The integration of courses BUSI 2150, 2160 and 2170 applies and extends students' basic skills and knowledge acquired in Diploma Year 1. The focus is

on a more complex application of business concepts and skills in a variety of authentic business settings. Students are given opportunities to plan and execute projects independently.

CREDITS: 12.00

**BUSI N2250 - APPLIED BUSINESS AND TECHNOLOGY**

This course integrates and advances the skills and knowledge previously acquired in the business and technology courses against the background of current events and trends in the UAE business environment.

CREDITS: 4.00

**BUSI N2260 - ADVANCED INTEGRATIVE PROJECT**

This course comprises the fourth level of the integrative project courses in the Diploma in Applied Business and Technology. The course focuses on applying the knowledge and skills from BUSI N2170 in authentic, vocationally-focused business and career-based projects.

CREDITS: 4.00

**BUSI N2290 - BUSINESS TECHNOLOGY IV**

This final semester integrated course for the Diploma in Applied Business and Technology programme advances students skills and knowledge against the background of current events and trends in the UAE business environment. Students conduct independent research for projects, based on the application of ICT to authentic vocationally-focused business and career-based topics.

CREDITS: 8.00

**BUSI N2295 - INTRODUCTION TO ENTREPRENEURSHIP: STARTING YOUR OWN BUSINESS**

Designed to give a final wrap up to the diploma course in the final semester. It can be administered just prior to work experience in place of optional work experience to give students the flavour of entrepreneurship which is much needed in the UAE business environment. This course will introduce the students to the act of being an entrepreneur and the entrepreneurial process.

CREDITS: 4.00

**CADV N400 - INTRODUCTION TO PSYCHOSOCIAL ISSUES**

Provides an introductory exploration of psychosocial

theory. It aims initially to describe the foundations of both psychology (with a focus on personality theories, with development theories and learning theories covered in detail in other courses) and sociology, and then to show how an understanding of both disciplines can be combined to give a better appreciation of how individuals interact with their social environment.

CREDITS: 4.00

### **CADV N403 - INTRODUCTION TO CAREER ADVISING AND COUNSELLING AND THE WORLD OF WORK**

Designed to provide students with knowledge and understanding of issues related to the workplace, from the past, present and possible futures, and how these issues will impact their roles as career advisers and counsellors. It provides an understanding of the meaning of work and various definitions of 'work', as determined by historical, sociological, economic and cultural factors.

CREDITS: 3.00

### **CADV N405 - BASIC COUNSELLING SKILLS: INTERPERSONAL COMMUNICATION I**

Provides students with basic and advanced counselling skills and applies them to a career advising/counselling structured interview process. Students will learn the phases of an assessment interview, preparation of a client action plan, and some of the interventions used in the career advising/counselling process.

CREDITS: 3.00

### **CADV N410 - THEORIES OF CAREER DEVELOPMENT**

Builds upon the theories introduced in VOCE 400 and CADV 400. Personality and developmental theories will be explored, as well as specific career development theories. The focus will be on the client/individual's acquisition and development of career identity. Theories included are: Trait and Factor, Life Span, Transition, Parental Influence, Social Learning and Career Decision Making. All of the theories will be explored with specific attention to their application to career development.

CREDITS: 4.00

### **CADV N420 - PRACTICUM - LEVEL I**

This practicum course provides students with the opportunity to apply knowledge and skills gained in the classroom to the workplace. The students will complete 80 hours of supervised practicum with an approved practicum host. Classroom hours will

be spent preparing for the practicum experience by identifying learning goals, preparing learning contracts and discussion of potential practicum sites. In addition, the classroom setting will provide a place for students to share their experiences, to learn from each others experience, to further their understanding of practical application of theoretical learning, to identify sites for future practicum or work.

CREDITS: 4.00

### **CADV N425 - APPLIED CAREER ADVISING AND COUNSELLING**

Provides students with tools and techniques to use with clients in the career development/planning process and the job search process. Students will experience all the tools and techniques themselves and practice using them with clients. Students will develop a repertoire of materials and techniques to use to assist clients in the process of self-assessment and job search preparation and marketing. Students will learn to critically evaluate tools for their appropriateness for the UAE context and for use with non-nationals.

CREDITS: 3.00

### **CADV N435 - JOB SEARCH THEORIES AND TECHNIQUES**

Prepares students to effectively teach job search strategies and techniques to clients. It will cover the current and emerging trends in researching, seeking and selecting work. The material covered will reflect trends in the UAE and employer requirements of job seekers. The course will cover client self assessment of strengths and skills, identification of employment targets, researching companies, preparation of a number of different formats of resumes and curriculum vitae, cover and thank you letters, interview preparation and networking and electronic resources.

CREDITS: 4.00

### **CADV N440 - CAREER DEVELOPMENT IN ORGANISATIONS**

Prepares students to work in the field of organisational career development. The focus will be on systems, policies and programmes used within organisations to promote career management for employees. The course will consider the role of the career development consultant whether as an internal or external consultant. The dual clients of the organisation/employer and the employee will be considered at all times.

CREDITS: 2.00

### **CADV N445 - GROUP COUNSELLING AND FACILITATION**

Provides theory and practice in group facilitation and counselling. It covers theory of stages of group development, group processes, group dynamics, needs of group members and behaviours/roles that members take on in groups. The transferability of individual counselling skills to the group setting will be demonstrated and practiced.

CREDITS: 3.00

### **CADV N460 - BASIC COUNSELLING SKILLS: INTERPERSONAL COMMUNICATION II**

Provides students with counselling skills, processes and strategies to apply to career advising and counselling interviews. Students will learn strategies to implement different counselling interventions including decision-making, learning and self-management strategies and techniques. These skills and strategies will be applied in a goal-directed, solution based counselling framework. Advanced theory and practice will be covered within a social-dynamic/constructivist career counselling approach.

CREDITS: 3.00

### **CADV N466 - RESEARCH PROJECT**

Offers students the opportunity to formulate a research question, conduct an extensive literature review, choose a methodology, design data collection tools, address the issue of ethical research, implement research plans and data collection tools, represent and analyse data, and write a formal, small-scale research report to represent their findings. Emphasis will be on learning by doing, where the learner takes on the role of a beginning researcher. Students will choose a topic of specific interest to them as career development practitioners in training.

CREDITS: 3.00

### **CADV N470 - PRACTICUM - LEVEL II**

This practicum course provides students with the opportunity to apply knowledge and skills gained in the classroom to the workplace. The students will complete 80 hours of supervised practicum with an approved practicum host. Classroom hours will be spent preparing for the practicum experience by identifying learning goals, preparing learning contracts and discussion potential practicum sites.

CREDITS: 2.00

### **CADV N475 - INFORMATION AND RESOURCE MANAGEMENT**

Provides students with knowledge and competency in the use of career information and resource management. Students will learn the use of career information within the counselling context, the role of the career information specialist and of the client in the gathering and use of information, as well as how to evaluate, choose and organise information and resources.

CREDITS: 3.00

### **CADV N520 - PRACTICUM - LEVEL III**

This practicum course provides students with the opportunity to apply knowledge and skills gained in the classroom to the workplace.

CREDITS: 2.00

### **CDA 2303 - PRINCIPLES OF ANIMATION I**

This course is designed to introduce students to the fundamental principles of animation that form the foundation of animation practice.

CREDITS: 3.00

### **CDA 3503 - STORYBOARDING**

Students learn the concepts and theories of applied storyboarding techniques used to communicate the essential elements of shot, scene and storyline. Working through case-based instruction, the students learn storyboarding conventions for staging, shot variation, scene pacing, camera angle and direction, audio effects (FX) and dialogue. They use these conventions to produce storyboards for both presentation and production purposes.

CREDITS: 3.00

### **CDA 3513 - CHARACTER DESIGN**

Provides students with the skills to design a variety of characters that meet the requirements of the script, scene, genre and storyline. Students will learn the design characters that reflect a range of cultural, visual and personality styles. Students experiment characters with costuming and cultural influences and understand characters that reflect a range of visual styles.

CREDITS: 3.00

### **CDA 3523 - PRINCIPLES OF ANIMATION II**

Designed to introduce students to the fundamental principles of animation that form the foundation of animation practice. Through the use of industry standard animation software and hardware the course

will guide students in producing animation from initial design stages to completion.

CREDITS: 3.00

### **CDA 3603 - 3D MODELLING**

Students learn to model three-dimensional objects, and simple characters, using a variety of essential 3D modelling and texturing techniques. Students will learn how to evaluate models in terms of quality of visual design and suitability for purpose, of the level of detail and polygon count.

CREDITS: 3.00

### **CDA 3613 - MULTIMEDIA SCRIPTING**

Introduces students to Multimedia Scripting. Students learn about the Multimedia Object Model as well as basic scripting elements - variables, control structures, objects, methods and events. Students will learn how certain types of animation can only be achieved by having script level control.

CREDITS: 3.00

### **CDA 4703 - 3D ANIMATION**

Covers the basic structure of the 3D animation production pipeline. The emphasis of the course is primarily on creation of the animation performance of simple objects and characters using applied animation principles in a 3D environment. Students learn to apply 3D animation to a variety of situations for a variety of purposes. Students also critique their own work and the work of others.

CREDITS: 3.00

### **CDA 4713 - FILM ANALYSIS AND NARRATIVE STRUCTURE**

Develops skills in storytelling (narrative structure) through the analysis of short animation and live action films, shots and sequences. It covers the elements of story structure, shot selection, scene development, and pacing and integrates elements of art direction, composition, colour, lighting, music and sound, and editing technique.

CREDITS: 3.00

### **CDA 4723 - ANIMATION SCRIPTING**

Begins by introducing students to the basic commands and scripts in MEL, and then continues to guide them through increasing levels of complexity to maximise their control of the commands, macros, scripts, and custom interface elements that can be created with

MEL. Students also use MEL commands to bypass Maya's user interface, quickly create shortcuts, and access advanced features.

CREDITS: 3.00

### **CDA 4803 - VFX, AUDIO, EDITING, COMPOSITING**

Integrates key skills necessary in visual effects, music and sound, rendering, and compositing in order to assemble all the assets of a short animation production into its final form. The student is introduced to the basic elements of post-production through exercises in each area using existing assets.

CREDITS: 3.00

### **CDA 4806 - FINAL PROJECT - ANIMATION**

The senior animation project creates a structure within which the students may demonstrate their area of specialty through a complete professional-level pre-production, production and post-production pipeline. This project trains the students' ability to follow a tight production schedule, plan and create a short production, accept constructive criticism and direction, solve problems, and demonstrate a strong work ethic and meet key deadlines. Students also critique their own work and the work of others.

CREDITS: 6.00

### **CDF 2303 - FASHION DRAWING**

Builds upon the skills developed in Drawing I and provides the initial introduction to the basic drawing concepts and skills needed in the profession of fashion design. The course emphasises the fundamentals of drawing the basic shapes, lines and contours used in the creation of fashion design drawings for a variety of basic clothing types.

CREDITS: 3.00

### **CDF 3503 - FASHION DESIGN AND TEXTILE**

Leads students through the study and analysis of the relationship between textiles and fashion, and adequate selection, combination, decoration and application of fabrics in Fashion Design. The objective is to improve students' knowledge of fibres and fabrics, characteristics of textiles and their application in fashion design. Students learn how to choose appropriate fabrics for specific fashion collection while analysing various aspects of fabrics and textile-comfort, appearance, textures, draping abilities, and various combinations effects.

CREDITS: 3.00

### **CDF 3513 - FASHION DRAPING AND PATTERN MAKING**

Introduces students to the fundamental techniques of draping and basic pattern making. The draping segment covers the fundamentals of draping that include the ability to drape and fit toiles or muslins according to specific measurement and fit standards; students practice the skills on dress forms. The pattern making segment of the course places emphases on precision pattern drawing, basic pattern production, development of blocks and application of measuring techniques to record body and dress form measurements.

CREDITS: 3.00

### **CDF 3523 - FASHION DESIGN AND TECHNOLOGY I**

The objective of the course is to improve students' knowledge and skills in fashion design and technology application from concept development to editing and presenting a fashion collection. Students are encouraged to use various technologies in design and illustration, they also gain advanced technical skills in garment production technology using different kinds of sewing machines and CAD, finally they learn how to make professional presentation of their work creating personal portfolio and web site using various technologies.

CREDITS: 3.00

### **CDF 3603 - FASHION DESIGN AND TREND RESEARCH**

The primary goal of this course is to develop students' design and trend research skills. Practical work broadens students' knowledge about the connection between fashion design and various fashion markets. Students learn how to develop design concept, analyse trends, potential fashion markets and target specific customers. They also learn to understand the factors which influence trends in the global fashion market. This course is a combination of theory, design practice and research skills.

CREDITS: 3.00

### **CDF 3623 - FASHION DESIGN AND TECHNOLOGY II**

Covers advanced level of the technology application in fashion design, production and presentation process. Students continue to combine skills and principles of technology application, design development and professional presentation in fashion. They work through carefully selected projects aimed at increasing their ability to develop original ideas, design unique fashion collections, produce garments and create professional

presentations of their work using various technologies.  
CREDITS: 3.00

### **CDF 4703 - FASHION DESIGN AND PRODUCTION**

Students analyse the fashion production process and apply that knowledge to produce specific collections.

CREDITS: 3.00

### **CDF 4713 - FASHION AND CAD DESIGN**

Provides students with the skills and knowledge to develop fashion projects using various computer software programmes both for collection design and pattern development in fashion. It also supports the students' fashion collection presentation skills through the development of advanced computer skills.

CREDITS: 3.00

### **CDF 4723 - FASHION MARKETING**

Presents the theoretical and practical understanding of fashion marketing decision making. It begins with exploring the fundamentals of fashion marketing including general fashion marketing concepts, the marketing environment and types of markets. Students learn how to analyse a target market and how to conduct market research for the fashion industry. Students also explore the fashion industry including types of businesses, history, current trends, fashion products, fashion consumers and the fashion marketplace.

CREDITS: 3.00

### **CDF 4803 - FASHION MERCHANDISING**

Provides students with a solid foundation for success in entry-level positions within the Fashion Merchandising field, by analysing concepts related to the commercial and professional elements of fashion. Students analyse all aspects of merchandising, and marketing, within fashion and its related industries.

CREDITS: 3.00

### **CDG 2303 - INTRODUCTION TO GRAPHIC DESIGN**

Provides an introduction to the fundamental elements and principles of both two and three dimensional design. Aspects of colour theory and colour systems and typography basics are discussed and students are able to demonstrate an understanding of typeface selection. Composition, rendering and production techniques are demonstrated using sketching and industry-standard software methods.

CREDITS: 3.00

**CDG 3503 - TYPOGRAPHY I**

Introduces students to the basic aspects of typography such as letterforms and page structures, through a variety of application scenarios. Students are exposed to the historical background, technical and aesthetic issues, and communicative abilities of typography, as both individual forms and as text. Students undertake a series of assignments and projects to apply basic typography concepts to given situations.

CREDITS: 3.00

**CDG 3513 - INTRODUCTION TO DESIGN****ILLUSTRATION**

Introduces students to the professional field of illustration, with a strong emphasis on concept development. The class specifically focuses on visual narratives by utilising a variety of media and formats. A dialogue of drawing and illustration issues is encouraged and expected as part of the classroom experience.

CREDITS: 3.00

**CDG 3603 - TYPOGRAPHY II**

Throughout this course, students expand and refine the skills acquired in Typography I. Using the foundation of typographic basics like letterforms and page structure, students primarily focus their efforts towards developing a greater understanding of typographic form through exercises based on the setting of words, phrases, sentences and short paragraphs.

CREDITS: 3.00

**CDG 3613 - STUDIO I**

Reviews the application of design principles and elements. Visual communication issues are analysed and solved through extensive critical research on existing visual communication. Students will also further develop their own creative processes while also critiquing their own work. Students will learn to creatively solve communication problems based on real design case studies through critical analysis of the application of learned design principles, design elements, and typography.

CREDITS: 3.00

**CDG 3623 - HISTORY OF GRAPHIC DESIGN**

Through a chronological survey, students study how, since 1450, graphic design has responded to (and affected) international, social, political, and technological developments. Emphasis will be on

printed work from 1880 to 1970, understanding visual communication in historical context and its application to design practice.

CREDITS: 3.00

**CDG 4703 - STUDIO II**

Continues the work done in Studio I by further extending the students' knowledge and skills in the solution of project design situations faced by professional visual communication offices. More advanced problems that represent current visual communication issues are solved through extensive research and the application of learned concepts and skills.

CREDITS: 3.00

**CDG 4713 - PACKAGING DESIGN**

Addresses the theory behind, and the studio investigation of, three-dimensional structures as they relate to the area of packaging, exhibition, advertising and environmental design. Experimentation with different materials is explored while addressing the client' briefs and ensuring that the design rational being used is conscious of the target market. Students further develop their own creative processes while also critiquing their own work and the work of others.

CREDITS: 3.00

**CDG 4723 - SUSTAINABLE/SOCIAL DESIGN**

Addresses the designer's role in shaping the public narrative on sustainable/social issues, causes and other needs-based topics. Students analyse contemporary environmental, cultural and societal issues around the world that have an impact on our daily lives. They also design communication strategies that increase awareness, motivate, inspire or incite action from specific, or broad, audiences.

CREDITS: 3.00

**CDG 4803 - PHOTOGRAPHY FOR GRAPHIC DESIGN**

Using a digital camera, students extend their ability to 'see' things around them, both outside and inside the studio. Through shooting assignments, students apply photography as another means of image-making for designers.

CREDITS: 3.00

**CDI 2303 - INTRODUCTION TO INTERIOR DESIGN**

Introduces the students to the fundamental principles and history of interior design and further explores the

application of design elements in the interior design field.

CREDITS: 3.00

### **CETE N400 - MANAGEMENT INFORMATION SYSTEMS**

Focuses on the role of computer-based information systems in business and industrial organisations from a management perspective. The strategic nature of an information system is emphasised in relation to other business systems. The major parts of an information system, their general inter-relationships and appropriate terminology are introduced to enable the effective communication of business requirements by managers to IT professionals.

CREDITS: 4.00

### **CHEM 318 - PETROLEUM REFINING AND PETROCHEMICALS**

Covers the essential processing operations in a refinery where crude oil is converted into lighter fuels. The properties of significant fuels, such as motor gasoline, diesel, jet fuel and heating oils are covered. The production, chemistry, and marketing aspects of some important petrochemicals are also covered. The course is supported by the relevant laboratory experiments.

CREDITS: 5.00

### **CHEM 330 - PROJECT: CHEMICAL (2 SEMESTERS)**

A major chemical engineering project extending over two semesters is one of the essential requirements for HD graduation. It illustrates the principles of design and economic evaluation of chemical processes through the preliminary design of a commercial industrial project. Working in groups on assigned or selected portions of the overall project, students are required to make integrated use of a wide variety of fundamentals and principles gained from previous courses. Lectures are given on the introduction methods of obtaining preliminary cost estimates of chemical process equipment.

CREDITS: 8.00

### **CHEM N207 - CHEMICAL ENGINEERING PRINCIPLES I**

The first of two courses covering the essential issues of chemical engineering principles and applications and a brief introduction to the fundamental techniques of engineering calculations.

CREDITS: 4.00

### **CHEM N2115 - GENERAL CHEMISTRY**

This is an introductory inorganic chemistry course which covers the following topics: matter; atomic structure and the periodic table; chemical bonding; naming and formulas of compounds and the writing and balancing of chemical equations. Chemical calculations are based on formulas and equations and include formula mass, mole determinations and stoichiometry. Concepts are reinforced through laboratory work.

CREDITS: 4.00

### **CHEM N2125 - CHEMICAL AND INDUSTRIAL SAFETY**

Designed to impart knowledge and skills in order to manage safety in a chemical laboratory, and to extend that knowledge to an industrial work site. The course topics include chemical safety, gas hazards, fire safety, and other safety aspects related to the chemical laboratory environment. Emphasis is on developing practical skills and knowledge required to create and maintain safe working conditions in chemical laboratories.

CREDITS: 2.00

### **CHEM N2130 - CHEMICAL PROCESS CALCULATIONS**

An introduction to the basics of chemical engineering unit operations and calculations. The principles of fluid flow, heat transfer and mass transfer are covered, along with the associated operation of major equipment and machinery common to chemical process industries. Concepts are reinforced through laboratory work.

CREDITS: 3.00

### **CHEM N224 - FUNDAMENTALS OF ELECTRONICS AND INSTRUMENTATION**

Introduces the students to the basic DC and AC circuit theory, electromagnetism, electrical hazards in the chemical industry and safe working procedures. This is followed by latest process instrumentation technology and selection criteria. The course includes experiments on measurement of common process variables such as temperature, pressure, level, flow, and density etc. It explains and applies the principles of temperature, pressure, level and flow measurement instruments and discusses their common operating and troubleshooting problems.

CREDITS: 4.00

### **CHEM N2320 - SAMPLING TECHNIQUES**

Introduction to the techniques used to take a representative sample, the importance of sampling

in the preparation for analysis, and the quantitative aspects of sampling. Both spot and composite testing procedures and the related qualitative and quantitative aspects of these are included.

CREDITS: 3.00

### **CHEM N2325 - ENVIRONMENTAL MONITORING AND CONTROL**

Introduces the student to the main sources of environmental pollution in terms of air, particulate, water and solid waste, within a global context. The analytical type instruments used to monitor and control pollution is examined in addition to the factors affecting pollution. Emphasis is placed on the development of laboratory skills and safe work practices, to ensure regulatory compliance of testing to meet EPA and OSHA test limits.

CREDITS: 3.00

### **CHEM N2415 - APPLIED ORGANIC CHEMISTRY**

Focuses on the application of organic chemistry relevant to the petrochemical industries in the UAE. Topics covered include: classification of plastics; sources of raw materials for the production of plastics; polymerisation processes; properties of thermosets and thermoplastics; production of specialist organic chemicals.

CREDITS: 3.00

### **CHEM N3117 - CHROMATOGRAPHIC TECHNIQUES I**

An introduction to chromatographic analysis. The course is laboratory-based, applying solvent extraction and chromatographic techniques i.e. column, paper, thin layer, for the qualitative and quantitative measurement of a range of analytes. The emphasis is on understanding the basic separation and identification concepts of these techniques in conjunction with the development of competent laboratory skills and safe working practices.

CREDITS: 3.00

### **CHEM N312 - HEAT TRANSFER**

Covers heat transfer, one of the core subjects in chemical engineering. The principles of heat transfer in solids (heat conduction), force and natural convection, and radiation are thoroughly covered. Emphasis is placed on problems solving techniques related to heat flow and the design of heat exchangers. A description of evaporators, furnaces, and boilers, is also included. A series of experiments is designed to

reinforce the principles and develop skills for operating heat transfer equipment.

CREDITS: 4.00

### **CHEM N3127 - SPECTROSCOPIC TECHNIQUES I**

An introduction to spectroscopic analysis. The major portion of course time is spent in the laboratory setting up and operating analytical instruments, colorimeters and UV-Vis spectrophotometers, for the qualitative and quantitative measurement of a range of analytes. This course covers the background theory of applied spectroscopy, calculations and applications. The emphasis is on the development of competent laboratory skills and safe working practices.

CREDITS: 3.00

### **CHEM N313 - MASS TRANSFER**

Covers mass transfer operations with their fundamental theories as related to industrial application. Special emphasis is on the diffusion theory of gases and liquids, K values, and equilibrium stages. The design of separation processes can be analysed using equilibrium behaviour of systems complemented with extensive laboratory experiments. Techniques will be developed for the analysis of processes that are used extensively used and practice in local oil industries such as distillation, adsorption and humidification.

CREDITS: 4.00

### **CHEM N316 - INDUSTRIAL PROCESSES AND SAFETY**

Covers the chemical process industries that are relevant in the UAE and includes the production of industrial gases, fertilizers, inorganic acids, food products, cement, aluminium, industrial carbon and iron and steel. Various types of hazards in the industry, safety procedures and risk analysis are also covered. Discuss the air and water pollution control technologies to provide a clean local environment. The course includes site visits to local industries in the UAE related to taught topics.

CREDITS: 4.00

### **CHEM N317 - MATERIALS AND CORROSION**

Provides an introduction to the properties and corrosion behaviour of materials including metals, alloys and non-metallic materials. The study of materials focuses on engineering properties and laboratory exercise on tensile testing and determination of material yield strength, ductility, toughness and resilience are used to reinforce theoretical concepts.

CREDITS: 3.00

### **CHEM N318 - PETROLEUM REFINING AND PETROCHEMICALS**

Covers the essential processing operations in a refinery where crude oil is converted into lighter fuels. The properties of significant fuels, such as motor gasoline, diesel, jet fuel and heating oils are covered. The production, chemistry, and marketing aspects of some important petrochemicals are also covered. The course is supported by the relevant laboratory experiments.

CREDITS: 4.00

### **CHEM N3215 - INTRODUCTION TO CORROSION**

Provides an introduction to the main types of corrosion and the most common methods used in industry to monitor and control corrosion. The factors which inhibit or contribute to corrosion are covered. Emphasis is placed upon laboratory work and case studies.

CREDITS: 3.00

### **CHEM N3220 - PETROLEUM TESTING**

Covers the application of tests and analyses that are currently in use in the oil and gas industry using ASTM methods. Emphasis is placed on the verification of the quality of the final products, determined by the effectiveness of processing. The concepts of petroleum processing, and laboratory safety are reinforced by laboratory work.

CREDITS: 3.00

### **CHEM N3225 - WATER QUALITY TESTING AND TREATMENT**

Provides an introduction to the theory and laboratory procedures required to analyse water to acceptable standards. The major portion of the course is spent on routine water collecting and testing by standard methods in order to check for compliance. An introduction to planning and initiating water testing programmes and an overview of water treatment methods are also included.

CREDITS: 3.00

### **CHEM N3240 - CHEMICAL PROJECT**

Develops abilities in applying knowledge and skills acquired throughout all the courses within the programme. In addition there is a strong focus on project skills such as independent learning, time management and critical thinking. The student is also required to provide detailed documentation and to make a presentation on a measurement based chemical laboratory project.

CREDITS: 2.00

### **CHEM N350 - PLANT OPERATIONS AND PERFORMANCE**

Covers the study of operational aspects of major process equipment. It emphasises the techniques and calculation procedures to determine the performance of plant and equipment. The key design and operational parameters are reviewed as well as practical ways are suggested to troubleshoot or improve the performance, capacity and efficiency of plant equipment.

CREDITS: 4.00

### **CHEM N353 - PROCESS CONTROL SYSTEMS**

Covers the theory and practical aspects of chemical process control including the development of outline control schemes and troubleshooting base on control related problems.

CREDITS: 4.00

### **CHEM N405 - PROCESS AND EQUIPMENT DESIGN**

Provides a basic knowledge of chemical process and equipment design. The course covers the overall procedure of designing a chemical plant, as well as performing some typical design calculations on material and energy balances. It will introduce students to flow sheeting, and give the methods used in the prediction of fluids physical properties. A case study to apply the design calculations is used to integrate the concepts.

CREDITS: 4.00

### **CHEM N407 - OPTIMISATION AND APPLICATION IN REFINERY AND PETROCHEMICAL PLANNING**

Introduces optimisation principles and linear programming techniques using graphical and simplex methods. It focuses on model development and applications to solve a wide range of process engineering problems using spread sheet software (Excel or Matlab). The course also introduces the use of commercial software which is extensively used in the oil, gas and petrochemical industries. This course explains the optimisation steps that can serve as a general guide for problem solving in design and operation analysis.

CREDITS: 4.00

### **CHEM N409 - INDEPENDENT WORK BASED-PROJECT**

This course uses an independent work based project as a practical means of: researching industrial problems; identifying and detailing a specific industrial problem from local industries; plan the means of obtaining

several solutions to the problem. Students will also learn by using optimisation techniques or other means that aid in developing possible solutions, resolving implementation issues and evaluating performance results.

CREDITS: 4.00

### **CHEM N415 - SEPARATION PROCESSES**

Designed to cover the fundamentals of separation processes. The course includes mechanical separation processes used in chemical industries like filtration, evaporation, drying, liquid-liquid extraction and multi-component distillation. The aim of the course is to give a practical flavour and to ensure a good overall understanding of the chemical industrial processes. The course also covers basic design calculations of separation equipment.

CREDITS: 4.00

### **CHEM N420 - PROCESS DYNAMICS AND CONTROL**

In this course the students learn the basic concepts of process control in chemical plants. Frequency response analysis is then covered to analyse the output sinusoidal changes with frequency of the input sinusoid. In this course, the dynamics characteristics of the response of closed loop systems are also examined and the closed loop transfer functions are developed. Before introducing the design of feedback control loop, a notion of stability is introduced. The students will perform basic process control design for typical industrial process systems.

CREDITS: 4.00

### **CHEM N425 - TRANSPORT PHENOMENA**

Designed to cover the concept of compressible flow, steady and unsteady heat transfer and the unsteady and convective mass transfer. The unique features of boiling and condensation are presented. The course highlights the basic understanding of the transport analogy by exploring the similarities between mass, momentum, and heat fundamentals. Students will develop a detailed understanding of the fundamental principles of momentum, energy, and mass transport and formulate and solve mathematical models for transport processes.

CREDITS: 4.00

### **CHEM N431 - CHEMICAL PROCESS HAZOP AND RISK ANALYSIS**

Provides an introduction to the specific approaches

and techniques which may be used to analyse, assess and manage hazards and risks in chemical process industries. Emphasis is placed on HAZOP and semi-quantitative studies for hazard identification and risk analysis. The basics of chemical process safety involving accident sequences, methods to eliminate sequence steps and use of statistics to characterise accidents are reinforced through case studies.

CREDITS: 4.00

### **CHEM N433 - PETROLEUM GAS PROCESSING**

Designed to cover the fundamentals of the gas process operations in the petroleum industry. Students will gain an understanding of hydrocarbon exploration methods and the conditions required for the formation and accumulation of hydrocarbon reserves. An overview of gas processing from exploration up to final production and transportation as well as gas properties calculations is also included. The course focuses on the principles of NGL extraction, LPG fractionation and LNG production plus some design aspects of the major unit process operations.

CREDITS: 4.00

### **CIA 2503 - WEB APPLICATIONS DEVELOPMENT**

This course exposes students to web applications technologies and the skills required to develop functional web applications.

CREDITS: 3.00

### **CIA 3103 - DATABASE DESIGN AND ADMINISTRATION**

Focuses on data modelling, database design and database administration on an RDBMS server as well as introducing the use of Structured Query Language (SQL) to define, manipulate, and administer data and covers the concept of database administration and defines the duties and responsibilities of database administrators.

CREDITS: 3.00

### **CIA 3303 - PRINCIPLES OF MOBILE APPLICATIONS**

Teaches students to develop and deploy mobile applications using a current mobile development technology. Students compare current mobile devices and their application development tools.

CREDITS: 3.00

### **CIA 4003 - ADVANCED MOBILE APPLICATIONS**

Covers advanced mobile application concepts. The course teaches students how to create custom user

interfaces and screens, manipulate and animate 2D graphics objects, and add multimedia content (audio and video) to mobile applications. The course covers file system access, SD card access, network data access, and how to use SQL for permanent data storage and retrieval. Furthermore the course covers location based services and Global Positioning System (GPS) applications.

CREDITS: 3.00

### **CIA 4103 - DATA DRIVEN WEB TECHNOLOGIES**

Develops the skills required for building data-driven web applications. Students will learn how to write server-side code to generate content, handle user interaction, validate user input, handle unexpected errors and maintain application state. The course also covers database connectivity for displaying and updating an applications data through the applications server-side code. Students learn security principles through user authentication, roles, and user authorisation.

CREDITS: 3.00

### **CIA 4203 - ENTERPRISE DATABASE APPLICATIONS**

Focuses on various advanced topics pertinent to database management systems (DBMS) and study how they are being applied in a business environment. The course will examine the advanced concepts used to design, implement and administer database applications on client server configuration. Students will use different tools to develop forms and reports, control objects and codes for mitigation of data entry errors, and implement security measures.

CREDITS: 3.00

### **CIA 4503 - ADVANCED OBJECT ORIENTED PROGRAMMING**

Continues to enhance students' ability to apply object oriented concepts in providing solutions for problems faced by software developers. Students will demonstrate ability to appropriately apply the concepts of abstract classes, inheritance, polymorphism, interfaces, method overloading, aggregation, compositions, and associations in developing object oriented code. Students will also develop applications that include a database backend component.

CREDITS: 3.00

### **CIB 2003 - TECHNOLOGY BASED MARKETING**

Introduces the basic concepts and process of marketing

with a focus on technology-based marketing strategies, principles and concepts.

CREDITS: 3.00

### **CIB 3003 - HUMAN RESOURCE MANAGEMENT AND SYSTEMS**

This course creates an understanding of HRM concepts from theory and practice, examines processes and systems, tools and contemporary developments.

CREDITS: 3.00

### **CIB 3103 - OBJECT ORIENTED ANALYSIS AND DESIGN**

Presents one practical, complete, object-oriented analysis and design (OOAD) road map from requirements gathering to system design. It explains the concepts and techniques necessary to effectively use system requirements captured in use cases to drive the development of a robust design model.

CREDITS: 3.00

### **CIB 3203 - ACCOUNTING FOR MANAGERS**

Introduces students to accounting as a system of information gathering and reporting, and its role in business decision-making. It introduces the processing of financial transactions through the accounting information system in each accounting period.

CREDITS: 3.00

### **CIB 3303 - E-BUSINESS PRINCIPLES**

Explores E-Business strategies, technologies and related legal issues. Students define e-business and explore its opportunities, limitations and impact on traditional businesses and institutions.

CREDITS: 3.00

### **CIB 3403 - ADVANCED DATABASE TECHNOLOGIES**

Discusses advanced database technologies and business intelligence tools that help modern day enterprises store, access and analyse data essential in decision making. The course focuses on such database technologies as data warehousing, data mining, XML data and information retrieval. Students understand the importance of data quality and such issues as integrity, consistency, concurrency and security.

CREDITS: 3.00

### **CIB 4003 - E BUSINESS APPLICATIONS DEVELOPMENT**

This course develops students skills required for

building e-commerce applications. Students will learn how to develop server side applications that generate content, maintain state, authenticate users, connect to databases and provide security of transactions and confidentiality of data. At the end of the course students will be able to build a complete e-commerce web application that handles memberships, online catalogues, shopping cart module, and check out.

CREDITS: 3.00

### **CIB 4103 - BUSINESS FINANCE**

This course provides students with financial and accounting concepts and the skills to integrate financial data with relevant information systems. It discusses financial and accounting concepts and issues that will contribute positively to the students' ability to design integrated business solutions enabled by information technology. Examples and applications will focus on IT infrastructure, Business solutions, IS management and implementation projects. in the business environment.

CREDITS: 3.00

### **CIB 4203 - CUSTOMER RELATIONSHIP MANAGEMENT SYSTEMS**

This course explores the use of Customer Relationship Management (CRM) to support business processes and development. It examines the information technology resources, strategies, software and processes needed to support an effective CRM strategy. It explores, in particular CRM techniques for enhancing customer service, sales force effectiveness and marketing strategy. The course explores the benefits of creating customer loyalty, developing market intelligence and embedding a customer relationship management system into an organisation.

CREDITS: 3.00

### **CID 1002 - INTRODUCTION TO INTERNET TECHNOLOGIES**

Introduces the basic concepts of the internet, the World Wide Web and their underlying technologies. Students explore Internet-based tools such as email, web browsers & file transfer applications, as well as various types a variety of website types including social media, blogs, student forums and mobile web applications. Topics include the history of the Internet, the difference between static and dynamic websites and the evolution from Web 1.0 to Web 2.0.

CREDITS: 2.00

### **CID 1012 - COMPUTER HARDWARE AND SOFTWARE**

An introduction to the essential hardware and software components of a contemporary computer system. Students learn about the internal components and organisation of computing and peripheral devices, leading on to the application of those skills in building and configuring computer systems. Software topics include the role of the operating system, operating system installation, system software administration and basic system security.

CREDITS: 2.00

### **CID 1022 - BASIC NETWORKING**

Introduces students to basic computer networking. Students will learn about standard network components, devices and media. Students will learn basic TCP/IP addressing and will build and test peer-to-peer local area networks using desktop operating systems. They will be introduced to home wireless networking set up and configuration.

CREDITS: 2.00

### **CID 1052 - WEB DESIGN**

Covers the fundamental concepts necessary for planning, designing, developing and publishing static web sites. Students use industry standard web page development tools to create static web sites including site maps, page layouts, navigation, images, multimedia objects, text, tables, forms and validation. The course includes detailed coverage of HTML and XHTML.

CREDITS: 2.00

### **CID 1062 - CREATIVE THINKING FOR IT PROFESSIONALS**

Students are introduced to and apply a variety of creative thinking techniques such as Six Thinking Hats, Mindmapping and Storyboarding using computer applications.

CREDITS: 2.00

### **CID 1113 - PRODUCTIVITY TOOLS**

An introduction to personal productivity tools. Topics include keyboarding in both English and Arabic, computer files, word processing, spreadsheets, databases, presentation software and accessing electronic information. Students are introduced to mobile collaboration apps. Students are prepared for the European/International Computer Driving Licence (ECDL/ICDL) examination and certification.

CREDITS: 3.00

**CID 1123 - CUSTOMER SERVICE SKILLS**

Teaches students how to build and maintain effective customer relationships by meeting the needs of both internal and external customers. Students learn how to monitor and solve customer service problems; process customer service complaints; handle difficult customers; respect diversity; work with others to improve customer service; and provide excellent customer service in person, online and via the telephone.

CREDITS: 3.00

**CID 1203 - NETWORK DOMAIN ADMINISTRATION**

Introduces the concepts and skills required for successful planning, installation, configuration and administration of an enterprise operating system. Students build their skills starting from the administration of standalone network servers in a workgroup environment to the level required to administer domain based enterprise networks. Topics/skills include creating users & groups and configuring other network resources.

CREDITS: 3.00

**CID 1213 - NETWORKING CONCEPTS**

This course introduces the basic concepts of the OSI and TCP/IP networking models. Students learn and apply basic network communication protocols. Topics/skills include basic TCP/IP addressing & subnetting, simple cabling setup and basic local area network configuration, as well as testing & establishing network connectivity

CREDITS: 3.00

**CID 1303 - FUNDAMENTALS OF DIGITAL MULTIMEDIA**

Introduces various multimedia components such as text, images and 2D graphics. Students develop practical skills in the design, development and delivery of multimedia content using specialised software tools.

CREDITS: 3.00

**CID 1313 - ADVANCED PRODUCTIVITY TOOLS**

Students are introduced to advanced skills in personal productivity tools. Topics include: advanced word processing with tables, forms, graphics and macros; advanced spreadsheets including advanced editing, data handling, functions, analysis features and macros; and advanced database using advanced features in table, query, form and report design. The course also includes personal productivity tools in Arabic version. Students are prepared for the advanced European/

International Computer Driving License (ECDL/ICDL) examination and certification.

CREDITS: 3.00

**CID 1393 - OFFICE ADMINISTRATION SKILLS**

Develops the skills and knowledge required to understand and evaluate an office system. Topics include the roles and responsibilities of office management, current working practices, legislation relating to the workplace and strategies for coping with work related stress. Students learn to improve business communication, office systems and procedures.

CREDITS: 3.00

**CIM 2003 - GRAPHIC DESIGN FOR MULTIMEDIA**

An introduction to the fundamental elements and principles of graphic design in both print-based and digital applications. Students develop an understanding of the design process from the development of concepts and visuals to the production of Web/print-ready images. Students will demonstrate an understanding of typeface selection. Aspects of colour theory systems are discussed. Composition, rendering and production techniques are demonstrated using visualisation and abstraction methods and industry-standard image processing software.

CREDITS: 3.00

**CIM 3103 - STORYBOARDING AND ANIMATICS**

Develops a thorough understanding of traditional storyboarding practices, and demonstrates how a digital pipeline can speed up working processes and provide greater flexibility in possible outputs.

CREDITS: 3.00

**CIM 3203 - PROGRAMMING FOR MULTIMEDIA**

The objective of this course is to introduce students to programming as a creative tool for digital image and audio processes, and to assist them in developing a basic understanding of object-based constructions and optimal multimedia delivery requirements.

CREDITS: 3.00

**CIM 3303 - 2D AND 3D ANIMATION**

This course introduces students to the fundamental principles of 2D and 3D animation, the theory and the application thereof.

CREDITS: 3.00

**CIM 4003 - MULTIMEDIA SCRIPTING**

An introduction to scripting as a creative tool for digital image and audio processes. It will also assist the students in gaining a basic understanding of object-based constructions and optimal multimedia delivery requirements. Students will design, assemble and write multimedia applications using scripting languages.

CREDITS: 3.00

**CIM 4103 - WEB AUTHORING AND ADMINISTRATION**

Designed to equip students with specialist skills in the use and design of digital multimedia including graphics, sound and digital movies for web-based presentation on the Internet. It will involve training in the specialist graphics, animation and multimedia software packages in current use. The course also focuses on web administration areas such as web security, web content management, log analysis, web usage and load balancing.

CREDITS: 3.00

**CIM 4203 - VIRTUAL REALITY AND SIMULATION**

Examines the emerging electronic technology of Virtual Reality (VR). It teaches the key concepts to understand and evaluate VR systems, applications and simulators, and their impact on future digital systems and user interfaces. The course also covers the topic of simulation which includes sub-topics such as stochastic modelling, random number generators, discrete-event simulation approaches, simulated data analysis, and simulation variance reduction techniques.

CREDITS: 3.00

**CIM 4303 - VFX, AUDIO, EDITING AND COMPOSITION**

Covers the techniques and technology used to create high quality digital visual effects, giving the students the skills required to work in post-production. The course gives an overview of the entire production process, before moving to key production and post-production skills such as digital film-making, compositing, editing, motion graphics, effects and computer graphics interface (CGI). The students will create a rich portfolio of work that will showcase their technical, artistic and team-working abilities.

CREDITS: 3.00

**CIN 2003 - ENTERPRISE NETWORK SERVICES**

Covers the concepts and skills required for successful

planning, installation, configuration and administration of an enterprise operating system such as Microsoft Windows Server 2008 or later.

CREDITS: 3.00

**CIN 2103 - NETWORKING FUNDAMENTALS**

This course introduces the basic concepts of networking such as an introduction to layered models, physical and logical addressing, network devices, network types and routed protocols.

CREDITS: 3.00

**CIN 2203 - ROUTING PROTOCOLS**

Develops an understanding of how a router learns about remote networks and determines the best path using both static and dynamic routing protocols

CREDITS: 3.00

**CIN 3003 - LAN SWITCHING**

Analyses the concepts and techniques of LAN switching in both wired and wireless networks. It discusses features of a layer 2 switch, and how a switch interconnects and communicates with other switches and routers in a small or medium sized network.

CREDITS: 3.00

**CIN 3103 - WIRELESS NETWORKS**

Introduces the fundamentals of wireless communication including the various wireless standards and the relevant organisations. Students learn the terminologies and behaviour associated with radio frequencies, as well as the components, basic measurements techniques and antenna concepts used in the planning and design of wireless networks.

CREDITS: 3.00

**CIN 3203 - WAN TECHNOLOGIES**

Focuses on the various WAN technologies used to connect small to medium sized networks, including PPP, Frame relay and DSL. WAN security is also discussed including methods for analysing network vulnerabilities and mitigating common security threats. The course covers configuration and implementation of IP addressing in an Enterprise network including NAT, DHCP and IPV6.

CREDITS: 3.00

**CIN 3303 - NETWORK SECURITY**

A detailed investigation of the principles of network security. An in-depth exposure to the management of

network security including threat identification, risk analysis, risk management and risk avoidance will be included.

CREDITS: 3.00

### **CIN 4006 - ADVANCED ROUTING**

This course teaches advanced skills for configuring and implementing enterprise wide converged networks. Using interior and exterior gateway protocols such as EIGRP, OSPF and BGP, students learn how to determine network resources, and create implementation and verification plans for both interior and exterior gateway routing protocols. The course also includes extensive information on the configuration and implementation of IPv6. It also analyses the concepts of layer 3 path control and discusses basic teleworker and branch service using technologies such as broadband and VPN.

CREDITS: 6.00

### **CIN 4106 - ADVANCED SWITCHING**

Teaches advanced skills in networking required to configure and implement enterprise wide switched networks. The main focus of the course is to design, build and secure switched networks. Students will also learn to design, implement and monitor campus network services such as IP telephony, QoS (traffic shaping and traffic engineering) and the integration of wireless LANs. The configuration and implementation of multilayer switching, high availability using protocols such as HSRP, VRRP/GLBP, VLANs, multicasting and protocols such as VTP and advanced STP will also be covered.

CREDITS: 6.00

### **CIS 1003 - INFORMATION SYSTEMS IN ORGANISATIONS AND SOCIETY**

Introduction to information systems and development concepts. The course will cover the fundamental and changing role of information within organisations and society exploring how information technology (IT) supports decision making and enables improvements in communication, quality, efficiency and effectiveness. Students will study emerging technologies and the local and global impact of such technologies on individuals, organisations and society.

CREDITS: 3.00

### **CIS 1103 - HARDWARE AND NETWORKING**

Introduces the essential components of a contemporary computer system. Students will study the hardware,

operating system and networking for desktop PCs. Students will learn about the internal components and organisation of computing and peripheral devices. Operating system topics include the role of the operating systems, installation, basic system administration and local security.

CREDITS: 3.00

### **CIS 1203 - WEB TECHNOLOGIES**

Studies the basic concepts of the World Wide Web and its underlying technologies. It defines the functions of web browsers and web servers for accessing resources over the internet. It explains the structure, categories, security and accessibility of web sites. The course also describes current popular web applications like search engines, social networking, wikis and blogs as well as emerging web technologies and trends. The course provides the students with basic skills to plan, design, develop, and publish static websites using an industry standard web authoring tool, including site maps, page layouts, navigation, images, multimedia objects, text, tables, forms, validation, and CSS.

CREDITS: 3.00

### **CIS 1303 - DATA AND INFORMATION MANAGEMENT**

Introduces relational database concepts and simple database application development. It focuses on core skills of identifying organisational requirements, database design and implementation, and business application development. Students will develop practical skills in building database systems using different types of queries to retrieve and/or manipulate data, through customised forms and reports.

CREDITS: 3.00

### **CIS 1403 - FUNDAMENTALS OF PROGRAMMING**

Builds the foundations of logical thinking/problem solving and introduces the fundamental concepts and terminology of programming. Students develop skills in designing and writing simple computer programmes within an integrated development environment. Concepts and techniques covered include variables, data types, sequence, selection, iteration, classes, objects, methods and the mechanics of running, testing and debugging programmes.

CREDITS: 3.00

### **CIS 1503 - INTRODUCTION TO MULTIMEDIA**

Introduces students to various multimedia components

such as 2D graphics, audio and video. It will examine software applications used for creating and editing 2D graphics, audio files, video files. Students will gain practical experience in various stages involved in the design, development and delivery of interactive multimedia content. The core objective of this course is to provide the students a walkthrough into the technological progress to be made later in the interactive multimedia specialisation.

CREDITS: 3.00

### **CIS 2003 - STATISTICS AND PROBABILITY**

This course offers an introduction to the major concepts and tools for collecting, analysing, and drawing conclusions from data.

CREDITS: 3.00

### **CIS 2103 - PRINCIPLES OF INFORMATION ASSURANCE, SECURITY AND PRIVACY**

This course introduces key concepts related to security and assurance of information assets. The course focuses on information risks, security frameworks and controls, and relevant legal, ethical, and professional issues.

CREDITS: 3.00

### **CIS 2303 - SYSTEMS ANALYSIS AND DESIGN**

Introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, the systems development life cycle phases, modelling tools and techniques, testing procedures and the need for systems evaluation.

CREDITS: 3.00

### **CIS 2403 - OBJECT ORIENTED PROGRAMMING**

Introduces the object-oriented methodology for programming. Topics include: the object oriented programming paradigm; objects and classes; data abstraction and encapsulation; and exception handling. The course explores graphics, event handling, and graphical user interfaces.

CREDITS: 3.00

### **CIS 3003 - HUMAN COMPUTER INTERACTION**

Introduces the concepts of human-computer interaction (HCI) through the use of multimedia tools. It provides students with the skills to design interactive layouts using a Graphical User Interface in a systematic manner.

CREDITS: 3.00

### **CIS 3103 - PROJECT MANAGEMENT**

Explores a systematic methodology for the initiating, planning, executing, controlling, and closing of projects.

CREDITS: 3.00

### **CIS 4103 - EMERGING TECHNOLOGIES**

Provides students with an opportunity to investigate the most recent advances in IS/IT. In this research-based course, students will select an emerging technology, describe how it works, analyse its strengths and weaknesses and determine what impact it is likely to have in their chosen major. Students will receive guidance in how to select a research topic, write a research question, conduct a literature review, analyse and properly attribute outside sources and write an abstract.

CREDITS: 3.00

### **CIS 4203 - INFORMATION TECHNOLOGY STRATEGY AND GOVERNANCE**

Provides an understanding of IS Strategy and Governance, decision rights, strategic frameworks and mechanisms, alignment of strategy, governance and performance with related change management issues and schemes. The course highlights the fact that IS strategy and governance refers to allocation of responsibilities for the control of IS that enable accountability, participation, predictability and transparency. The course emphasises the responsibility of the Board of Directors and Executive Management in an organisation, and their integral role in enterprise governance.

CREDITS: 3.00

### **CIS 4803 - WORK RELATED LEARNING**

Designed as a framework within which a range of work related learning activities can be accommodated to meet defined learning outcomes. It gives the flexibility, for example, for students to learn from work experience and to receive an understanding of business and technology and its real life operations (where possible in their chosen major topic) or to undertake an industry based project which meets the same outcomes.

CREDITS: 3.00

### **CIS 4906 - CAPSTONE PROJECT (INTEGRATIVE AND CONSULTANCY FOCUSED)**

This capstone course will integrate knowledge and skills gained throughout the major and lead students, to analyse, design, and build a business information

system component. Students will experience the ownership of an idea from concept to solution. They will act as consultants, to elicit and articulate business requirements, then work through the full development cycle.

CREDITS: 6.00

### **CIVL N0333 - PROJECT PLANNING FOR CONSTRUCTION**

Emphasises the importance of, and the methods used, in the planning and management of construction activities for civil engineering projects. Topics covered include the techniques adopted from the feasibility study phase, through project programming, scheduling, management and monitoring of progress. MS Project computer software will be used to facilitate planning and management activities.

CREDITS: 4.00

### **CIVL N212 - STRENGTHS OF MATERIALS**

Introduces the concepts necessary for the design of structural elements including material selection and component design. The course content provides a link between statics, mechanics and properties of materials, as these relate to engineering design.

CREDITS: 4.00

### **CIVL N256 - FOUNDATION ENGINEERING**

Provides the student with an effective amalgamation of geotechnical properties, performance of construction materials and design considerations to determine the bearing capacities of soils in order to produce practical, safe and economical foundation systems with emphasis on piles.

CREDITS: 4.00

### **CIVL N312 - STRUCTURAL ANALYSIS I**

This course includes the basics of structural analysis for both determinate and indeterminate structures. The material covers the principles and applications of structural analysis for indeterminate structures as a blend of classical concepts and current computer techniques.

CREDITS: 4.00

### **CIVL N313 - REINFORCED CONCRETE DESIGN AND DETAILING I**

Introduces the student to the properties and design principles of reinforced concrete structural elements. The British Standards Code of Practice BS 8110 is the

basic code of reference for all the design and detailing work in this course. This Code is predominantly used in the UAE. The course includes the properties of structural concrete and the influence of each of its constituents on the performance of the final product.

CREDITS: 4.00

### **CIVL N319 - WASTE WATER ENGINEERING**

Introduces the topics of wastewater technology, sewer design and construction. The collection, transportation and treatment of sewerage is essential to maintain the growth of modern cities across the UAE. Some coverage of septic systems and storm water collection are included in the course.

CREDITS: 4.00

### **CIVL N324 - WATER RESOURCES AND SUPPLY ENGINEERING**

This course is an introduction to water supply technology as a branch of municipal engineering. The course provides a comprehensive understanding of municipal water and processing and water supply distribution. Emphasis will be placed on the chemical and biological science applied to water technology, design of internal and main water supply networks, drinking water quality, municipal water supply requirements, processing of water and water supply systems in the UAE.

CREDITS: 4.00

### **CIVL N326 - STRUCTURAL STEEL DESIGN AND DETAILING I**

Presents the basic principles of design, behaviour and safety of steel in construction. The design calculations and, where appropriate, the detailing for connections, tension members, compression members, beams, plate girders, columns, column bases and trusses will be covered. BS 5950 is the basic code of reference for all design and detailing work in this course.

CREDITS: 4.00

### **CIVL N327 - CIVIL ENGINEERING CONSTRUCTION**

Covers the basic works associated with earthmoving, compaction and excavation with emphasis on the current processes and techniques used in such operations. Construction professionals must recognise traditional building construction methods and be able to assess the impact, advantages and disadvantages of new and alternate methods of construction. It also covers the basics of materials and methods for high rise and commercial low rise building construction

in the UAE. Further emphasis is placed on practical applications, regional bylaws and local practice.

CREDITS: 4.00

### **CIVL N329 - HIGHWAY ENGINEERING**

Introduces the topics of design and construction of highways. It addresses geometric design of highways - vertical and horizontal alignment, cross - sections, preparation of plans, drainage concerns, and intersections at grade and interchanges. Highways play an essential role in sustaining the development of countries such as the United Arab Emirates. Emphasis is on design practices and construction procedures to achieve a highway with acceptable levels of performance in terms of safety, operation, economics and environmental concerns.

CREDITS: 4.00

### **CIVL N336 - ARABIC FOR CIVIL ENGINEERING**

Designed to promote the Arabic language skills of the Civil Engineering students to meet the functions they will perform after graduation in a bilingual environment. The course highlights design and construction terminology, in both Arabic and English languages, with emphasis on local practice.

CREDITS: 3.00

### **CIVL N401 - PRESTRESSED CONCRETE DESIGN**

This course provides the student with the basic principles of pre-stressed concrete design and builds this to an ability to calculate, design and detail simple precast elements such as beams and slabs. The student will be able to complete both strength and serviceability checks and make appropriate allowances for fabrication and construction issues such as jacking techniques and joint details.

CREDITS: 4.00

### **CIVL N403 - STRUCTURAL TIMBER DESIGN**

Offers practical studies in the design of timber structural elements and systems to BS 5268 Part 2 based on permissible stress approach. It explains how timber is specified and stress graded for structural uses and covers basic design procedures for beams (sawn, glue-lam and plywood built-up sections), columns, connections, load bearing wall systems, decking, trench support and formwork for concrete construction. The design of fire safety for wood structures and protection against termite will also be covered.

CREDITS: 4.00

### **CIVL N407 - TRAFFIC ENGINEERING**

The effective design of highway facilities requires careful consideration of the factors that affect traffic flow and safety. In this course students are introduced to the human and vehicle characteristics that impact upon highway design and the techniques used to conduct traffic: speed; volume; travel time; and delay studies in order to understand highway capacity and traffic flow characteristics. The course also examines techniques used for the control of intersections and traffic safety.

CREDITS: 4.00

### **CIVL N412 - TRANSPORTATION PLANNING**

Introduces the processes involved in facilitating the planning for future transportation facilities. Factors that should be considered in the justification of new transportation projects include improvements in traffic flow, safety, savings in energy consumption and travel time, accessibility, socio-economic and environmental impacts.

CREDITS: 4.00

### **CIVL N413 - REINFORCED CONCRETE DESIGN AND DETAILING II**

This course is intended to give the student an understanding of typical design procedures, construction methods and detailing of reinforced concrete elements and structures as a whole. The course will cover basic design procedures and detailing of footings, pile foundations, walls, shear walls, columns, beams, and slabs for reinforced concrete buildings.

CREDITS: 4.00

### **CIVL N422 - ROAD DESIGN AND CONSTRUCTION**

Introduces pavement types and the factors that impact their design with emphasis on equipment, materials and practices associated with the construction of flexible and rigid pavements. Maintenance methods including the evaluation and rehabilitation of existing pavements are also covered. The construction of cut and fill earth structures are included with particular emphasis on the effects of compaction, the mass haul diagram, slope stability and the environmental impacts related to their design and construction.

CREDITS: 4.00

### **CIVL N426 - STRUCTURAL STEEL DESIGN AND DETAILING II**

Topics such as moment connections, beam-column members and lateral frames are covered in this course.

The course further incorporates basic steel design into the overall analysis and design of small industrial building. An introduction of the analysis and design of steel bridges will be presented.

CREDITS: 4.00

#### **CIVL N427 - CONSTRUCTION CONTRACT MANAGEMENT**

Gives an overview of principles and procedures involved in effective administration and management of engineering contracts, from tender to final completion.

CREDITS: 4.00

#### **CIVL N432 - CONSTRUCTION SURVEYING**

Provides the student with an understanding of the role of the construction setting out engineer, including techniques commonly used to communicate theoretical information found on construction drawings to personnel and operatives working on-site. A broad range of practical on-site surveying activities will be demonstrated, aligned to the office based determination and calculation of setting out data.

CREDITS: 4.00

#### **CIVL N437 - ENGINEERING ECONOMICS**

Deals with the concept of cost control to ensure that scarce resources are used to the best advantage in the construction of projects. Clients in today's world of high material prices and finance costs are insisting on projects being designed and executed to give maximum value for money. The structure of the construction industry in the UAE is looked at as well as the make-up of the companies that operate within it.

CREDITS: 4.00

#### **CIVL N445 - WASTE MANAGEMENT**

Gives the opportunity for the student engineer to examine the different sources of solid waste production. The important aspects of waste control legislation, waste reduction programming and waste recycling are investigated and strategies developed to protect the local and global environment. Finally the handling and disposal of hazardous waste is introduced.

CREDITS: 4.00

#### **CIVL N449 - PROJECT: CIVIL ENGINEERING TECHNOLOGY**

Uses an independent work based project to integrate and apply the management, organisational, communication and interpersonal skills learned in the other courses in the programme. The development of managerial

planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

#### **CIVL N451 - COASTAL ENGINEERING**

Covers modern dredging technology, coastal climates, coastal tides, corrosion and material degradation, key-wall water front structures, breakwaters, pile foundations, sheet piles, wave force on offshore structures and resistance of footings to sliding. Environmental conditions and concerns are also addressed. Safety issues and computer modelling techniques will be introduced. Technical content will be supported by relevant site visits and practical's.

CREDITS: 4.00

#### **CIVL N455 - ENVIRONMENTAL ENGINEERING**

Discusses fundamental chemical, physical and biological principles in environmental engineering as an interdisciplinary science. The course covers all the naturally occurring environmental phenomena, the industry and human induced compounds and microorganisms and the changes and imbalances that occur in the environment. The course qualifies, quantifies and provides measurement and monitoring techniques to enable engineering and design options and solutions in civil engineering practice. The course discusses waste disposal options and specific engineering disposal requirements.

CREDITS: 4.00

#### **CLAS N1100 - LIFESPAN DEVELOPMENT 1**

An introduction to the development of children and adolescents. A general outline of the domains of development is followed by a specific focus on the physical/motor and cognitive development of children and adolescents. In order for students to develop a basic understanding of learners in the kindergarten, primary and post-primary years, the goals focus on the stages of development in each of these two domains, associated developmental milestones and the factors that affect physical/motor and cognitive development. It also looks at the importance of play in the development of cognition and motor development in children in the kindergarten and primary years. The course is closely integrated with the Apprenticeship course and observations of learners in the schools will focus on these two domains, the similarities and differences between same age learners and the factors that appear to affect their development.

CREDITS: 4.00

**CLAS N1110 - COMPUTER SKILLS**

In this course, students will acquire and apply Information and Communication Technology (ICT) skills and knowledge to the context of the school and to the classroom in particular. A general overview of what ICT means and how it can support teaching will be given with a special emphasis on primary grades and the classroom.

CREDITS: 4.00

**CLAS N1200 - LIFESPAN DEVELOPMENT II**

Broadly examines children's development in the linguistic and social/emotional domains. In order for students to develop a basic understanding of learners in the kindergarten and primary years, the goals focus on the sequence of development in each of these two domains, associated developmental milestones and the factors that affect language and social/emotional development. It also outlines the importance of supporting and promoting language and social/emotional development during the kindergarten and primary years.

CREDITS: 4.00

**CLAS N1210 - CREATING, MANAGING AND ORGANISING RESOURCES**

Looks at the way in which classroom assistants work with the teacher in order to ensure that the children in the classroom have sufficient learning resources. Students will acquire and demonstrate the skills required to prepare and to exploit materials, software and equipment used to create learning resources. All areas of the curriculum will be examined with a special focus on the kindergarten and primary grades. Students will also learn to organise and monitor the effective use of these resources.

CREDITS: 4.00

**CLAS N2100 - SUPPORTING LEARNING IN THE CLASSROOM**

Examines how classroom assistants can best support children when undertaking learning activities in school. They will implement a range of strategies and skills in order to help children to become independent learners. They will also need to be aware of different learning styles and how to adapt support strategies to accommodate them.

CREDITS: 4.00

**CLAS N2110 - EFFECTIVE CLASSROOM DISPLAYS**

After initial research and discussions on the concepts of

how children learn, the need to motivate them and the importance of a positive school environment, students will learn how effective displays can contribute actively to the achievement of these objectives. Students will research, describe, discuss and create different types of displays using a variety of resources and presentation methods.

CREDITS: 4.00

**CLAS N2200 - GUIDING CHILDREN'S BEHAVIOUR**

This course will help students acquire the skills and attitudes needed when dealing with children's behaviour. It will teach students how to work alongside classroom teachers and to assist them in the management of children's behaviour. Students will learn how a positive attitude, good preparation and efficient strategies are the key ingredients to efficient classroom management.

CREDITS: 4.00

**CLAS N2210 - UNDERSTANDING LEARNING CHALLENGES**

Teaching assistants will be required to support children with learning difficulties and enable them to access the curriculum, and also help them develop relationships with others. Other children in the class will also need to learn to respond appropriately to children with difficulties. This course will focus on enabling classroom assistants to provide literacy and numeracy support to help pupils access the curriculum.

CREDITS: 4.00

**CMC 2303 - CORPORATE COMMUNICATION I**

Introduces students to the principles and concepts of corporate communication including key definitions, dynamics and the tools of corporate communication. Students learn the skills needed to develop, execute and analyse the strategies, which are essential in the contemporary corporate world.

CREDITS: 3.00

**CMC 3503 - SOCIAL MEDIA**

Introduces students to various social media and examines different issues arising in the online communication field, focusing on opportunities and challenges available to organisations and media practitioners. The course examines the evolution and practice of social media with emphasis on issues of ethics, privacy, reputation management, identity and continuity. It also explores how to take advantage of a large variety of social media outlets. Students use a variety of social

media sites (Facebook, Twitter, LinkedIn, YouTube and others) and learn about blogging in journalism.

CREDITS: 3.00

### **CMC 3603 - MEDIA RELATIONS**

Introduction to current issues in communication and media theory in relation to the local media environment. Students consider the current situation rather than the historical. Aspects of the new media and their attributes are balanced with the more controversial issues of contemporary communication technologies. Students produce basic competitive media campaigns targeting the appropriate audience, tracking and evaluating the final product, coordinating and preparing for interviews and interacting with media organisations.

CREDITS: 3.00

### **CMC 3613 - CORPORATE COMMUNICATION II**

Examines a variety of corporate communication functions such as crisis communication, investor relations, issues management and public affairs, media relations, internal communication, leadership and change management, and corporate social responsibility. The course introduces students to a variety of local, regional, and international case studies discussing the complexities of the world of corporate communications. Students practice writing case studies on relevant corporate communication issues.

CREDITS: 3.00

### **CMC 3623 - MEDIA AND SOCIETY**

Focuses on the social, cultural and political contexts in which media operates today. The course, engaging with critical issues of contemporary media landscape, highlights the role of journalist in society bringing to the forefront issues of social change, women and media, environmental issues, reporting human rights and humanitarian issues, freedom of press, privacy, and ownership and news management. The course also takes a critical look at the social and technological implications on the practice of journalism due to the growth in the digital and online media.

CREDITS: 3.00

### **CMC 3633 - DIGITAL BROADCASTING**

Provides students with the fundamentals of broadcast journalism in the digital age, including the use of words, images, and sounds to tell a newsworthy story. The journalist's role in news selection and the treatment of the news stories is examined along with the importance of journalistic ethics. The course also explores the use

of the newly emerging social and convergent medias.

CREDITS: 3.00

### **CMC 4623 - COMMUNICATION THEORY**

Evaluates various communication theories and how they relate to society and culture. The emphasis is on the concepts, meanings, effects and impacts of diverse forms of mass communication within contemporary societies. The course covers the nature of theory and scientific research methods, communication theories and models, media content, and the communication process. It also includes social-psychological approaches on the theories of persuasion and mass media effects, as well as the issue of media ownership.

CREDITS: 3.00

### **CMC 4703 - PUBLIC RELATIONS**

Students evaluate organisations, publics, and the media in order to prepare public relations messages for print and electronic media.

CREDITS: 3.00

### **CMC 4713 - MEDIA LAW AND ETHICS**

Students discuss media law and ethics, particularly as they apply to the UAE, and analyse specific past and developing cases relevant to an understanding of media law and ethics. Students learn the legal and ethical boundaries within which media professionals must operate. They also learn specific legal terms and concepts, such as defamation and Intellectual Property Rights, while evaluating ethical issues such as fairness, balance and bias.

CREDITS: 3.00

### **CMC 4806 - FINAL PROJECT - CORPORATE AND MEDIA COMMUNICATION**

Students take on the role of a corporate communication specialist, as part of a project to produce a media campaign based on an actual industry situation for a real client. The role of faculty is as a mentor, coach, and adviser as required. Practical projects may involve group work by interdisciplinary teams. The project parameters are negotiated between the student(s), the industry client and the teacher(s) involved. Students critique their own work and the work of others.

CREDITS: 6.00

### **CMM 2303 - INTRODUCTION TO MEDIA COMMUNICATION**

Introduces students to the field of media communication focusing on the practice of journalism to help them

understand the role journalists play in reporting, processing and producing news.

CREDITS: 3.00

### **CMV 2303 - INTRODUCTION TO VIDEO PRODUCTION**

Serves as a basic introduction to the practical elements of video production. Students apply the basic concepts of video camera and tripod setup, basic shot composition, recording both sound and video, logging and capturing video material, and basic editing.

CREDITS: 3.00

### **CMV 3503 - EDITING**

Students learn the basics of post-production and are introduced to the history and theory of editing through critical analysis and discussion of selected examples. Student praxis includes hands-on editing exercises and assigned projects, software skills and post-production techniques, including sound mix and colour grading.

CREDITS: 3.00

### **CMV 3513 - PRODUCTION SKILLS I**

Students learn the elements of professional video production with an emphasis on production procedures. Students build their knowledge of visual literacy, storyboarding, shot composition, framing and shot types. They learn to apply the proper use of sound, appropriate selection of microphones and lighting equipment. Students create a video production (such as a P.S.A., information piece, or news item) and critique their own work and the work of others.

CREDITS: 3.00

### **CMV 3606 - SHORT VIDEO**

Students collaborate on all stages of a video production, from concept to distribution of the finished project. They produce a script, become visual storytellers, guide/direct actors, and choreograph the best possible shots and camera movements for visual conveyance of their story. An emphasis is placed on storytelling in narrative format.

CREDITS: 6.00

### **CMV 3613 - PRODUCTION SKILLS II**

Students extend video production skills with the introduction of additional creative concepts and technical skills. Working in small teams in different roles, learning new skill sets, including crew hierarchy, set procedures, budgets and realistic production schedules. The emphasis of the course is on enhancing the students' technical and creative abilities in different

phases of production. Students produce single camera productions working as a cohesive unit.

CREDITS: 3.00

### **CMV 4709 - DOCUMENTARY AND VIDEO PRODUCTION**

Through a combination of lecture, film screenings and hands-on demonstrations, this course familiarises students with the basics of producing, shooting, lighting, sound gathering and editing for documentary production. Students operate field monitors, simple location lighting packages, sound recording equipment and basic editing systems. Students evaluate techniques to improve storytelling skills, creative decision-making, and creating proposals for funding a project.

CREDITS: 9.00

### **CMV 4803 - ADVANCED EDIT AND EFFECTS**

In this course students work with advanced editing and embark on an advanced study of the techniques of film and video post-production.

CREDITS: 3.00

### **CMV 4806 - FINAL PROJECT - VIDEO PRODUCTION**

This capstone course is the culminating educational experience for the student and links academic coursework and professional practice. Using a major production as the focus, students have the opportunity to use their knowledge, skills and experiential learning to demonstrate learning as well as behaviours typical of their chosen profession. The project requires students to collaborate with their peers and engage in reflective thinking during and after completing a major video.

CREDITS: 6.00

### **COM 1103 - INTRODUCTION TO MASS COMMUNICATION**

Introduces students to the process of communication focusing on interpersonal, group, and mass communication.

CREDITS: 3.00

### **COM 1113 - DRAWING**

Provides the initial introduction to the basic concepts and language of visual communication by introducing the basic drawing skills needed in Applied Communication professions. The course emphasises the fundamentals of drawing line, shape, light and reflection, shade and shadow, perspective, rendering techniques and colour theory.

CREDITS: 3.00

### **COM 1123 - INTRODUCTION TO MEDIA TECHNOLOGY**

This course introduces students to the underlying concepts and theories of digital production, as well as practical knowledge involved in creating digital works using industry standard programmes and practices. This course is intended to introduce students to multiple tools and concepts that will apply and develop during their media careers.

CREDITS: 3.00

### **COM 1133 - VISUAL COMMUNICATION**

Presents the concept of image based communication. Students will gain a theoretical and practical understanding of images, pictures, symbols, signs, icons and pictograms, as well as a range of visual design elements. This course also covers the governing principles of arrangement and composition in still images and image sequences.

CREDITS: 3.00

### **COM 1203 - PHOTOGRAPHY**

Introduces students to the basic photographic technical and compositional skills, together with an understanding of the history and development of photography.

CREDITS: 3.00

### **COM 1213 - ARABIC I**

Provides students with an intermediate level of Arabic language skills, including reading about the history of media and various media and design majors, writing and research techniques, speaking (including debating, group discussions and individual presentation skills), the fundamental principles of translation and starting the development of a glossary of media terminology in both Arabic and English.

CREDITS: 3.00

### **COM 1223 - HISTORY OF MEDIA AND DESIGN**

Introduces students to the historical developments in design, with a focus on the interface between media and design.

CREDITS: 3.00

### **COM 1703 - INTRODUCTION TO BUSINESS AND SME MANAGEMENT**

This course introduces students to the basic concepts and theories of business and the management of small to medium enterprises. The course looks at basic business models and forms of ownership, management roles and responsibilities, management types and

the basic departments that make up small to medium enterprises.

CREDITS: 3.00

### **COM 2303 - COMMUNICATION RESEARCH AND WRITING IN AN ENGLISH/ARABIC ENVIRONMENT**

Introduces students to the basic concepts and skills of research methodology and information literacy.

CREDITS: 3.00

### **COM 2313 - PROJECT MANAGEMENT FOR MEDIA**

The aim of this course is to provide a basic knowledge of project management principles, methodologies, tools and techniques. Students develop an understanding of what constitutes a project, and the role of a project manager. They analyse and plan the activities needed to carry out the project, including how to set up a project, how to control and execute a project, and how to carry out project reviews. Learners discuss how the project fits into the company's strategy.

CREDITS: 3.00

### **COM 2323 - MEDIA EDUCATION**

This course introduces students to media literacy concepts and increases their functional literacy so that they can access, analyse, evaluate and create media messages of all kinds using a combination of text, images and sounds. The course provides the tools and skills that help to understand the role media plays in shaping, reflecting and, at times, manipulating social realities. The course offers insight into media production processes and encourages critical thinking, so that students can understand and navigate through complex media environment we live in.

CREDITS: 3.00

### **COM 2403 - WEB DEVELOPMENT**

In this course, students learn the fundamentals of web site creation and publishing.

CREDITS: 3.00

### **COM 2413 - PORTFOLIO AND PRESENTATION SKILLS**

Instructs students in the preparation and presentation of a personal professional portfolio. Presentation techniques and continued portfolio review are emphasised in the course, and it also provides a forum for critiquing Website projects. Students are introduced to interactive electronic portfolios and their characteristics, and utilise their technical skills in the preparation of print and digital multimedia portfolio.

CREDITS: 3.00

**COM 2423 - INDUSTRY RESEARCH PROJECT**

Further develops the concepts and skills already acquired by the students by having them go out into the industry to research a potential business project in their major field of study. The students will be expected to identify a real company in the industry, an existing problem or opportunity, develop a potential solution and present that solution to their peers for feedback and critiquing.

CREDITS: 3.00

**COM 3503 - ARABIC II**

Provides students with an advanced level of Arabic language skills to help students engage with media content in newspapers, TV, Radio, Advertising and Public relations. Students will learn how to use their language skills in researching, analysing and interpreting local and international media content, and how to apply knowledge of Arabic language to debates, discussions and presentations with focus on improving both writing and speaking skills. Students will also learn the fundamental principles of translation, techniques of referencing and glossary writing in Arabic.

CREDITS: 3.00

**COM 4806 - LEARNING IN THE WORKPLACE**

This course provides a range of work related learning activities. The course provides students to the opportunity to learn from work experience and to receive an understanding of design/media and its real life operations. Students are assessed using reflection and investigation to make the most of their work related learning and to prepare them for employment.

CREDITS: 6.00

**COMA N0125 - GRAPHIC DESIGN I**

Delivers an introduction to the fundamental elements and principles of design. Typography basics are discussed and students are able to demonstrate an understanding of typeface selection. Aspects of colour theory and colour systems are discussed. Composition, rendering and production techniques are demonstrated using industry-standard software.

CREDITS: 3.00

**COMA N101 - DRAWING BASICS**

Introduces students to the materials and techniques involved in manual image making. Students will develop an understanding of different drawing styles and genres, and learn the fundamental principles of

drawing.

CREDITS: 4.00

**COMA N105 - INTRODUCTION TO ARABIC**

Designed to enable the student to understand and employ the basics of fundamental concepts, and terms of journalism as presented in the Arabic language.

CREDITS: 4.00

**COMA N110 - INTRODUCTION TO MEDIA TECHNOLOGY**

Students will learn the underlying concepts of digital production and how they apply to a broad range of technologies and techniques that they will use throughout their remaining studies in the programme. The goal is for students to be able to make educated operational decisions in their use of technologies and techniques, rather than relying on defaults, pre-sets, or prescriptive step-by-step instructions.

CREDITS: 4.00

**COMA N115 - VISUAL LANGUAGE**

This course introduces students to the concept of image based communication. Students will gain a theoretical and practical understanding of images, pictures, symbols, signs, icons and pictograms, as well as a range of visual design elements. This course also covers the governing principles of arrangement and composition in still images and image sequences.

CREDITS: 4.00

**COMA N201 - BROADCAST JOURNALISM**

Students apply the fundamentals of broadcast journalism, which include how to use words, images, and sounds to tell a newsworthy story. The journalist's role in news selection, and the treatment of news stories, will be examined along with the importance of journalistic ethics. This course is taught using both English and Arabic to increase the student's Arabic language skills. The course also explores the use of social and convergent media.

CREDITS: 4.00

**COMA N202 - DRAWING II**

Explores advanced drawing skills and develops visual awareness to facilitate mature expression in a range of 2D and 3D media. Students use a variety of materials, media and equipment to produce drawings that demonstrate refined techniques depicting formal elements such as line and contour, texture, two

dimensional and three dimensional space, unity, dynamics, composition, proportion and rhythm.  
CREDITS: 4.00

### **COMA N203 - FUNDAMENTALS OF VIDEO PRODUCTION**

Students apply the fundamental skills and concepts of single-camera, video production including basic camera operation, sound recording, editing and lighting; with an emphasis on capturing high quality, technically-sound video and audio. Through cuts-only editing, students form audio and video recordings into a convincing sequence through continuity editing.  
CREDITS: 4.00

### **COMA N205 - GLOBAL ART HISTORY**

Students will learn and demonstrate how Art History informs our modern consumption and creation of media, design, art and culture. Students will develop practical communication responses, which are historically and socially aware and can respond to and build upon art movements from diverse geographical backgrounds.  
CREDITS: 4.00

### **COMA N208 - GRAPHIC DESIGN**

In this course, students learn the fundamentals of graphic design. The course allows students gain and understand the history of graphic design to studio and actual design work. Students apply the fundamental principles and elements of graphic design while building a body of visual work, and vocabulary to critically engage with design objects and issues.  
CREDITS: 4.00

### **COMA N209 - SHORT FILM**

Students demonstrate their skills in script writing and practical visual storytelling to create a compelling short film suitable for submission to a film festival.  
CREDITS: 4.00

### **COMA N211 - TYPOGRAPHY**

In order to be a successful designer, one must have a working knowledge of fonts and letterforms, their aesthetic qualities and how to use and combine fonts and letterforms. This course provides an introduction to the use and application of typography.  
CREDITS: 4.00

### **COMA N212 - WEB DESIGN**

Students learn the fundamentals of web site creation and

publishing. The course stresses industry best practices in XHTML and CSS coding and accessibility in addition to the introduction of web design principles and the continued application of graphic design principles to the screen environment.  
CREDITS: 4.00

### **COMA N213 - ARABIC FOR CORPORATE COMMUNICATIONS I**

Gives an introduction to corporate communications and its importance, providing an overview of its function and processes as well as enhancing the students' Arabic language skills. Functions of corporate communications introduced in this course include internal communications, corporate social responsibility and developing Arabic/English translation skills.  
CREDITS: 4.00

### **COMA N217 - INTRODUCTION TO RESEARCH**

Introduces the students to the essentials of the research process. It provides the students with basic research skills necessary to carry out projects in the corporate communication industry.  
CREDITS: 4.00

### **COMA N221 - MEDIA LITERACY**

Enables students to work on projects in any media genre or format in the areas of graphic design, media production (video, television, radio and/or audio production), and/or advertising.  
CREDITS: 4.00

### **COMA N223 - SOCIAL MEDIA**

Social Media has played a critical role in changing the landscape of the corporate communications industry in the past few years. This course introduces the students to different issues arising in the online communications field focusing on opportunities and challenges available to organisations. The course examines the evolution and practice of social media with emphasis on issues of privacy, reputation management, identity and continuity.  
CREDITS: 4.00

### **COMA N224 - MEDIA SKILLS**

Enables students to engage with a wide range of media forms and develop their own media skills and production techniques. Students will study the varying communicative properties of different media forms and they will undertake projects and assignments

concurrent with media technology and media production techniques.

CREDITS: 4.00

### **COMA N226 - INTRODUCTION TO ARABIC JOURNALISM**

This course provides students with an introduction to basic journalism, including understanding the role a journalist plays and the history of journalism.

CREDITS: 4.00

### **COMA N228 - ARABIC COMMUNICATIONS I**

Delivers students an introduction to the history of, and writing for, radio. It also provides an introduction to radio broadcasting skills and techniques including research, news stories, interviews, scripts, commentary and ads. This course will include an introduction to the history of television and fundamental principles of writing for TV. Students produce a TV multi track programme using appropriate documentation. Translation is a very important skill in this course.

CREDITS: 4.00

### **COMA N240 - WRITING FOR CORPORATE COMMUNICATIONS**

Offers students an introduction to producing the many forms of business communications in use today and how to effectively write for the ones most commonly used.

CREDITS: 4.00

### **COMA N301 - INTEGRATED PROJECT**

The main aim of this course is to develop students' conceptual ability to analyse design problems and produce commercially acceptable solutions. Students are taught to analyse marketing problems associated with press advertising and prepare marketing strategy that include press magazines, advertising, direct mailings, in/out store designs and television storyboards; as well as produce camera-ready artwork in line with industry standards.

CREDITS: 4.00

### **COMA N303 - MARKETING AND ADVERTISING (ARABIC)**

This course takes the students through the fundamentals of advertising principles and marketing strategies as they relate to the Applied Communications field and

within an Arabic speaking environment; including the development of a client/team dialogue.

CREDITS: 4.00

### **COMA N305 - PRINT PRODUCTION AND PRE-PRESS**

An overview of the practical and technical aspects of print production to help students develop a working knowledge of pre-press and production practices.

CREDITS: 4.00

### **COMA N309 - TELEVISION PRODUCTION**

This course introduces students to the basic theory and techniques of TV with a focus on studio based single and/or multi camera production practice.

CREDITS: 4.00

### **COMA N311 - INTERACTIVE MULTIMEDIA**

In this course students learn how to incorporate elements of traditional visual art, design, movement, sound, video, the internet, photography, animation, as well as the elements of time and human interaction.

CREDITS: 4.00

### **COMA N313 - ARABIC FOR CORPORATE COMMUNICATIONS II**

This is a fifth level Arabic language course for corporate communications students. This course continues to develop greater Arabic language skills through preparing a media campaign, the examination of Arabic news media online and through writing a CV and job application letters.

CREDITS: 4.00

### **COMA N317 - JOURNALISM AND MEDIA RELATIONS**

Introduces students to perennial and current issues in communication and media theory in relation to the local media environment. The intent being for students to consider the current situation, rather than the historical.

CREDITS: 4.00

### **COMA N319 - BUSINESS INDUSTRY MEDIA PROJECT**

Students undertake their first project using directed study and project work for a media campaign based on an actual industry situation for a real client and

under the supervision of a faculty mentor. Practical projects may involve group work by interdisciplinary teams. The project parameters are negotiated between the student/s, the industry client and the teacher/s involved.

CREDITS: 4.00

### **COMA N326 - CORPORATE COMMUNICATIONS II**

A practical application of the fundamental concepts and functions of corporate communications. It introduces students to a variety of local, regional, and international case studies introducing the complexities of the world of corporate communications. Students practise writing case studies on relevant corporate communication issues.

CREDITS: 4.00

### **COMA N327 - CURRENT AFFAIRS, BUSINESS AND POLITICS IN THE UAE**

This course outlines the key events occurring in the business and political arenas within the UAE and their impact on organisations from a public relations/corporate communications point of view. This course will require students to undertake research using newspapers, magazines and online news services, as well as into the governmental structure of the UAE.

CREDITS: 4.00

### **COMA N329 - ARABIC COMMUNICATIONS II**

This is a fifth level Arabic language course for Applied communications students. This course continues to develop greater Arabic language skills through writing of book reviews, the examination of Arabic news media online and through writing a CV and job application letters.

CREDITS: 4.00

### **COMA N401 - BUSINESS IN MEDIA**

Designed to develop students' business ideas and entrepreneurial skills. Based on research students will learn to develop a business plan for a project in the field of media.

CREDITS: 4.00

### **COMA N402 - COMMUNICATIONS THEORY**

Introduces students to various communication theories and how they relate to society and culture. The emphasis is on concepts, meanings, effects and impacts of diverse forms of mass communication within contemporary societies.

CREDITS: 4.00

### **COMA N403 - BUSINESS PRACTICE**

Focuses on the development of students' business ideas and entrepreneurial skills. Students consolidate knowledge and research skills by developing a business plan and corporate identity for a business or project in their field of specialisation such as a graphic design studio, independent video production, freelance writing business or an integrated communications project.

CREDITS: 4.00

### **COMA N405 - COMMUNICATIONS THEORY**

Introduces students to various communication theories and how they relate to society and culture. The emphasis is on concepts, meanings, effects and impacts of diverse forms of mass communication within contemporary societies.

CREDITS: 4.00

### **COMA N406 - CRISIS COMMUNICATIONS**

Examines the impact of crises on organisations, focusing on the difference strategic and effective communications can make during difficult times for corporations. The course differentiates between crisis management (dealing with the reality of the crisis) and crisis communications (dealing with the perception of the crisis).

CREDITS: 4.00

### **COMA N407 - GLOBAL MEDIA TRENDS**

In this course students identify and analyse contemporary trends and debates arising from the information revolution and emerging world communication processes and systems. Students explore the position of the Emirati and Arab media within its global and regional context and research and analyse topics such as the cultural and social significance of new media technologies.

CREDITS: 4.00

### **COMA N408 - APPLIED MEDIA PROJECT I**

In Applied Media Project 1 students will plan a major media project in their area of specialisation. In conjunction with their faculty adviser, students will select a suitable project and conduct the necessary research to plan and implement their ideas so that their final product will be of professional quality. Although students will be able to utilise a faculty adviser, this course will be largely self-directed and students will be expected to display a high level of independent learning and work. Workshops and classroom sessions will be scheduled as deemed necessary by faculty advisers.

CREDITS: 8.00

**COMA N416 - MEDIA PROJECT I**

In Media Project 1 students will plan a major media project in their area of specialisation. In conjunction with their faculty adviser, students will select a suitable project and conduct the necessary research to plan and implement their ideas so that their final product will be of professional quality. Although students will be able to utilise a faculty adviser, this course will be largely self-directed and students will be expected to display a high level of independent learning and work. Workshops and classroom sessions will be scheduled as deemed necessary by faculty advisers.

CREDITS: 14.00

**COMA N418 - LANGUAGE SUPPORT I**

The primary aim of this course is to ensure that students have adequate language support to meet the requirements of COMA N416 Media Project I and thereby submit work of a suitable standard at bachelor degree level.

CREDITS: 2.00

**COMA N419 - CREATIVE AND PROFESSIONAL WRITING**

This unit provides students with an understanding of creative writing concepts and techniques, which seem especially pertinent to the present situations faced by many professionals. These are developed through an examination of the ideas of prominent contemporary writers and through workshop discussions of the students' own writing.

CREDITS: 4.00

**COMA N420 - PORTFOLIO PRODUCTION**

Instructs students in the preparation of a personal professional portfolio. Continued portfolio review is emphasised, and it also provides a forum for critiquing website projects. Students are introduced to interactive electronic portfolios and their characteristics, and utilise their technical skills in the preparation of print and digital multimedia portfolio.

CREDITS: 4.00

**COMA N421 - INTERNATIONAL PUBLIC RELATIONS**

The forces of globalisation have created a necessity and opportunity for international PR programmes. Given the newness of truly international programmes, prospective practitioners must gain expertise in cultural sensitivity, knowledge of business cultures and realistic expectations. The course covers global firms, local agencies, case studies, and PR practices around the world.

CREDITS: 4.00

**COMA N423 - ADVANCED PUBLIC RELATIONS WRITING**

Students evaluate organisations, publics and the media in order to prepare Public Relations messages for print and electronic media. Students develop messages for various media (e.g. news releases, copy for employee publications, position papers, direct mail, video script, speeches and websites) while considering the audience, associated motivational factors and the technical requirements of the medium.

CREDITS: 4.00

**COMA N424 - CORPORATE COMMUNICATIONS PROJECT I**

Students undertake directed study and project work for a media campaign based on an actual industry situation for a real client and under the supervision of a faculty mentor. Practical projects may involve group work by interdisciplinary teams. The project parameters are negotiated between the students, the industry client and the teachers involved.

CREDITS: 4.00

**COMA N425 - CORPORATE COMMUNICATIONS PROJECT II**

Students will take on a strategic role to undertake project work for a media campaign based on an actual industry situation for a real client. The role faculty would be as a mentor, coach, and adviser as required. Practical projects may involve group work by interdisciplinary teams. The project parameters will be negotiated between the student, industry client and the teacher involved.

CREDITS: 8.00

**COMA N426 - APPLIED MEDIA PROJECT II**

In Media Project II students will, in conjunction with their faculty adviser, implement planned research, production schedules and budgets to produce a major media project in their area of specialisation. Although students will be able to utilise a faculty adviser, this course will be largely self-directed and students will be expected to display a high level of independent learning to implement their idea, so that their final product will be of professional quality.

CREDITS: 8.00

**COMA N427 - PRESENTATION AND CRITIQUE**

Sharpens the student's ability to give presentations in variety of business situations including sales pitches, individual presentations, group presentations and job interviews.

CREDITS: 4.00

**COMA N452 - INTERNATIONAL STUDIES**

Engages Applied Media students in the development of a knowledge and skill base related to historical and current issues associated with an international perspective. Students research, analyse, and interpret a range of topics in international politics, economics, globalisation, culture, the environment, technology and private and public organisations.

CREDITS: 4.00

**COMA N453 - ENTREPRENEURSHIP**

Students learn how to identify business opportunities and assess feasibility to start up and manage a small business. Students create a business plan suitable for presentation to a funding source.

CREDITS: 4.00

**COMA N466 - MEDIA PROJECT II**

Media Project II enables students to individually further develop their creative, technical and project management competencies to a professional industry standard. Students work in their area of specialisation. This project course gives students a greater degree of autonomy than they have previously had in the programme, enabling them to individually develop and produce substantial, high quality and more complex creative, practical, and/or theoretical projects of their choice.

CREDITS: 14.00

**COMA N468 - LANGUAGE SUPPORT II**

The primary aim of COMA 468 is to ensure that students have adequate language support to meet the requirements of COMA 466 Media Project II and thereby submit work of a suitable standard at bachelor degree level.

CREDITS: 2.00

**CSF 2903 - OPERATING SYSTEM ADMINISTRATION AND SECURITY**

Introduces Open Source Software and the GNU/Linux operating system. Students perform installations, and use command line and graphical user interfaces, as well as popular applications, all within a networked environment. The course covers standard workstation administration tasks: managing storage; managing files; administering users and groups; installing and configuring local services. It introduces standard network services such as FTP, Apache and security implementation.

CREDITS: 3.00

**CSF 3003 - CYBER LAW AND ETHICS**

Provides an insight into the laws and regulations of cyberspace, from a general understanding of the legal issues in e-commerce security and privacy, to the legal, managerial, and ethical issues affecting technology enabled organisations.

CREDITS: 3.00

**CSF 3103 - INCIDENT RESPONSE AND DISASTER RECOVERY**

Develops two threads: how to identify and respond to an attack, and how to recover the system from an attack or other disaster. Students learn how to identify system vulnerabilities, take appropriate countermeasures, and identify and apprehend attackers, with the end goal of minimising downtime and the accompanying organisational loss.

CREDITS: 3.00

**CSF 3203 - INTRUSION DETECTION AND ETHICAL HACKING**

Teaches students the skills needed to recognise and utilise intrusion detection techniques, for the purpose of defending and securing organisational information infrastructures. This course studies in-depth the methods used in computer and network hacking with the intention of learning how better to protect systems from such intrusions. Hacking techniques covered include reconnaissance techniques, system scanning, network and application-level access attacks, and denial-of-service attacks, as well as multiple technique attacks.

CREDITS: 3.00

**CSF 3403 - COMPUTER FORENSICS AND INVESTIGATION**

Examines the methods of analysis of computer systems that have already been compromised. The course teaches students how to conduct a systematic investigation, recover critical data, and aid authorities in tracking those who caused the security breach.

CREDITS: 3.00

**CSF 3603 - CRYPTOGRAPHY AND NETWORK SECURITY**

Introduces key concepts of encryption such as ciphers, symmetric encryption and asymmetric encryption. It discusses advanced techniques including public key infrastructure, digital signatures and hash functions, with applications to user authentication, e-mail, IP/web security, and wired/wireless networks.

CREDITS: 3.00

**CSF 4003 - SECURITY AND RISK MANAGEMENT**

Provides a detailed study of information security from the management and administration perspective. The course covers guidelines for access management, control and communication, and business continuity management. Students will learn methods for information security risk assessment, intellectual property protection, organisational structure assessment and modelling of critical infrastructure protection, and apply these methods to case studies from industry. The course also presents a set of analytical tools for quantifying risk and the costs and benefits of various mitigation methods.

CREDITS: 3.00

**CSF 4103 - WEB APPLICATION AND E-COMMERCE SECURITY**

A practical guide to discovering and exploiting security flaws in web applications, as well as protecting web applications against known vulnerabilities. Students will learn different steps involved in detecting, exploiting, and securing different types of vulnerabilities found within a variety of applications such as online banking, e-commerce and other web applications. The course covers techniques for exploiting client-side controls, authentication, session management, and access controls vulnerabilities.

CREDITS: 3.00

**CSF 4203 - TELECOMMUNICATIONS AND WAN SECURITY**

Develops the knowledge of data communications, networking and network security in telecommunications industry. Students are expected to learn, discuss concepts and techniques in the field of telecommunication and how to apply them. The course also discusses concepts and techniques of data communications in Wide Area Networks using different media and protocols including Wireless WAN. Students will also understand different protocol reference models such as TCP/IP protocol suite and OSI model architecture for business data communications.

CREDITS: 3.00

**CTT 2003 - PRINCIPLES OF LEARNING FOR INSTRUCTIONAL TECHNOLOGY**

Provides a revision of learning theories in relation to technology-supported learning. The course focuses on principle theories of learning with a foundation in instructional design.

CREDITS: 3.00

**CTT 3103 - LEARNING ENVIRONMENT DESIGN, SUPPORT AND ADMINISTRATION**

An overview of the management and utilisation of technology-based training practices in corporate settings. The course focuses on the selection, planning, development, administration, organisation and delivery of training to adult learners with the special attention to the role of instructional technologists.

CREDITS: 3.00

**CTT 3303 - ASSISTIVE TECHNOLOGY**

This course provides students with an understanding of the current philosophies, levels of support, structure, methodologies and assistive technologies required to educate students with special needs in different learning environments. It offers an overview of the learning needs of gifted learners and learners with hearing, visual, and language impairments, and intellectual and socio-emotional disabilities.

CREDITS: 3.00

**CTT 3403 - INSTRUCTIONAL DESIGN FOR COMPUTER BASED TRAINING**

Focuses on the systematic design of instructional courseware, including analysis, media selection and evaluation. It includes instructional strategies, screen design, response analysis, feedback and interactivity.

CREDITS: 3.00

**CTT 4003 - DISTANCE AND ONLINE EDUCATION**

Discusses modern theoretical and practical aspects of distance and online education. Students evaluate the effectiveness of teaching and learning resources used in distance and online education practices using a range of available tools against specific educational and pedagogical criteria. Students design and construct an e-learning site for a specified learning community using a course management system and the assessment software to produce relevant assessments for their e-learning materials.

CREDITS: 3.00

**CTT 4203 - STAFF DEVELOPMENT AND CORPORATE TRAINING STRATEGIES**

Introduces a strategic training process which is considered as the preferred training methodology for the world's major corporations to ensure training quality and compliance with corporate goals, and to provide cost effective benefits to employers and employees alike. This course focuses on concepts and models useful in the formulation, analysis, and

implementation of training strategies. During the course, students will learn how to create the Strategic Training and Development Plan.

CREDITS: 3.00

### **CTT 4303 - TECHNOLOGY BASED ASSESSMENT DESIGN AND ADMINISTRATION**

Explores assessment writing principles and practices in relation to different Computer-based assessment (CBA) models. Course provides guidelines in designing computer-based assessments using different computer-based assessment tools. Course focuses on quality of Computer-based assessments, its administrations, and integrity of the testing environment.

CREDITS: 3.00

### **EAA 1403 - ELECTRONIC FUNDAMENTALS (MOD 4 B1)**

In this course the fundamentals of electronics are taught. This course is delivered to aviation students to furnish a familiarisation with common semiconductor devices, printed circuit boards and synchro and servo mechanisms used in aircraft systems. This course meets the requirements of CAR Module 4B1.

CREDITS: 3.00

### **EAA 1503 - DIGITAL TECHNIQUES/ ELECTRONIC INSTRUMENT SYSTEMS (MOD 5 B1)**

This course provides the theoretical and practical knowledge of the fundamental concepts of digital electronics technology.

CREDITS: 3.00

### **EAA 1612 - MATERIALS AND HARDWARE (MOD 6 B1)**

The purpose of this course is to provide the student with general knowledge of the theoretical and practical aspects of Advanced Aircraft Materials and Hardware and ability to apply that knowledge.

CREDITS: 12.00

### **EAA 2509 - GAS TURBINE ENGINE (MOD 15 B1)**

Introduces and applies gas turbine engine concepts and designs that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 15 B1.1. Topics covered include; fundamentals, engine parts functional breakdown, engine designs, APU, protection and indication, and storage and preservation.

CREDITS: 9.00

### **EAA 2712 - MAINTENANCE PRACTICES (MOD 7 B1)**

Introduces and applies maintenance practices that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 7 B1.1. Topics covered include; safety precautions, workshop practices, tools, test equipment, fits and clearances, electrical connectors, riveting, maintenance procedures and material handling.

CREDITS: 12.00

### **EAA 3136 - TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS (MOD 11A) (B1.1) \*1 YR COURSE**

Provides information on civil aircraft systems and designs deemed essential by GCAA CAR 66 Module 11A (B1.1) for engineers in the field of aircraft maintenance. The course covers the range of airframe, electrical and avionic topics required for completion of the B1.1 engineer's licence.

CREDITS: 36.00

### **EAA 3704 - PROPELLER (MOD 17 B1)**

Introduces and applies propeller concepts that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 17 B1.1. Topics covered include; fundamentals, construction, pitch control, synchronising, ice protection, propeller maintenance, storage and preservation.

CREDITS: 4.00

### **EAM 1306 - ELECTRICAL FUNDAMENTALS**

This common course is delivered to all aviation students to furnish the needed background. It provides knowledge of electrical fundamentals and characteristics and the production and utilisation of electrical power. This course meets all the requirements of CAR 66 Module 3.

CREDITS: 6.00

### **EAM 2003 - BASIC AERODYNAMICS (MOD 8)**

Aerodynamics is the study of objects moving through the air. In effect, aerodynamics is concerned with the aircraft, the relative wind and the atmosphere. This common course is delivered to all aviation diploma and higher diploma students in semester two, and furnishes the basic knowledge of aerodynamics required for entry into EASA Module 11 and 13 courses. This course meets the requirements of EASA Module 8.

CREDITS: 3.00

**EAM 2023 - AVIATION LEGISLATION (MOD 10B1 AND B2)**

Introduces and describes aviation legislation that is essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 10 B1.1. Topics covered include; regulatory framework, certifying staff, approved maintenance organisations, commercial and private air transportation, aircraft certification, CAR M and applicable national and international requirements. CREDITS: 3.00

**EAM 2903 - HUMAN FACTORS (MOD 9 B1 AND B2)**

This course introduces human factors principles that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 9 B1 and B2. Topics covered include; human performance and limitations, social psychology, factors affecting performance, physical environment, communication, human error and hazards in the workplace. CREDITS: 3.00

**EARC N122 - AVIATION PHYSICS (EASA MOD 2)**

Physics is the building block of aviation technology. From the drawings and experiments of Leonardo Da Vinci to the Wright Brothers, to modern commercial airliners, all flying machines follow and are governed by the laws of physics. Physics is the branch of science concerned with the discovery and understanding of the fundamental laws which govern matter, energy, space and time. That is, physics deals with the elementary constituents of the Universe and their interactions, as well as the analysis of systems which are best understood in terms of these fundamental principles. CREDITS: 4.00

**EARC N132 - ELECTRICAL FUNDAMENTALS II**

Because electricity is so vital to sustained flight, everyone involved in aviation maintenance must have a good understanding of electricity and the laws that govern it. This common course is delivered to all aviation diploma and higher diploma students in semester two to furnish the needed background. It provides knowledge of electrical fundamentals and characteristics and the production and utilisation of Alternating Current (AC). It also covers components used and their action in electrical circuits. This course is a follow on from EARC 131, Direct Current (DC), to complete EASA Module 3. CREDITS: 4.00

**EARC N133 - ELECTRICAL FUNDAMENTALS (EASA MOD3 B1.1 AND B2)**

Because electricity is so vital to sustained flight, everyone involved in aviation maintenance must have a good understanding of electricity and the laws that govern it. This common course is delivered to all aviation diploma and higher diploma students in semester two to furnish the needed background. It provides knowledge of electrical fundamentals and characteristics and the production and utilisation of electrical power. It also covers components used and their action in electrical circuits. This course meets all the requirements of CAR 66 Module 3. CREDITS: 9.00

**EARC N166 - MATERIALS AND HARDWARE**

The purpose of this course is to provide the student with knowledge of the theoretical and practical aspects of Aircraft Materials and Hardware and the ability to apply that knowledge. Subjects include: Aircraft Materials (Ferrous, Non-ferrous, Composite, Non-metallic, Wood and Fabric), Corrosion, Fasteners, Pipes and Unions, Bearings, Transmissions, Control Cables and Electrical Cables and Connectors. This course meets the requirements of EASA Module 6A and 6B2. CREDITS: 6.00

**EARC N177 - MAINTENANCE PRACTICES (EASA MOD7 A AND B2)**

This common course is delivered to all aviation diploma and higher diploma students in semester two to furnish the needed background. Subjects include: Safety Precautions Aircraft and Workshop Practices, Tools, Engineering Drawings, Diagrams and Standards, Fits and Clearances, Riveting, Pipes and Unions, Springs, Bearings, Transmission, Control Cables, Aircraft Handling and Storage, Weight and Balance, Disassembly, Inspection, Repair and Reassembly, Abnormal Events, Inspection and Maintenance Records. This course meets the requirements of EASA 7A and 7B2. CREDITS: 9.00

**EARC N188 - BASIC AERODYNAMICS(EASA MOD 8)**

Aerodynamics is the study of objects moving through the air. In effect, aerodynamics is concerned with the aircraft, the relative wind, and the atmosphere. This common course is delivered to all aviation diploma and higher diploma students in semester two and furnishes

the basic knowledge of aerodynamics required for entry into EASA Module 11 and 13 courses. This course meets the requirements of EASA Module 8.  
CREDITS: 3.00

#### **EARC N204 - TURBINE AEROPLANE SYSTEMS - MECHANICAL II (EASA MOD 11)**

The purpose of this course is to provide the student with knowledge of the theoretical and practical aspects of Aircraft Systems and the ability to apply that knowledge. The subjects include: Aircraft fuel systems, Aircraft hydraulic systems, Aircraft oxygen systems, Aircraft Pneumatic and vacuum systems, Aircraft landing gear systems. EASA module 11, sections 10, 11, 15, 16, 13 respectively. This course, together with EARC 201, 202, 203 and 205 meets the requirements of EASA Module 11A.  
CREDITS: 5.00

#### **EARC N205 - TURBINE AEROPLANE SYSTEMS - AVIONICS II (EASA MOD 11)**

Avionics is short for aviation electronics. In this course aircraft communications (ATA 23), navigation (ATA 34) and auto flight (ATA 22) systems are taught. This common course is delivered to all aviation diploma and higher diploma students in semester four to furnish a familiarisation with the various avionic systems found on modern transport category turbine aircraft. This course, together with EARC 201, 202, 203 and 204, meets the requirements of EASA Module 11A.  
CREDITS: 5.00

#### **EARC N210 - LEGISLATION (EASA MOD 10)**

This course provides a thorough knowledge and understanding of the requirements and procedures under the laws of the UAE GCAA and Europe's EASA. These requirements and procedures deal with the roles and relationships of national and international regulatory bodies, licensing for maintenance engineers, and aircraft maintenance and certification. This course is written to comply with all the requirements of EASA 66 Module 10.  
CREDITS: 4.00

#### **EARC N211 - TURBINE AEROPLANE AERODYNAMICS, STRUCTURES, AND SYSTEMS (EASA MOD 11 A)**

Turbine airplane aerodynamics, structures, and aircraft systems (GCAA Mod 11A); to the Category A1 license level.  
CREDITS: 20.00

#### **EARC N212 - HELICOPTERS COMMON (EASA MOD 12)**

The purpose of this course is to provide the student with a familiarisation level of knowledge of the theoretical aspects of Helicopter Aerodynamics, Structures and Systems and the ability to apply that knowledge. The subjects taught are those subjects not covered in EASA Module 11 that apply directly to helicopters, as listed in EASA Module 12.  
CREDITS: 3.00

#### **EARC N215 - GAS TURBINE ENGINE (EASA MOD 15)**

This common course in gas turbine engines shall combine theory and practical classes where necessary. It shall provide the basis for student development and comprehension of gas turbine engines, terminology associated with gas turbine engines and their maintenance, basic inspection techniques, maintenance practices and associated systems related to gas turbines.  
CREDITS: 4.00

#### **EARC N217 - PROPELLERS (EASA MOD 17)**

This introductory course in propellers shall combine theory, and practical classes where necessary, to provide the basis for student development and comprehension of aircraft propellers, terminology associated with propellers and their maintenance, basic inspection techniques, maintenance practices and the associated systems that control propellers. This common course is delivered to all aviation diploma and higher diploma students in semester two and furnishes the basic knowledge of propellers required for entry into the EARC N317 course. This course meets the requirements of EASA 66 Module 17A.  
CREDITS: 2.00

#### **EARC N244 - ELECTRICAL FUNDAMENTALS (EASA MODULE 4)**

In this course the fundamentals of electronics are taught. This common course is delivered to all aviation diploma and higher diploma students in semester three to furnish a familiarisation with common semiconductor devices, printed circuit boards (PCB's) and servomechanisms used in aircraft systems. This course meets the requirements of EASA Module 4B1.  
CREDITS: 4.00

#### **EARC N255 - DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS (EASA MOD 5)**

This course provides the theoretical and practical

knowledge of the fundamental concepts of digital electronics technology. It covers the basic principles of components, circuits, and techniques used in digital computers and electronic instrument systems. This course meets the requirements of EASA Module 5B1.

CREDITS: 4.00

### **EARC N299 - HUMAN FACTORS (EASA MOD 9)**

This course is intended to provide an introduction to human factors and human performance and limitations for ab-initio engineers studying for their Part 66 engineering licenses. Knowledge of this subject has a significant impact on the safety standards expected of the aircraft maintenance engineer. This course meets all the requirements of EASA Module 9.

CREDITS: 2.00

### **EAV 1409 - ELECTRONIC FUNDAMENTALS (MOD 4 B2)**

Covers electronic components and circuits including diodes, transistors, integrated circuits, printed circuit boards and syncho and servo mechanisms. This course meets the requirements of CAR Module 4B2.

CREDITS: 9.00

### **EAV 1509 - DIGITAL TECHNIQUES/ ELECTRONIC INSTRUMENT SYSTEMS (MOD 5 B2)**

Designed for avionics students and meets the EASA Module 5 requirements.

CREDITS: 9.00

### **EAV 2405 - PROPULSION (MOD 14 B2)**

Introduces gas turbine engine concepts and develops theoretical and practical knowledge relating to engine parameter monitoring that is essential for avionics engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 14 B2. Topics covered include; basic turbine engine construction and operation, turbine engine indication systems, engine control systems, and engine built in test equipment (BITE).

CREDITS: 5.00

### **EAV 2608 - MATERIALS AND HARDWARE (MOD 6 B2)**

Provides the avionics student with a theoretical and practical familiarisation of aircraft materials and hardware that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 6 B2. Topics covered include; ferrous/nonferrous materials, composite and non-metallic materials, corrosion, fasteners, pipes and unions,

springs, bearings, transmissions, control cables and electrical cables and connectors.

CREDITS: 8.00

### **EAV 2708 - MAINTENANCE PRACTICES (MOD 7 B2)**

Provides the avionics student with a theoretical and practical familiarisation of maintenance practices that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 7 B2. Topics covered include; safety precautions, workshop practices, tools, test equipment, fits and clearances, electrical connectors, riveting, maintenance procedures and material handling.

CREDITS: 8.00

### **EAV 3340 - AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS (MOD 13) (B2) \*1 YR COURSE**

Provides information on civil aircraft systems and designs deemed essential by GCAA CAR 66 Module 13 (B2) for engineers in the field of aircraft maintenance. The course covers the range of electrical, instrument, com/nav and miscellaneous avionics topics required for completion of the B2 engineer's licence.

CREDITS: 40.00

### **EAVO N313 - AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS (EASA MOD 13 B2) (CONTINUING COURSE)**

This course is taught over two semesters and culminates with a final exam at the conclusion of the second semester, covering aircraft avionics systems in the field of aviation maintenance engineering as required by GCAA CAR 66 Module 13 B2. The first semester topics covered include; instrument systems and electrical systems. The second semester topics covered include; communication and navigation systems, radar systems and autoflight.

CREDITS: 41.00

### **EAVO N314 - PROPULSION (MODULE 14 B2)**

Introduces gas turbine engine concepts and develops theoretical and practical knowledge relating to engine parameter monitoring that is essential for avionics engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 14 B2. Topics covered include; basic turbine engine construction and operation, turbine engine indication systems, FADEC system, and engine built in test equipment (BITE).

CREDITS: 3.00

### **EAVO N344 - ADVANCED ELECTRONIC FUNDAMENTALS (EASA MOD 4)**

Develops and applies theoretical and practical electronic concepts to an advanced level, which is essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 4 B2. Topics covered include; diodes, transistors, op-amps, printed circuit boards and synchro/servomechanisms.

CREDITS: 3.00

### **EAVO N355 - ADVANCED DIGITAL TECHNIQUES ELECTRONIC INSTRUMENT SYSTEMS (EASA MOD 5)**

Develops and applies theoretical and practical digital concepts to an advanced level, which is essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 5 B2. Topics covered include; digital instrument systems, numbering systems, data conversion/buses, logic circuits, integrated circuits, computer structure, micro-processors, multiplexing, fibre optics, EMI and software management control.

CREDITS: 3.00

### **EBMG N200 - INTRODUCTION TO E-BUSINESS**

Introduction to the scope of e-business and the benefits it offers to an organisation through the different business models. It also provides sufficient understanding of internet technology for learners to appreciate the potential, and the limitations, of using the internet for business.

CREDITS: 4.00

### **EBMG N216 - E-BUSINESS MARKETING**

The aim of this course is to enable participants to understand the marketing approach to business. The student explores the marketing fundamentals such as marketing orientation, marketing mix, the importance of buyer behaviour and the research process. The students also assess the importance of different types of information and marketing research requirements needed for effective marketing management in a competitive environment.

CREDITS: 4.00

### **EBMG N217 - CONSUMER BEHAVIOUR**

The aim of this course is to enable students to understand the purchase decision-making process and to recognise the variables and situations that influence buying behaviour. The learner explores the marketing research process and assesses the importance of different types of information and marketing research requirements needed for effective marketing

management in a competitive environment. This course also provides learners with the specialist knowledge and skills to prepare and present a research proposal.  
CREDITS: 4.00

### **EBMG N220 - BUSINESS DECISION MAKING**

The aim of this course is to enable students to make decisions using critical thinking skills. This course gives students the opportunity to examine a variety of sources and develop techniques for the four aspects of doing research for decision making: data gathering, data storage, and the tools available to create useful information from raw data. Further, the learner gains the skills to present this information in a meaningful and relevant manner.

CREDITS: 4.00

### **EBMG N250 - E-BUSINESS OPERATIONS**

The development of the internet for purchasing, supply chain management and other business applications are examined in this course. It is first necessary to identify the essential differences between business and consumer purchasing (b2b and b2c). Experience with Electronic Data Interchange (EDI) established the ground rules for e-business over the internet, which has led to the development of electronic marketplaces and industry networks.

CREDITS: 4.00

### **EBMG N260 - MANAGING FINANCIAL RESOURCES**

Designed to give a broad understanding of the ways in which finance is managed within a business organisation. Learners learn how to evaluate the different sources of finance, compare the ways in which these are used and how to use financial information to make decisions.

CREDITS: 4.00

### **EBMG N266 - INTERNET MARKETING**

Students will develop their knowledge of the marketing concepts seen in an earlier course to understand marketing and how it is applied through the e-business models which were introduced in a previous course on the Internet and E-Business.

CREDITS: 4.00

### **EBMG N267 - E-BUSINESS STRATEGY**

The aim of this course is to develop the student's abilities to evaluate and select strategies appropriate to business organisations. This involves an analysis of the impacts of the external operating micro and macro environment on business decisions. Students use tools

such as S.W.O.T. analysis and P.E.S.T. analysis, as well as other performance measuring tools.

CREDITS: 4.00

### **EBMG N270 - DATA ANALYSIS AND DESIGN**

An understanding of databases is fundamental to the development of any significant information system. Database systems are predominant in the world of IT and continue to demand more complex data structures as applications get increasingly sophisticated. The aim of this course is to provide an essential knowledge of database systems including design principles, practical implementation and development skills for both system designer and software engineer.

CREDITS: 4.00

### **EBMG N300 - ORGANISATIONS AND BEHAVIOUR**

An introduction to the nature of organisations in relation to management practices. The course examines the internal nature of organisations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behaviour of people within organisations and the significance of organisational design and characteristics. It also aims to provide the basis for, and to underpin further study in, specialist areas of business.

CREDITS: 4.00

### **EBMG N305 - E-BUSINESS PLANNING AND IMPLEMENTATION**

Considers e-business planning and implementation. It starts by considering customers' expectations of e-business. It is first necessary to assess the status of the business information and logistics systems, because they will provide the foundation for e-business. Preparations are necessary to meet the standard of support that e-customers expect.

CREDITS: 4.00

### **EBMG N310 - E-BUSINESS ENVIRONMENT**

The aim of this course is to encourage learners to identify the objectives of organisations and the influence of stakeholders.

CREDITS: 4.00

### **EBMG N315 - PROJECT MANAGEMENT**

The aim of this course is to provide a basic knowledge of project management principles, methodologies, tools and techniques that may be used in any industry, the professions and the public sector. Learners develop

an understanding of what constitutes a project, and the role of a project manager.

CREDITS: 4.00

### **EBMG N325 - HUMAN RESOURCES**

An introduction to the concepts and practices of human resource management within the UAE. The aim of the unit is to provide an understanding of the human resource management role within an organisation. Some of the key areas students examine are the utilising of resources, developing reward systems, retention of employees, motivation of employees and managing the HRM function within an organisation. Students are also required to develop a job description as well as develop an advertisement for a specific job.

CREDITS: 4.00

### **EBMG N391 - E-BUSINESS PROJECT**

Enables students to integrate the skills and knowledge they have acquired during their studies to produce a viable and realistic e-business project.

CREDITS: 8.00

### **EBMG N405 - TECHNOLOGY AND MANAGEMENT**

Enables students to recognise the need for managers to be able to gather, analyse, record, store and distribute information as part of the management function. Learners examine the different types and sources of information and learn to use information as a decision making tool.

CREDITS: 4.00

### **EBMG N411 - FINANCIAL AWARENESS**

Designed to introduce the management of finance in organisations from a managerial perspective. Students will have the opportunity to examine a variety of financial topics that directly impinge on the management of organisations, the maintenance of the financial resource, the effective acquisition of assets and the effective control of the deployment of financial resources.

CREDITS: 4.00

### **EBMG N412 - MANAGING MARKETING**

Designed to develop knowledge and understanding of managing marketing for operational purposes. Learners study principles related to the broad management of marketing at an operational level.

CREDITS: 4.00

**EBMG N413 - LEADERSHIP OF ORGANISATIONS**

An insight into current thinking on leadership from the perspective of the organisation. In a rapidly changing working environment the emphasis is on the studies of the last ten years rather than traditional leadership models. Learners will consider the range of competences and styles of successful leaders, the importance of the context in which leadership exists and how organisations can plan to meet their current and future requirements for leadership.

CREDITS: 4.00

**EBMG N416 - MANAGING QUALITY**

Designed to introduce students to the concept of 'total quality' and its achievement through Total Quality Management (TQM). The origins of TQM are explored via the contributions of major theoreticians, its holistic nature is emphasised, as is the need to manage changes in both operational systems and organisational culture/s for its successful implementation.

CREDITS: 4.00

**EBMG N420 - STRATEGIC MANAGEMENT**

Introduces students to strategic management and develops their knowledge and understanding of the nature, scope, principles and processes of strategy. The course covers the formulation, implementation and control of strategy as carried out by the senior management and functional management of an organisation, within its internal and external environments.

CREDITS: 4.00

**EBMG N460 - MANAGING FINANCIAL PRINCIPLES AND TECHNIQUES**

Provides the learners with a foundation in financial principles and techniques relevant to the strategic management process. The focus of the unit is income and expenditure, budgets, investment criteria for decision making, and the use and analysis of financial statements. The main objectives are to give learners the confidence to construct, analyse and interpret financial information in order to enhance their decision-making skills in relation to their own organisations. Learners study the role of accounting information in the management process.

CREDITS: 4.00

**EBMG N461 - FINAL RESEARCH PROJECT**

This course provides learners with the opportunity

to undertake a comprehensive piece of research developing critical thinking and integration. It represents an academic challenge to the learner.

CREDITS: 8.00

**EBMG N463 - ETHICS IN THE GLOBAL COMMUNITY**

The increase in information and communication technology, the consequent globalisation of markets and competition and the need to respect today's more diverse society means that organisations have to ensure they are more aware of the wider environment.

CREDITS: 4.00

**EBMG N464 - COMMUNICATION STRATEGY**

Organisations today need to plan their communication systems to ensure up-to-date information, knowledge and awareness are always available to all who need them. This unit gives learners an opportunity to look to the design of a communication system within one organisation, such as their own workplace, one to which they are seconded or through a case study.

CREDITS: 4.00

**EBMG N467 - SUPPLY CHAIN MANAGEMENT**

The aim of this course is to provide an understanding of the strategies, systems, policies, procedures and techniques involved with managing the supply chain. The course will help learners to understand the evolution of supply chain management and the strategies that organisations develop to maintain effective supplier relationships.

CREDITS: 4.00

**EBMG N476 - CULTURE, CLIMATE AND VALUES**

Focuses on the crucial importance of understanding culture and climate in a globalised, diverse and repeatedly restructured working environment. The course explores cultural issues at national and organisational levels and the differences between culture, climate and values.

CREDITS: 4.00

**EBMG N477 - HR PLANNING AND DEVELOPMENT**

Enables students to focus on the knowledge, understanding and skills necessary for the planning and development of an organisation's human resources (HR). Learners will research the role of the HR function, analyse HR planning and development methods and

how they contribute to organisational objectives and requirements, and analyse performance enhancements.  
CREDITS: 4.00

### **EBT 1103 - BIO ANATOMY AND PHYSIOLOGY**

Introduces the basic concepts of human anatomy and physiology with associated terminology.  
CREDITS: 3.00

### **EBT 1303 - CHEMISTRY FOR BIOMEDICAL ENGINEERING**

This course provides an introduction to general concepts of chemistry.  
CREDITS: 3.00

### **EBT 2003 - MEDICAL ELECTRONICS**

Introduces the fundamental devices commonly used in the design and construction of electronic medical equipment.  
CREDITS: 3.00

### **EBT 2053 - BIOMEDICAL INSTRUMENTATION**

This course introduces the principles, applications and design of medical instrumentation commonly used in hospitals and clinics.  
CREDITS: 3.00

### **EBT 2503 - BIOMATERIALS**

Explores materials and associated chemical and physical properties used in the healthcare industry. Various classes of biomaterials, such as polymers, metals, and ceramics are presented.  
CREDITS: 3.00

### **EBT 3002 - CLINICAL ENGINEERING AND SAFETY MANAGEMENT**

Covers engineering, scientific, and legal aspects of safety. It covers changes in engineering and science, law and regulatory demands, and the attitude of workers and the public. The course examines the ability of technology to respond to change. Students gain knowledge about the complex, and potentially hazardous situations in their work environment, how individuals and government work together to better inform and protect workers, and the implementation of measures to either eliminate or reduce the risk connected with these hazards.  
CREDITS: 3.00

### **EBT 3003 - BIOMECHANICS**

Introduces mechanical principles related to the functioning of the musculoskeletal system. The course includes analyses of rigid body and deformational mechanics as applied to biological tissues of bone, cartilage, ligaments, tendons and skeletal muscle, and to systems such as skeletal joints and limbs. The biomechanics of these tissues and systems has significance in the fields of orthopaedics, rehabilitation, tissue engineering and ergonomics.  
CREDITS: 3.00

### **EBT 3013 - DIAGNOSTIC AND THERAPEUTIC EQUIPMENT**

Studies the theory and application of instrumentation for physiological and medical measurements. It introduces the use of signals for therapeutic and prosthetic devices. The characteristics of physiological variables, signal conditioning devices, and transducers are used to measure biological variables.  
CREDITS: 3.00

### **EBT 3503 - REHABILITATION ENGINEERING**

Introduces the principles and practices of rehabilitation engineering and the interaction of biomedical engineering with healthcare delivery to individuals with impaired mobility. An overview covers the historical perspective of the field as well as special disabilities and the use of assistive technologies. The course also introduces how to derive and measure standards of performance and proper positioning when using assistive devices. Students apply acquired skills to appropriate case studies as part of the clinical decision-making process.  
CREDITS: 3.00

### **EBT 3553 - MEDICAL IMAGING SYSTEMS**

An introduction to the underlying concepts and instrumentation of several modern medical imaging modalities. Students review applicable linear systems theory and relevant principles of physics. Modalities studied include X-ray radiography (conventional film-screen imaging and modern electronic imaging), computerised tomography (including the theory of reconstruction), ultrasound, nuclear magnetic resonance imaging (MRI), nuclear medicine, radiation protection, dosimetry, and biology. The course also provides key coverage of the clinical implications of technical principles.  
CREDITS: 3.00

### **EBT 4903 - MODELLING AND SIMULATION OF BIOMEDICAL SYSTEMS**

Introduces computer-based methods for implementing mathematical functions to model the operation of various cellular and physiological systems. In particular, students use software packages to apply presented theoretical analyses and algorithms to model the input/output relational characteristics of common biological and physiological processes, such as cellular population growth, ion transport, action potential propagation, cardiac pressure signal, heart rate control, and insulin-glucose control systems.

CREDITS: 3.00

### **EBT 4913 - DIGITAL SIGNAL PROCESSING**

This course introduces the theoretical and practical aspects of digital signal processing as applied to biomedical signals using a software package. It reviews analogue to digital and digital to analogue conversion techniques as well as the sampling theorem. Difference equations, correlation, convolution, Fourier analysis, and Z-transform are examined. Finite and Infinite Impulse Response (FIR and IIR) filters are designed for common physiological signals, such as the electrocardiogram (ECG), electroencephalogram (EEG), and arterial blood pressure (ABP) signals.

CREDITS: 3.00

### **EBT 4923 - DESIGN OF MEDICAL DEVICES I**

Presents the design of biomedical devices from conception to delivery, using industry examples. It presents pertinent issues in the design process and explores the best practices in material selection, safety, prototyping, premarket testing and validation, liability, and learning from failure. Students are introduced to new concepts in hardware and software design, including the use of computer-aided tools to predict and document safety-related design issues.

CREDITS: 3.00

### **EBT 4933 - DESIGN OF MEDICAL DEVICES II**

Strengthens the skills developed in Design of Medical Devices I through software applications in the field of healthcare and biomedical engineering. The course introduces virtual instrumentation applications (such as LABVIEW and Bio Bench) to empower students to conceive, develop, and implement a wide variety of research-based applications and executive information tools. These applications fall into several categories, including clinical research, equipment testing and

quality assurance, data management, and performance improvement.

CREDITS: 3.00

### **ECE 2003 - TEACHING MATHEMATICS IN THE EARLY YEARS: SKILLS AND CONCEPT ACQUISITION**

Charts the development of early mathematical skills and concepts collectively known as problem solving, reasoning and numeracy, subdivided into the areas of numbers as labels and for counting, calculating and shape, space and measures. It also explores contemporary thinking about pedagogy and current practice in mathematics teaching in early childhood settings with a particular emphasis on the provision of developmentally appropriate, play-based learning experiences.

CREDITS: 3.00

### **ECE 2203 - LEARNING THROUGH THE VISUAL ARTS**

Explores recent thinking about creativity, nurtures student teacher creativity including the acquisition of new technical skills, and provides a context for understanding the importance of the creative arts and more specifically the visual arts to enable children to express themselves through a variety of media using all the senses.

CREDITS: 3.00

### **ECE 2503 - THEORIES OF TEACHING AND LEARNING THAT IMPACT THE PRESCHOOL CURRICULUM**

Builds upon previous learning with a key focus on how a range of approaches to teaching and learning in ECE settings are influenced by early childhood practitioners such as: Froebel, Montessori, Dewey and Steiner (Waldorf); current practice e.g. Reggio Emilia; general theories of child development; and more specifically the work of developmental psychologists such as Piaget, Bruner and Vygotsky.

CREDITS: 3.00

### **ECE 2603 - LEARNING THROUGH THE PERFORMING ARTS**

Explores the relative importance of the performing arts in a range of early childhood methodologies including the UK Early Years Foundation Stage (EYFS), the Montessori Method, the IB Primary Years Programme (IB PYP), the High/Scope programme and in the UAE preschool syllabus.

CREDITS: 3.00

**ECE 3003 - LITERACIES IN EARLY CHILDHOOD**

Explores a range of current approaches that facilitate the development of language and literacy skills including what are currently termed the new literacies, digital literacies or multiliteracies, (Lankshear and Knobel 2003) which integrate screen-based texts, images, text layout and hypertext within their scope of study. The processes by which children interact with a range of multiple sign systems that represent meaning in soft texts will be explored.

CREDITS: 3.00

**ECE 3203 - LEARNING THROUGH LITERATURE**

Focuses on how books, poems and a range of other texts can be used to develop learning across domains with a particular emphasis on early childhood literacy. Students examine four aspects: the historical and contemporary influence of popular culture on the development of early childhood literacy practices, the role of literature to support learning across domains, selecting and exploiting appropriate texts/ genres for young learners (with reference to UAE and cross culturally relevant content) and establishing print/literacy-rich environments with a range of texts for various purposes

CREDITS: 3.00

**ECE 3503 - PLANNING AND ASSESSMENT IN EARLY CHILDHOOD EDUCATION**

Students review the factors, including developmental levels, individual learning needs and programme aims that need to be considered in planning for learning across both domains (cognitive, physical, social and emotional) and curriculum areas. Students define the terms curriculum and syllabus, examining the relationship between the two.

CREDITS: 3.00

**ECE 3703 - BUILDING LEARNING COMMUNITIES IN EARLY CHILDHOOD EDUCATION**

Raises student awareness of the family as the child's first teacher, foundation, and framework for the transmission of culture, language, attitudes, and values. Students analyse the stages of the family life cycle, interpersonal relationships within and outside the family and also explore the impact of context and culture on its ability to function effectively as an institution.

CREDITS: 3.00

**ECH 1003 - GENERAL CHEMISTRY I**

Introduces the fundamental concepts of chemistry to chemical engineers. This introductory inorganic chemistry course will cover the following topics: matter and measurements in chemistry, atomic theory and periodic table, naming and formulas of inorganic compounds, concepts of chemical bonding, mass relations in chemical compounds and reactions. Classroom concepts are supported by laboratory experiments.

CREDITS: 3.00

**ECH 1103 - CHEMICAL ENGINEERING PRINCIPLES I**

This course is the first of two courses that cover the essential issues of chemical engineering principles and their application in industry.

CREDITS: 3.00

**ECH 2003 - PHYSICAL CHEMISTRY**

Students will be introduced to gas law and kinetic theory of gases, thermochemistry, spontaneity of reaction, chemical equilibrium, properties of solutions, and study the phenomena of liquid at interface. Attention should be focused on an engineering application.

CREDITS: 3.00

**ECH 2013 - CHEMICAL ENGINEERING PRINCIPLES II**

This course is the second part of a course series covering fundamental chemical principles and applications. It introduces students to the applications of material and energy balances for non-reactive and chemically reactive systems used in industrial processes.

CREDITS: 3.00

**ECH 2033 - FLUID MECHANICS**

Covers fluid mechanics principles of energy balance, determination of flow regimes, compressible flow, and fluid measurement mechanisms. The course includes metering and pumping of fluids, a relevant application to the chemical and petrochemical industry.

CREDITS: 3.00

**ECH 2043 - ANALYTICAL CHEMISTRY**

The main purpose of this course is to provide students with the fundamentals and practical background of classical and analytical techniques in chemistry. It also covers instruments as related to modern laboratory operation and applications to industrial settings.

CREDITS: 3.00

**ECH 2053 - ORGANIC CHEMISTRY**

Covers the basic and fundamental principles of organic chemistry, nomenclature, structure and properties of organic molecules, isomerism, reactions and mechanisms. In the practical component, the student will learn how to, synthesise simple organic compounds, perform separation and purification experiments, and also be able to identify compounds based on their functional groups.

CREDITS: 3.00

**ECH 2063 - THERMODYNAMICS**

Introduces students to thermodynamic properties of pure substances. It also covers the properties and the equations-of-state of ideal and real gases.

CREDITS: 3.00

**ECH 2073 - PETROLEUM TESTING**

Studies the application of tests and analyses that are currently in use in the oil and gas industry using ASTM methods. Emphasis is placed on the verification of the quality of the final products, determined by the effectiveness of processing. The concepts of petroleum processing, refining and other petrochemical processes are also discussed.

CREDITS: 3.00

**ECH 2083 - GENERAL CHEMISTRY II**

General Chemistry II is a continuation of general chemistry I and its targeted students taking chemical engineering as their degree major. The course concentrates on the study of gases and gases behaviour, thermochemistry, chemical equilibrium, solutions and their properties, and electrochemistry. Attention should be focused on engineering and technical applications.

CREDITS: 3.00

**ECH 3003 - MASS TRANSFER**

Covers mass transfer operations with their fundamental theories as related to industrial applications. Emphasis is made on equilibrium stage operations, diffusion, gas absorption in packed towers, distillation and humidification. Laboratory exercises will be performed to illustrate the theory covered in this course.

CREDITS: 3.00

**ECH 3013 - MATERIALS AND CORROSION**

An introduction to the properties and corrosion behaviour of metals, alloys and non-metallic materials. Laboratory exercises assist to reinforce theoretical

concepts. Corrosion topics include classification of corrosion types and related corrosion mechanisms.

CREDITS: 3.00

**ECH 3023 - CHEMICAL HEAT TRANSFER**

This course covers heat transfer, one of the core subjects in chemical engineering. The principles of heat transfer in solids (heat conduction), forced and natural convection, and radiation are thoroughly covered. Emphasis is placed on problems solving techniques related to heat flow and heat exchangers design. A description of evaporators, furnaces, and boilers, is also included. A series of experiments are designed to reinforce the principles and develop skills for operating heat transfer equipment.

CREDITS: 3.00

**ECH 3033 - ELECTRICAL FUNDAMENTALS AND INSTRUMENTATION**

Offers an introduction to electrical circuit theory and process instrumentation as it applies to the day to day operation in a Chemical and Petro-Chemical process plant.

CREDITS: 3.00

**ECH 3043 - PROCESS CONTROL: CHEMICAL**

Explores the theory and practical aspects of chemical process control including the development of outline control schemes and troubleshooting base on control related problems. Conventional control methods as well as computer process control are discussed and laboratory sessions will emphasise the basic principles. This course examines the role and importance of process control systems and the dynamic behaviour of the process. Students will learn and apply the concept of P, PI and PIP controllers.

CREDITS: 3.00

**ECH 3053 - UNIT OPERATION I**

Studies the fundamentals of separation processes used in chemical industries, such as filtration, evaporation, drying, liquid - liquid extraction and multi-component distillation.

CREDITS: 3.00

**ECH 3063 - REACTION KINETICS**

Provides an introduction to the kinetics of chemical reactions and the design and operation of elementary chemical reactors. The principles of the kinetics of homogeneous gas and liquid phase reactions are

detailed and a brief coverage of complex kinetic concepts related to chain reactions, and heterogeneous catalysis is given.

CREDITS: 3.00

### **ECH 4002 - DESIGN PROJECT I**

This course is the first of a two semester final year design project. The course introduces the design selection process and detailed material and energy balance used for the design. Students also consider engineering ethics common to typical work situations. The course project is undertaken by student teams with individual responsibilities.

CREDITS: 2.00

### **ECH 4003 - CHEMICAL ENGINEERING DESIGN**

Provides knowledge of equipment design for chemical processes. The course covers the overall procedure of designing a chemical process for various unit operations. It introduces the students to the detailed procedures of equipment design found in most gas and petroleum plants. A special emphasis is also made on mechanical design of the selected equipment.

CREDITS: 3.00

### **ECH 4053 - CHEMICAL ENGINEERING SIMULATION**

Highlights the basic principles of the transport phenomena. Students will develop a detailed understanding of the fundamental principles of momentum, energy, and mass transport and formulate and solve mathematical models for transport processes. Transport phenomena draws deep mathematical connections between the transport processes that often provide very useful tools in the analysis of one field that are directly derived from the others.

CREDITS: 3.00

### **ECH 4073 - OPTIMISATION AND APPLICATION IN REFINERY**

Introduces optimisation principles and linear programming techniques which serve as a general guide for problem solving in design and operation. It focuses on model development and applications to solve a wide range of process engineering problems using spreadsheet software (Excel or Mathcad). The course also introduces the use of commercial software which is extensively used in the oil, gas and petrochemical industries.

CREDITS: 3.00

### **ECH 4903 - CHEMICAL PROCESS HAZOP AND RISK ANALYSIS**

An introduction to the specific approaches and techniques which may be used to analyse, assess and manage hazards and risks in chemical process industries. Emphasis is placed on HAZOP and semi-quantitative studies for hazard identification and risk analysis. Chemical process safety involving accident sequences, methods to eliminate sequence steps and use of statistics to characterise accidents are reinforced through case studies.

CREDITS: 3.00

### **ECH 4913 - GAS PROCESSING**

Designed to cover the fundamentals of the gas process operations in the petroleum industry. Students will gain an understanding of hydrocarbon exploration methods and the conditions required for the formation and accumulation of hydrocarbon reserves. An overview of gas processing from exploration up to final production and transportation as well as gas properties calculations is also included. The course focuses on the principles of NGL extraction, LPG fractionation and LNG production plus some design aspects of the major unit process operations.

CREDITS: 3.00

### **ECH 4933 - PETROLEUM AND PETROCHEMICAL PROCESSING**

Studies the essential processing operations in a refinery where crude oil is converted into lighter fuels. The properties of significant fuels, such as motor gasoline, diesel, jet fuel and heating oils are covered. The production, chemistry, and marketing aspects of some important petrochemicals are also covered. The course is supported by the relevant laboratory experiments.

CREDITS: 3.00

### **ECHM N101 - CHEMICAL ENGINEERING PRINCIPLES I**

This course is the first of two courses that cover the essential issues of chemical engineering principles and their application in industry. A brief introduction is given to the fundamental techniques of engineering calculations.

CREDITS: 4.00

### **ECHM N200 - PHYSICAL CHEMISTRY**

Students will be introduced to collision theory and transition state theory. The course also focuses on the

application of thermodynamics in the description of chemical reactions, free energy and substance activities, chemical equilibrium, properties of solutions, physical properties of solids surfaces-catalysis and absorption.  
CREDITS: 4.00

#### **ECHM N201 - CHEMICAL ENGINEERING PRINCIPLES II**

This course is the second part of a two-part series covering essential chemical principles and applications. It covers the applications of material and energy balances for non-reactive and chemically reactive systems usually used in industrial processes.  
CREDITS: 4.00

#### **ECHM N202 - INDUSTRIAL PROCESSES**

Covers the chemical process industries that are relevant in the UAE and includes the production of industrial gases, fertilizers, inorganic acids, food products, cement, aluminium, industrial carbon and iron and steel.  
CREDITS: 4.00

#### **ECHM N203 - FLUID MECHANICS**

This course covers fluid mechanics principles and fundamentals. It covers the basic concepts of energy balance, determination of flow regimes (laminar and turbulent flows), an introduction to compressible flow, sonic velocity calculations and the different mechanisms in flow measurement.  
CREDITS: 4.00

#### **ECHM N204 - ANALYTICAL CHEMISTRY**

The main purpose of this course is to provide students with fundamentals and practical background of classical and instrumental analytical techniques as related to modern laboratory operation and applications to an industrial setting.  
CREDITS: 4.00

#### **ECHM N205 - ORGANIC CHEMISTRY**

Covers the basic and fundamental principles of organic chemistry, nomenclature, structure and properties of organic molecules, isomerism, reactions and mechanisms of: alkanes, cycloalkanes, alkenes, alkynes, aromatic compounds, alkyl halides, alcohols, phenols, thiols, ethers, epoxides, carbonyl compounds, carboxylic acid, and amines.  
CREDITS: 4.00

#### **ECHM N206 - THERMODYNAMICS**

Introduces students to thermodynamic properties of pure substances including the properties and the equations of state of ideal and real gases.  
CREDITS: 4.00

#### **ECHM N300 - MASS TRANSFER**

Studies mass transfer operations with their fundamental theories as related to industrial application.  
CREDITS: 4.00

#### **ECHM N301 - MATERIALS AND CORROSION**

Provides an introduction to the properties and corrosion behaviour of materials including metals, alloys and non-metallic materials.  
CREDITS: 4.00

#### **ECHM N302 - HEAT TRANSFER**

Explores heat transfer, one of the core subjects in chemical engineering.  
CREDITS: 4.00

#### **ECHM N303 - ELECTRICAL FUNDAMENTALS AND INSTRUMENTATION**

Introduces the students to the basic DC and AC circuit theory, electromagnetism, electrical hazards in the chemical industry and safe working procedures.  
CREDITS: 4.00

#### **ECHM N304 - PROCESS CONTROL SYSTEMS**

Theory and practical aspects of chemical process control including the development of outline control schemes and troubleshooting based on control related problems.  
CREDITS: 4.00

#### **ECHM N305 - UNIT OPERATION I**

Designed to cover the fundamentals of separation processes. The course includes mechanical separation processes used in chemical industries like filtration, evaporation, drying, liquid-liquid extraction and multi-component distillation.  
CREDITS: 4.00

#### **ECHM N306 - REACTION KINETICS**

An introduction to the kinetics of chemical reactions and the design and operation of elementary chemical reactors.  
CREDITS: 4.00

**ECHM N307 - PROJECT: CHEMICAL (2 SEMESTERS)**

Illustrates the principles of design and economic evaluation of chemical processes through the preliminary design of a commercial industrial project. Working in groups on assigned or selected portions of the overall project, students are required to make integrated use of a wide variety of fundamentals and principles gained from previous courses.

CREDITS: 4.00

**ECHM N400 - PROJECT**

A major chemical engineering project extending over two semesters is an essential requirement for BAS graduation. Students are required to make integrated use of a wide variety of fundamentals and principles gained from their learned courses.

CREDITS: 8.00

**ECHM N401 - CHEMICAL ENGINEERING DESIGN**

Examines the overall procedure of designing a chemical plant and performing typical design calculations of material and energy balances. It introduces students to flow sheeting, and the methods used in predicting fluids' physical properties.

CREDITS: 4.00

**ECHM N403 - CHEMICAL PROCESS HAZOP AND RISK ANALYSIS**

An introduction to the specific approaches and techniques which may be used to analyse, assess, and manage hazards and risks in chemical process industries. Emphasis is placed on HAZOP and semi-quantitative studies for hazard identification and risk analysis.

CREDITS: 4.00

**ECHM N404 - PETROLEUM REFINING AND PETROCHEMICALS**

Covers the essential processing operations in a refinery where crude oil is converted into lighter fuels. The properties of fuels and the production, chemistry, and marketing aspects of such petrochemicals are discussed. The course is supported by a number of laboratory experiments.

CREDITS: 4.00

**ECHM N405 - TRANSPORT PHENOMENA**

Highlights the basic principles of the transport phenomena. Students will develop a detailed

understanding of the fundamental principles of momentum, energy, and mass transport and formulate and solve mathematical models for transport processes.

CREDITS: 4.00

**ECHM N406 - PETROLEUM GAS PROCESSING**

Covers the fundamentals of gas processing operations in the petroleum industry. Students will gain an understanding of hydrocarbon exploration methods and the conditions required for the formation and accumulation of hydrocarbon reserves.

CREDITS: 4.00

**ECOM N300 - ORGANISATIONS AND BEHAVIOUR**

Provides an introduction to the nature of organisations in relation to management practices. The course examines the internal nature of organisations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behaviour of people within organisations and the significance of organisational design and characteristics. It also aims to provide the basis for, and to underpin further study in, specialist areas of business.

CREDITS: 4.00

**ECOM N305 - E-BUSINESS PLANNING AND IMPLEMENTATION**

Considers e-business planning and implementation. It starts by considering customers' expectations of e-business. It is first necessary to assess the status of the business information and logistics systems, because they will provide the foundation for e-business. Preparations are necessary to meet the standard of support that e-customers expect.

CREDITS: 4.00

**ECOM N310 - E-BUSINESS ENVIRONMENT**

The aim of this course is to encourage learners to identify the objectives of organisations and the influence of stakeholders. Learners are also encouraged to investigate the operation of organisations in relation to the local, national and global environment and to identify how those macro and micro environmental issues affect organisation's decision making process. The course also provides learners with a solid base of understanding of the parameters within which organisations act that can be built upon in further courses.

CREDITS: 4.00

**ECOM N315 - PROJECT MANAGEMENT**

The aim of this course is to provide a basic knowledge of project management principles, methodologies, tools and techniques that may be used in any industry, the professions and the public sector. Learners develop an understanding of what constitutes a project, and the role of a project manager. They analyse and plan the activities needed to carry out the project, including how to set up a project, how to control and execute a project, and how to carry out project reviews. Learners discuss how the project fits into the company's strategy. CREDITS: 4.00

**ECOM N325 - HUMAN RESOURCES**

An introduction to the concepts and practices of human resource management within the UAE. The aim of the unit is to provide an understanding of the human resource management role within an organisation. Some of the key areas students examine are the utilising of resources, developing reward systems, retention of employees, motivation of employees and managing the HRM function within an organisation. Students are also be required to develop a job description as well as develop an advertisement for a specific job. CREDITS: 4.00

**ECON N260 - MACROECONOMICS**

The Macroeconomics course aims to give students a perspective of the different economic concepts that apply to the national and international economy. CREDITS: 4.00

**ECON N400 - ECONOMICS OF THE UAE**

Builds on prior knowledge of basic micro and macro economic concepts, and students' experience of working within the UAE economy to develop an analytical approach to current issues arising from the historical development of the oil-based UAE economy. CREDITS: 4.00

**ECON N450 - MONETARY THEORY**

This course builds upon prior macro economic concepts to develop skills in understanding monetary theory. CREDITS: 4.00

**ECV 1003 - APPLIED DRAFTING AND CAD: CIVIL**

Develops skills to use CAD drafting as a means of communication in the civil and construction industry. CREDITS: 3.00

**ECV 1103 - CONSTRUCTION MATERIALS**

Introduces the student to many of the materials used in the construction industry. It covers materials used in the construction of buildings, pavements and infrastructure using international and local standards. CREDITS: 3.00

**ECV 2003 - SOIL MECHANICS**

Soil Mechanics is the study of the physical properties and behaviour of soil as an engineering material before, during and after the design and construction of foundations for structures and subgrades for highways. CREDITS: 3.00

**ECV 2013 - ENGINEERING MECHANICS**

Covers the basic principles of mechanics including composition and resolution of forces. The combination of forces to keep a body in equilibrium and their effect on the stability of basic structures such as beams, cantilevers, trusses and cables are also investigated. CREDITS: 3.00

**ECV 2023 - FLUID MECHANICS AND HYDRAULICS**

Introduction to the fundamental principles of fluid mechanics and hydraulics with applications to practical engineering problems. Primary emphasis will be placed on basic topics including fluid properties, hydrostatics, and hydrodynamics forces on submerged surfaces, floatation and buoyancy theory and measurements of flow and pressure. CREDITS: 3.00

**ECV 2033 - STRENGTH OF MATERIALS**

Introduces the concepts necessary for the design of structural elements including material selection and component design. The course provides a link between engineering mechanics and structural analysis. CREDITS: 3.00

**ECV 2043 - FOUNDATION ENGINEERING**

Extends the core knowledge and understanding of soil mechanics previously taught in the programme. Students will be introduced to geotechnical engineering systems and approaches required for their design and stability issues. CREDITS: 3.00

**ECV 2053 - SITE SURVEYING**

A fundamental civil engineering course that provides

students with industry-relevant theoretical and practical surveying skills.

CREDITS: 3.00

### **ECV 2072 - CHEMISTRY FOR CIVIL ENGINEERING**

This is an introductory course in general inorganic chemistry followed by topics specifically related to civil engineering. Lab experiments support classroom instruction.

CREDITS: 2.00

### **ECV 3003 - HIGHWAY ENGINEERING**

Highways play an essential role in sustaining the development of countries such as the United Arab Emirates. This course introduces the topics of design and construction of highways. It addresses geometric design of highways-vertical and horizontal alignment, cross-sections, preparation of plans, drainage concerns, and intersections at grade and interchanges. Emphasis is on design practices and construction procedures to achieve a highway with acceptable levels of performance in terms of safety, operation, economics and environmental concerns.

CREDITS: 3.00

### **ECV 3013 - WASTE WATER ENGINEERING**

Introduces the topics of waste water technology, sewer design and construction. The collection, transportation and treatment of sewerage is essential to maintain the growth of modern cities in the UAE. Some coverage of septic systems and storm water collection are included in the course.

CREDITS: 3.00

### **ECV 3023 - QUANTITY SURVEYING AND ESTIMATING**

Examines project cost measurement and monitoring relative to the client, the consultant, and the contractor. Emphasis is placed on the roles of the quantity surveyor and estimator with respect to estimation and measurement at all stages throughout the project. The course also examines the various constraints placed on the project in order to conform to the client's planned project expenditure, and the role of the contractor's project management team in estimating, monitoring and controlling costs, from the tender phase to completion.

CREDITS: 3.00

### **ECV 3033 - STRUCTURAL ANALYSIS**

Includes the basics of structural analysis for both

determinate and indeterminate structures. The material covers the principles and applications of structural analysis for indeterminate structures as a blend of classical concepts and current computer techniques. The main topics are the determination of reactions and internal forces for beams, frames and arches as well as the calculation of deflection for beams and trusses. There are relevant laboratory experiments to verify the theoretical calculations.

CREDITS: 3.00

### **ECV 3053 - WATER RESOURCES AND SUPPLY**

This course is an introduction to water supply technology as a branch of municipal engineering. The course provides a comprehensive understanding of municipal water and processing and water supply distribution. Emphasis will be placed on the chemical and biological science applied to water technology, design of internal and main water supply networks, drinking water quality, municipal water supply requirements, processing of water and water supply systems in the UAE.

CREDITS: 3.00

### **ECV 3063 - CONCRETE DESIGN**

Introduces the student to the properties and design principles of reinforced concrete structural elements. The Euro codes and the British Standards Code of Practice BS 8110 are the basic codes of reference for all the design and detailing work in this course. This Code is predominantly used in the UAE. The course includes the properties of structural concrete and the influence of each of its constituents on the performance of the final product.

CREDITS: 3.00

### **ECV 3073 - CIVIL ENGINEERING CONSTRUCTION**

Introduces different topics related to civil engineering construction; e.g. common types of formwork, steel and precast concrete frames and causes of deterioration in concrete structures. The course materials reflect local, regional and international building standards and practices.

CREDITS: 3.00

### **ECV 3133 - REINFORCED CONCRETE DESIGN AND DETAILING**

This course introduces the student to the properties and design principles of reinforced concrete structural elements.

CREDITS: 3.00

### **ECV 3143 - QUANTITY SURVEYING AND ESTIMATING**

Examines project costs relative to the client, the consultant and the contractor. Emphasis is placed on the roles of the quantity surveyor and estimator with respect to estimation and measurement at various stages throughout the project. The course also examines the various constraints placed on the project in order to conform to the client's planned project expenditure, and the role of the contractor's project management team in estimating, monitoring and controlling costs, from the tender phase to completion.

CREDITS: 3.00

### **ECV 3193 - WASTE WATER ENGINEERING**

Introduces the topics of wastewater technology, sewer design and construction.

CREDITS: 3.00

### **ECV 3243 - WATER RESOURCES AND SUPPLY ENGINEERING**

This course is an introduction to water supply technology as a branch of municipal engineering.

CREDITS: 3.00

### **ECV 3263 - STEEL DESIGN**

Explores topics such as moment connections, beam-column members and lateral frames for steel structures. The course further incorporates basic steel design into the overall analysis and design of a small industrial building. An introduction of the analysis and design of steel bridges will be presented.

CREDITS: 3.00

### **ECV 4002 - CIVIL PROJECT I**

This final year course requires the formation of a team to propose, plan and design a civil engineering project. The student team is totally responsible for the completion of the project milestones and course objectives while working under the mentorship of a faculty or industry engineer. The team is evaluated on its ability to coordinate efforts to propose the project design criteria, components, resources, implementation schedule, and estimated cost.

CREDITS: 2.00

### **ECV 4022 - CIVIL PROJECT II**

This final year course consists of the implementation, evaluation, and analysis of a civil engineering design project. Though guided by faculty, the student team is

primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organisational, communication, and interpersonal skills by the student team. Accurate analysis, implementation, documentation, and presentation skills form the basis for assessment.

CREDITS: 2.00

### **ECV 4053 - ENVIRONMENTAL ENGINEERING**

Discusses the fundamental principles in environmental engineering as an interdisciplinary science. The course covers all the naturally occurring environmental phenomena, industry and human induced compounds and micro-organisms and the changes and imbalances that occur in the environment.

CREDITS: 3.00

### **ECV 4803 - CONCRETE DESIGN II**

Gives the students an understanding of typical design procedures, construction methods and detailing of reinforced concrete elements and structures as a whole. The course will cover basic design procedures and detailing of footings, pile foundations, walls, shear walls, columns, beams, and slabs for reinforced concrete buildings.

CREDITS: 3.00

### **ECV 4813 - GIS APPLICATIONS IN CIVIL ENGINEERING**

This course enables students to define the basic concepts and types of Geographic Information Systems (GIS), collect and analyse data, and perform selected spatial operations. It introduces the five main components and functions of a GIS while differentiating between vector and raster methods for data capture. Students will be introduced to various GIS applications in civil engineering using appropriate software.

CREDITS: 3.00

### **ECV 4903 - ROAD DESIGN AND CONSTRUCTION**

Introduces pavement types and the factors that impact their design with emphasis on equipment, materials and practices associated with the construction of flexible and rigid pavements. Maintenance methods including evaluation and rehabilitation are addressed. Environmental impacts of construction and maintenance topics are included.

CREDITS: 3.00

**ECV 4913 - STEEL DESIGN II**

This is the second structural steel course in the civil engineering technology programme. It is part of a string of seven structural engineering courses. This course covers topics such as structural moment steel connections, beam-column members, continuous steel beams and lateral steel frames. The course further incorporates basic steel design into the overall analysis and design of small industrial buildings. An introduction of the analysis and design of steel bridges will be presented.

CREDITS: 3.00

**ECV 4923 - CONSTRUCTION CONTRACT MANAGEMENT**

Gives an overview of principles and procedures involved in effective administration and management of engineering contracts, from tender to final completion. Topics covered include: legal implications of contract documents; major issues in pricing and bidding; preparation of tenders and work breakdown for bidding; reading tender documents and estimating the cost of work; initiating, negotiating and signing agreements; coordinating with General Services as per UAE procedures.

CREDITS: 3.00

**ECV 4963 - SOLID WASTE MANAGEMENT**

This course gives the opportunity for the student to examine the different sources of solid waste management. The important aspects of waste control legislation, waste reduction programmes and waste recycling are investigated and strategies developed to protect the local and global environment. Finally the handling and disposal of hazardous waste is introduced.

CREDITS: 3.00

**ECV 4973 - RESEARCH METHODS IN ENGINEERING**

Designed to introduce students to the techniques and methods of research in engineering, using qualitative and quantitative methods for decision making. The course addresses a variety of research methodologies, data collection and analysis, development of theory and research verification and validation through the application of statistical analysis in research.

CREDITS: 3.00

**ECV 4993 - TRANSPORTATION PLANNING**

Introduces the processes involved in facilitating the

planning for future transportation facilities. Factors to be considered in the planning of new transportation projects include traffic flow, safety, energy consumption, travel time, accessibility, socio-economic and environmental impacts.

CREDITS: 3.00

**ECVL N100 - APPLIED DRAFTING AND CAD: CIVIL**

Develops skills to use CAD drafting as a means of communication in the civil and construction industry. The course includes the skills required to use advanced features of AutoCAD and to create typical civil engineering or architectural drawings. Drawings developed include floor plans, elevations, sections, profiles, detail drawings and other civil related CAD drawings.

CREDITS: 4.00

**ECVL N101 - CONSTRUCTION MATERIALS**

Introduces the student to many of the materials used in the construction industry. The fundamental knowledge and skill gained in this course will serve as the basis for the students' design and field decisions in subsequent courses. The course covers materials used in the construction of buildings, pavements and infrastructure. There is a strong practical component as students will perform a number of experiments in the laboratory and workshop.

CREDITS: 4.00

**ECVL N200 - SOIL MECHANICS**

Soil mechanics is defined as the application of the laws and principles of mechanics and hydraulics to engineering problems dealing with soil as an engineering material.

CREDITS: 4.00

**ECVL N201 - ENGINEERING MECHANICS I**

Covers basic principles of mechanics including the composition and resolution of forces; how they combine to keep a body in equilibrium, and their effect on the stability of the structures on which they act such as simply supported beams, cantilevers, trusses and cables.

CREDITS: 4.00

**ECVL N202 - MECHANICS OF FLUIDS AND HYDRAULICS**

Introduces students to the fundamental principles of

fluid mechanics and hydraulics with applications to practically applied problems. Primary emphasis will be placed on basic topics including fluid properties, measurements of flow and pressure, hydrostatics, and hydrodynamics forces on submerged surfaces, floatation and buoyancy theory.

CREDITS: 4.00

### **ECVL N203 - STRENGTH OF MATERIALS**

Presents the concepts necessary for the design of structural elements including material selection and component design.

CREDITS: 4.00

### **ECVL N204 - FOUNDATION ENGINEERING**

This course is intended to extend the core knowledge and understanding of Soil Mechanics that were developed in course ECV 2003.

CREDITS: 4.00

### **ECVL N205 - SITE SURVEYING**

A fundamental course that provides students with appropriate theoretical and practical surveying skills that can be utilised in civil engineering related work.

CREDITS: 4.00

### **ECVL N207 - CHEMISTRY FOR CIVIL ENGINEERING**

An introductory course in general inorganic chemistry followed by topics specifically related to civil engineering.

CREDITS: 4.00

### **ECVL N210 - INTRODUCTION TO TRANSPORTATION**

Introduces the student to the field of transportation engineering. It provides an overview of transportation systems characteristics; illustrates the basic interdependence between land use and transportation; and describes how transportation users interact with vehicles and the transportation facilities they use. For practicality, the course focuses on highway operations, examines the fundamental uninterrupted traffic flow equation and involves the evaluation of operational performance for a segment of highway.

CREDITS: 4.00

### **ECVL N300 - PROJECT: CIVIL ENGINEERING TECHNOLOGY**

It is important that civil engineering students have some experience in the development, analysis, design, and management of engineering projects. Describing,

evaluating, solving, and managing `real` engineering problems are essential skills needed by the engineer to contribute to an always changing engineering market place. The ability to document and communicate the intricate details of the project are important tasks for the engineer of tomorrow. The integration of various fundamental engineering disciplines and skills are the main focus of this course.

CREDITS: 4.00

### **ECVL N301 - WASTE WATER ENGINEERING**

This course introduces the topics of wastewater technology, sewer design and construction.

CREDITS: 4.00

### **ECVL N302 - QUANTITY SURVEYING AND ESTIMATING**

Examines project costs relative to the client, the consultant and the contractor.

CREDITS: 4.00

### **ECVL N303 - STRUCTURAL ANALYSIS I**

Includes the basics of structural analysis for both determinate and indeterminate structures.

CREDITS: 4.00

### **ECVL N305 - WATER RESOURCES AND SUPPLY**

An introduction to water supply technology as a branch of municipal engineering.

CREDITS: 4.00

### **ECVL N306 - STRUCTURAL DESIGN I**

Introduces the student to the properties and design principles of reinforced concrete structural elements.

CREDITS: 4.00

### **ECVL N307 - CIVIL ENGINEERING CONSTRUCTION**

Covers the basic works associated with earthmoving, compaction and excavation with emphasis on the current processes and techniques used in such operations.

CREDITS: 4.00

### **ECVL N308 - HIGHWAY ENGINEERING**

This course introduces the topics of design and construction of highways.

CREDITS: 4.00

### **ECVL N309 - LAND TRANSPORTATION**

Integrated, multi-modal transport is essential for the

movement of goods and people in urban and regional areas. Students will be introduced to the demand for transportation, and the way in which government and the private sector provide the necessary transport infrastructure and services. Consideration will also be given to the roles of road and rail transport, features of public transport systems and services including their technological characteristics and operation, the role of non-motorised transport, factors influencing the engineering design of land transport infrastructure, and freight transport logistics.

CREDITS: 4.00

### **ECVL N310 - HIGHWAY DESIGN**

Studies geometric design practices and construction procedures of highways with acceptable levels of performance in terms of safety, operation, economics and environmental concerns. Students address quality control procedures used in highway construction and maintenance. This course includes typical quality control tests, procedures, analyses and applications required to meet the regulatory standards throughout the construction phase. Aspects of the highway asset management system and pavement management systems at the RTA are central components of this course. Students gain first-hand experience with the tools, software and processes of asset management.

CREDITS: 4.00

### **ECVL N312 - WATER TRANSPORT**

Introduces the student to the field of waterway transportation engineering. It provides an overview of the engineering and architectural concepts associated with the field.

CREDITS: 4.00

### **ECVL N313 - AIR TRANSPORTATION**

Air transportation continues to be one of the largest and fastest growing industries worldwide. The course deals with the main roles and responsibilities of various participants in the aviation sector and their contribution to the global economy.

CREDITS: 4.00

### **ECVL N350 - PROJECT: CIVIL ENGINEERING TECHNOLOGY**

It is important that civil engineering students have some experience in the development, analysis, design, and management of engineering projects. Describing, evaluating, solving, and managing 'real' engineering

problems are essential skills needed by the engineer to contribute to an always changing engineering market place. The ability to document and communicate the intricate details of the project are important tasks for the engineer of tomorrow. The integration of various fundamental engineering disciplines and skills are the main focus of this course.

CREDITS: 8.00

### **ECVL N400 - PROJECT**

Includes the design, implementation, evaluation, analysis and design of a civil engineering project. The student project team is responsible for the completion of the project milestones and course learning outcomes. The course requires the integration and application of the technological, organisational, communication and interpersonal skills by the student team. Project management, estimating, analysis, design, safe implementation, documentation and presentation skills form the basis for assessment.

CREDITS: 8.00

### **ECVL N401 - ROAD DESIGN AND CONSTRUCTION**

Introduces pavement types and the factors that effect the design and construction of highways and roads. Maintenance methods are also covered. The construction of cut and fill earth structures and the environmental impacts of road design and construction are discussed.

CREDITS: 4.00

### **ECVL N402 - STRUCTURAL DESIGN II**

Explores topics such as moment connections, beam-column members and lateral frames for steel structures. The course further incorporates basic steel design into the overall analysis and design of small industrial building. An introduction of the analysis and design of steel bridges will be presented.

CREDITS: 4.00

### **ECVL N403 - TRANSPORTATION PLANNING**

Introduces the processes involved in facilitating the planning for future transportation facilities. Factors to be considered in the planning of new transportation projects include traffic flow, safety, energy consumption, travel time, accessibility, socio-economic and environmental impacts.

CREDITS: 4.00

### **ECVL N404 - CONSTRUCTION CONTRACT MANAGEMENT**

This course aims to give an overview of principles and procedures involved in effective administration and management of engineering contracts, from tender to final completion.

CREDITS: 4.00

### **ECVL N405 - ENVIRONMENTAL ENGINEERING**

Discusses fundamental principles in environmental engineering as an interdisciplinary science. The course covers all the naturally occurring environmental phenomena, industry and human induced compounds and microorganisms and the changes and imbalances that occur in the environment.

CREDITS: 4.00

### **ECVL N406 - CONCRETE DESIGN AND DETAILING II**

Gives the students an understanding of typical design procedures, construction methods and detailing of reinforced concrete elements and structures as a whole. The course will cover basic design procedures and detailing of footings, pile foundations, walls, shear walls, columns, beams, and slabs for reinforced concrete buildings.

CREDITS: 4.00

### **ECVL N407 - COASTAL ENGINEERING**

Introduces all aspects of modern coastal engineering. Environmental conditions and concerns are also addressed. Safety issues and computer modelling techniques will be covered to a limited degree.

CREDITS: 4.00

### **ECVL N409 - INTERMODAL TRANSPORTATION**

Examines worldwide commercial freight transportation systems, with an emphasis on international intermodal surface transportation. Modal/intermodal economic and operating characteristics will be surveyed, along with cost, pricing, and regulation of transportation services.

CREDITS: 4.00

### **ECVL N410 - TRANSPORT PLANNING, APPRAISAL AND PROJECT DELIVERY**

This subject explores the theory and practice of the process whereby transport initiatives are identified, assessed and prepared so that they are ready to gain approval for implementation.

CREDITS: 4.00

### **ECVL N411 - COMPUTER APPLICATIONS IN TRANSPORT ENGINEERING**

An introduction to the key concepts and issues related to the use of computers and software in transport engineering.

CREDITS: 4.00

### **ECVL N412 - LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

This course will introduce terms, concepts and techniques that underlie logistics and supply chain management.

CREDITS: 4.00

### **ECVL N413 - SURFACE TRANSPORT - TRAFFIC ENGINEERING**

Provides students with an overview of the fundamentals of traffic engineering, with emphasis on data analysis, modelling, traffic control devices and field studies.

CREDITS: 4.00

### **ECVL N414 - SURFACE TRANSPORT - CONTRACT MANAGEMENT**

Introduces key concepts and issues related to the tendering, assessment and management of contracts for the construction and maintenance of land transport infrastructure using various forms of project delivery.

CREDITS: 4.00

### **ECVL N415 - WATER TRANSPORT - COASTAL AND MARITIME INFRASTRUCTURE ENGINEERING**

Links Harbour, Coastal and Waterways Engineering concepts from subjects such as Hydrographic and Bathymetric. Surveys, Design and Construction of Coastal and Port Structures, Seaport Infrastructure and Handling Equipment and Coastal and Inland Waterways Erosion and Dredging infrastructures maintenance.

CREDITS: 4.00

### **ECVL N416 - WATER TRANSPORT - NAVAL ARCHITECTURE**

As a future regulator, the student will have to develop skills that support an ability to lay out the rules, approve the designs and actually evaluate infringements for impact and so on.

CREDITS: 4.00

### **ECVL N417 - AIRPORT PLANNING**

On completion of this course participants will understand the airport master planning process and

be familiar with the regulatory requirements for aerodrome certification.

CREDITS: 4.00

### **ECVL N420 - RESEARCH METHODS IN ENGINEERING**

This course allows students to gain experience, practice and knowledge of research methodology to be applied in a variety of engineering disciplines.

CREDITS: 4.00

### **ECVL N421 - GIS APPLICATIONS IN CIVIL ENGINEERING**

Enables students to define the basic concepts and types of Geographic Information Systems (GIS), collect and analyse data, and perform selected spatial operations.

CREDITS: 4.00

### **ECVL N422 - WASTE MANAGEMENT**

This course gives the opportunity for the student to examine the different sources of solid waste management. The important aspects of waste control legislation, waste reduction programmes and waste recycling are investigated and strategies developed to protect the local and global environment. Finally the handling and disposal of hazardous waste is introduced.

CREDITS: 4.00

### **EDT 2003 - TECHNOLOGIES FOR LEARNING I**

Introduces students to current educational theory and practice about learning technologies, and how they can be used to enhance teaching and learning in schools, tertiary institutions and other learning environments such as the workplace.

CREDITS: 3.00

### **EDT 2203 - INFORMATION, COMMUNICATION AND MEDIA STUDIES**

Media literacy is an essential component of global citizenship in today's mediated world. Given the impact of the media on people's lives, the media can also serve as a highly motivating resource for teaching.

CREDITS: 3.00

### **EDT 2503 - TECHNOLOGIES FOR LEARNING II**

Students build upon, and extend their knowledge, skills and understanding of current educational theory and practice about computer-based learning technologies that were introduced and developed in Technologies for Learning I.

CREDITS: 3.00

### **EDT 2703 - DISTANCE AND ONLINE EDUCATION**

Develops students' understanding of current educational theory and practice about learning technologies in distance and online education.

CREDITS: 3.00

### **EDT 3003 - COMPUTER PLATFORMS**

Covers the basics of network operating systems, network operating system components, operating system installation, and device drivers and configuration. Students learn how to install and configure an operating system in a work group and domain environment. Students also learn the basics of desktop, laptop, mobile and network hardware, system administration, resource permissions, and become familiar with planning, creating and managing user and group accounts.

CREDITS: 3.00

### **EDT 3203 - COMPUTER-BASED TRAINING**

Introduces the students to the skills needed to develop computer and web-based training courseware. Students will be introduced to computer and web based instructional teaching and learning theories and strategies. The students gain an understanding of the basic elements of computer and web-based system courseware and develop skills in designing and delivering computer-based training.

CREDITS: 3.00

### **EDT 3503 - WEB DESIGN FOR LEARNING**

Students use a current/contemporary web development technology, with a focus on designing and building dynamic, database driven web sites appropriate for use in educational settings. This course deals with the role of Internet technology in present day educational settings, with particular attention to the development of Inter/Intranet applications.

CREDITS: 3.00

### **EDT 3703 - MULTIMEDIA AUTHORIZING FOR LEARNING**

In this course students learn, demonstrate and use the principles, best practices and techniques of creating successful multimedia applications. They develop design and specifications for a multimedia application project for an educational context, including elements like storyboards, flow-models and mock-ups.

CREDITS: 3.00

### **EDU 1003 - INTRODUCTION TO THEORIES OF LEARNING 1A**

This course introduces students wishing to join the teaching profession to a broad base from which to understand the theories of child development and how they influence approaches to teaching and learning. It explores the development of children from birth to primary school age by investigating the domains of cognitive, linguistic, motor, social, artistic and emotional development.

CREDITS: 3.00

### **EDU 1203 - LEARNING TO TEACH IN THE CONTEMPORARY UAE 1A**

Students will develop an initial understanding of the broad role of the teacher/educator, the student and the culture of the classroom/learning environment in an introductory and non-threatening manner. This will be achieved either by direct experience (observation) in relevant institutions or through viewing videos of best practice, and through input sessions at college during the semester.

CREDITS: 3.00

### **EDU 1302 - LEARNING TECHNOLOGIES FOR THE CLASSROOM**

This course is an introductory level course to introduce students to computer hardware, software, and web-based learning technologies that can be used in teaching and learning. This foundation course introduces the fundamental elements of ICT for learning environments and its underlying pedagogy, educational issues relating to the use of technology in the classroom, the significance of technologies, their impact on society, and how society has changed as a result of them.

CREDITS: 2.00

### **EDU 1503 - INTRODUCTION TO THEORIES OF LEARNING 1B**

Briefly revises theories of child development and how they influence approaches to teaching and learning that were introduced in semester one. Students explore the development of the older child by investigating the domains of cognitive, linguistic, motor, social, artistic and emotional development and their influence on motivation and learner behaviour.

CREDITS: 3.00

### **EDU 1703 - LEARNING TO TEACH IN THE CONTEMPORARY UAE 1B**

Students will continue to develop an understanding of the broad role of the teacher/educator, students

and the culture of the learning environment. This is achieved by direct experience (observation) in relevant institutions, viewing videos of best practice, and input sessions at college. The themes of the course closely relate to educational and practicum subjects. Students explore a range of methodologies including Gardner's theory of multiple intelligences, Bloom's taxonomy and other contemporary theories, with students critically reflecting on their application.

CREDITS: 3.00

### **EDU 1802 - INTRODUCTION TO MATH AND SCIENCE IN THE CLASSROOM**

In this course, students focus on the process of inquiry. They will apply naturalistic, informal and structured concepts through activities that support the development of a range of fundamental mathematical and scientific concepts and skills. Links are made to theories learned in EDU1003, EDU1203, EDU1503 and EDU1703.

CREDITS: 2.00

### **EDU 2302 - LANGUAGE AND DEVELOPMENT: SLA PRINCIPLES AND PEDAGOGY**

Builds upon the knowledge and awareness of both how language impacts learning and how young children acquire and learn in a second or additional language. Bilingualism and multilingualism and contrasting theories of first and second language acquisition including the nature of interlanguage and universal grammar are analysed and evaluated.

CREDITS: 2.00

### **EDU 2802 - TEACHING LEARNERS WITH SPECIAL NEEDS**

Provides students with a basic understanding of the current philosophies, structure, levels of support, methodologies and assistive technologies required to educate students with special needs in different learning environments.

CREDITS: 2.00

### **EDU 4003 - RESEARCH METHODS AND REFLECTIVE PRACTICE IN EDUCATION**

This subject introduces students to basic educational research issues, enabling them to apply this knowledge to the creation of an authentic preliminary investigation into a self-selected researchable issue that is implemented in the second semester (EDUY N450) to form a complete action research project.

CREDITS: 3.00

### **EDU 4103 - MANAGING INNOVATION AND CHANGE IN EDUCATION**

In this course students develop an awareness of the overall organisational and management structure of the UAE government education system as it impacts on the early childhood/school education sector, relating this to relevant theory.

CREDITS: 3.00

### **EDU 4203 - CURRICULUM DESIGN**

Examines a variety of curricula and curriculum documents to develop an understanding of the various aspects and the dynamic nature of curriculum.

CREDITS: 3.00

### **EDU 4503 - RESEARCH PROJECT**

This capstone course offer learners the opportunity to implement the authentic action research proposal designed in EDUY N400 culminating in a complete action research project.

CREDITS: 3.00

### **EDU 4603 - EMPLOYMENT PREPARATION FOR NEW UAE EDUCATORS**

There are different and varying field requirements that aspiring teachers are required to meet in order to be considered for employment, depending on the UAE education agency involved, (e.g. IELTS band, ICDL, Praxis exam, etc.). This course assists students in addressing such requirements.

CREDITS: 3.00

### **EDUC N155 - SOCIAL STUDIES**

This course aims to engage students in investigating local and global issues while developing independent learning skills. ICT skills will be refined and developed. The teaching/learning process will focus on collaboration, communication and participation in researching issues in society. The students will observe and analyse a range of strategies and materials overtly modelled by the teacher and engage in peer teaching and evaluation. They will develop and maintain an on-going portfolio containing an Issues Log with suggestions for classroom application. Students will be encouraged to reflect on the interconnections between young learners and the world around them.

CREDITS: 2.00

### **EDUC N200 - LEARNING AND TEACHING**

Students examine significant international models of

learning and teaching as well as examining approaches to the teaching of Speaking, Listening and Vocabulary to school-age EFL learners. Microteaching and observation of microteaching, with a focus on accurate target language will support students' ability to evaluate these approaches.

CREDITS: 7.00

### **EDUC N205 - SPECIAL NEEDS IN EDUCATION**

This subject is designed to provide students with a basic understanding of the current philosophies, structure, levels of support, methodologies and assistive technologies required to educate students with special needs in different learning environments. An overview will be provided of the learning needs of gifted learners and learners with hearing impairment, visual impairment, language impairment, intellectual disabilities and socio-emotional disabilities.

CREDITS: 1.00

### **EDUC N210 - TECHNOLOGIES FOR LEARNING 1**

Introduces students to current educational theory and practice about learning technologies, and how they can be used to enhance teaching and learning in schools, tertiary institutions and other learning environments such as the workplace. Students explore the student-centred learning paradigm and are introduced to active learning strategies that are part of current best practice in education.

CREDITS: 7.00

### **EDUC N218 - ENGLISH LANGUAGE STUDIES 2A**

Further develops students' general and academic English language skills as well as supporting and scaffolding student learning in the B.Ed. Programme (B.Ed. ELTS and B.Ed. Tech). It increases student knowledge about language as well as developing their personal language skills in English by integrating the study about language with personal language development.

CREDITS: 13.00

### **EDUC N249 - TEACHING PRACTICE PREPARATION AND REVIEW 2A**

The practicum strand within the Bachelor of Education allows practicum participants to gradually take on greater responsibilities, through carefully planned and guided educational experiences. This semester's course allows students to plan, implement and evaluate individual teaching or training activities. This is achieved through direct practicum experience as well as sessions at the college. Practicum participants

continue to observe learners, teachers, classrooms and other appropriate learning environments.

CREDITS: 5.00

### **EDUC N250 - WORKING WITH LEARNERS**

Focuses on the teaching of reading and vocabulary. Throughout the course, and integrated with English Language Studies EDUC 268, students engage in an on-going extensive and intensive reading programme in order to develop their own reading fluency and skills. Student teachers will develop their understanding of what the skill of reading entails and how best to develop the skill of reading in their students at the different age levels.

CREDITS: 7.00

### **EDUC N255 - CHILD AND ADOLESCENT LITERATURE**

Develops students' awareness of the value of children's literature as a tool for language teaching. Students will be given an opportunity to explore, evaluate, and utilise a variety of children's literature. The course will include an exploration of some theoretical foundations for the use of literature in the classroom, and will include a strong practical component where students will work with children's stories to develop a bank of classroom applications for teaching English to young learners. Students should be encouraged to publish and share resources and materials developed in this course for use by students across the system on teaching practice in schools.

CREDITS: 3.00

### **EDUC N260 - TECHNOLOGIES FOR LEARNING II**

Students build upon and extend their knowledge, skills and understanding of current educational theory and practice about computer-based learning technologies that were introduced and developed in Technologies for Learning I. Students continue to explore the student-centred learning paradigm and apply active learning strategies in the creation of an e-learning resource for a specified learning community and an IT Plan for a selected blended learning environment.

CREDITS: 7.00

### **EDUC N265 - DISTANCE AND ONLINE EDUCATION**

This course develops students' understanding of current educational theory and practice about learning technologies in distance and online education. Students evaluate the usefulness of teaching and learning

resources used in distance and online education practices using a range of evaluation tools against specific educational and pedagogical criteria.

CREDITS: 3.00

### **EDUC N268 - ENGLISH LANGUAGE STUDIES 2B**

This course aims to further students' knowledge of language and about language. Students will develop their general academic language skills. Students will also examine the notion of genre, i.e. a particular form of language used for particular purposes and contexts, and examine key genres in their major field of study (B.Ed. ELTS: English language teaching; B.Ed. Ed Tech: an educational technologies context).

CREDITS: 13.00

### **EDUC N299 - TEACHING PRACTICE PREPARATION AND REVIEW 2B**

Requires students to plan, implement and evaluate individual teaching sessions appropriate for their major (English Language Teaching/Educational Technology) in private, English medium settings. Sessions at college prepare students for this placement in schools; with opportunities to discuss and reflect throughout the course.

CREDITS: 5.00

### **EDUC N300 - WORKING WITH LEARNERS II**

Enables students to build upon their knowledge of literacy development from ELED 250 by examining the teaching and learning of writing and grammar, and considering how to plan for literacy and grammar in the second language curriculum. Students start with an examination of the complex skills involved in writing, before moving on to examine a range of approaches and strategies that can be used to teach writing.

CREDITS: 13.00

### **EDUC N305 - MEDIA STUDIES**

The media have a significant impact on people's lives. The media not only comment on and reflect the culture and events of society, but also to some degree create and sustain the values of the society within which they operate - an increasingly global society/audience. Hence a degree of media literacy is an essential component of 'global citizenship' in today's mediated world.

CREDITS: 3.00

### **EDUC N318 - ENGLISH LANGUAGE STUDIES 3A**

Knowledge of the language is an essential tool for English language teachers. This course will raise

awareness of grammar, sensitise students to the language they are teaching and build on their existing knowledge. Students will analyse grammatical items in terms of form and use with particular reference to school texts, with a view to a clearer understanding.

CREDITS: 7.00

### **EDUC N320 - WEB DESIGN**

Deals with the roles of Internet technology in present day businesses, with particular attention to the development of Inter/Intra-net applications. Students gain skills in gathering information, analysing it and using the Internet. The development of an e-commerce web site lays the foundations for building other Internet applications.

CREDITS: 7.00

### **EDUC N349 - TEACHING PRACTICE PREPARATION AND REVIEW 3A**

This course is delivered throughout the whole semester, during which student teachers spend a four-week block in a school/educational setting. Student teachers will be given ample time to effectively prepare for and reflect on their school experience.

CREDITS: 5.00

### **EDUC N350 - CURRICULUM PLANNING AND SYLLABUS DESIGN II**

In order to highlight the integral links between Curriculum, Assessment and Evaluation, students will begin by examining the recurring cycle of: 1. Planning for learning; 2. Implementing curriculum; 3. Informal assessment: feedback, correction and record keeping; 4. Formal assessment and; 5. Evaluation.

CREDITS: 13.00

### **EDUC N355 - ICT AND DESIGN**

Information and communication technologies play an increasingly significant part in people's lives, work and indeed, in schools. However, it has often been assumed in education in general and in schools in particular that students learn from information technologies - that is, students learn from watching instructional films and television, responding to programmed instruction or computer assisted instruction frames, just as they learn by listening to a lecture from the teacher.

CREDITS: 3.00

### **EDUC N368 - ENGLISH LANGUAGE STUDIES 3B**

In this course, students will formalise and extend their orientation to teaching, particularly with regard to

second language acquisition and issues of language and culture. Thus, with their prospective careers as informed and responsible professionals in mind, students will analyse issues related to English as a global language and how these issues relate specifically to the UAE environment.

CREDITS: 7.00

### **EDUC N370 - SOFTWARE DESIGN**

Prepares students for the development of desktop software applications suitable for education settings using object-oriented programming principles. Using visual design tools, students learn to design desktop applications by identifying classes of objects, their domain relevant attributes and methods, as well as relations among the classes.

CREDITS: 7.00

### **EDUC N399 - TEACHING PRACTICE PREPARATION AND REVIEW 3B**

This course is delivered across the whole semester, during which student teachers spend a four-week block in one school/educational setting. Student teacher will work in schools in Weeks 10, 11, 12 and 13 of the semester. Student teachers will be expected to plan, teach and evaluate lessons with greater autonomy.

CREDITS: 5.00

### **EDUC N400 - RESEARCH METHODS AND REFLECTIVE PRACTICE IN EDUCATION**

This subject will introduce learners to fundamental research issues and enable them to apply this knowledge to the creation of an authentic preliminary investigation into a researchable issue that will be implemented in the second semester (EDUC N450) as a complete action research project. Although the focus of this course will be on action research and a qualitative approach, an introductory understanding of key general research issues will give learners an appreciation of the varieties of choices that have to be made related to conducting classroom-based action research.

CREDITS: 16.00

### **EDUC N401 - THE BUSINESS ENVIRONMENT IN EDUCATION**

Designed to give Education students an awareness of the economic and business environment in which they will operate. The course develops an analytical approach to current issues in the UAE economy, concentrating on the education sector. Students will focus on fundamental business processes in the

management of an education/training provider.  
CREDITS: 4.00

### **EDUC N402 - RESEARCH METHODS IN EDUCATION**

Developing primary research skills. Learn how to conduct primary research and create data collection devices. Understanding the different paradigms e.g.: quantitative/ qualitative, Action Research/ Scientific Research/ Case Study research. Choosing the best research approach. This course will introduce learners to fundamental research issues and enable them to apply this knowledge to the creation of an authentic preliminary investigation / needs analysis conducted in EDUC N403 EdTech Practicum. The subsequent research project will be implemented in the second semester (EDUC N409 EdTech Internship) as a complete research project at the internship site.  
CREDITS: 5.00

### **EDUC N403 - EDUCATIONAL TECHNOLOGY PRACTICUM**

During this 10 day, on-site practicum students must identify, through consultation with faculty, a site for the internship conducted in EDUC N409 EdTech Internship which starts mid-semester. During the 10 days on-site the students must conduct a needs analysis and draft a research proposal for semester eight that involves the creation and implementation of a learning product. This draft research proposal is presented to the instructor. This course is informed by the research methodologies explored in EDUC N402 Research Methods in Education.  
CREDITS: 5.00

### **EDUC N404 - IMPLEMENTING IT IN EDUCATION**

Understanding and implementing Learning Management Systems (LMS) and Content Management Systems (CMS). Creating learning tools and products for the workplace.  
CREDITS: 5.00

### **EDUC N405 - MANAGING INNOVATION AND CHANGE IN EDUCATION**

Aims to develop an awareness of the overall organisational and management structure of the UAE government education system as it impacts on primary/secondary schools and to relate this broadly to relevant theory.  
CREDITS: 4.00

### **EDUC N406 - APPLIED LEARNING THEORIES**

Review and application of learning and evaluation theories in Education. Understanding how these theories inform pedagogical practices particularly with Information and Communications Technology (ICT).  
CREDITS: 5.00

### **EDUC N407 - INSTRUCTIONAL MEDIA DESIGN AND DEVELOPMENT**

Students are introduced to the fundamental concepts of visual print communication design and provided with opportunities to apply these concepts. For students not majoring in applied media, this course provides basic print production skills and allows them to interface more effectively with media professionals in work settings. Through discussion and production, students will learn creative and practical techniques to create visual artwork that can be used in a variety of media formats. Through project-based assignments, the course will encourage creative thinking and problem solving. Students will develop an understanding of the design process, including the development of concepts and visuals  
CREDITS: 5.00

### **EDUC N408 - EDUCATIONAL TECHNOLOGY RESEARCH PROJECT**

Part One: Build research writing skills including secondary research skills, referencing skills, analysis, interpretation of results and critical thinking. Understanding how to write good descriptive and argumentative research reports. Complete the final research proposal before the internship (EDUC N409 EdTech Internship). Must include a literature review and detailed research plan. Part Two: Writing and presenting a research report to a professional standard for the primary research carried out on the delivery of a product as part of the internship  
CREDITS: 10.00

### **EDUC N449 - TEACHING PRACTICE PREPARATION AND REVIEW 4A**

This course is delivered throughout the whole semester, during which student teachers spend six weeks in a government school. Student teachers will ideally return to the same school next semester for their Internship placement.  
CREDITS: 6.00

### **EDUC N450 - RESEARCH PROJECT**

This subject will offer learners the opportunity to

implement the authentic action research proposal designed in EDUC 400 culminating in a complete research project.

CREDITS: 10.00

### **EDUC N499 - INTERNSHIP**

Student teachers complete a ten week Internship at the government school ideally, where they completed their Teaching Practice in Semester One. Student teachers will spend 4 days a week at their school and return to college one day per week. A minimum of 40 days will be spent in one school.

CREDITS: 9.00

### **EEC 1003 - ELECTRIC CIRCUITS I**

Introduces students to DC linear circuit fundamentals which include appropriately scaled-units of basic quantities, Ohm's law, power dissipation, Kirchhoff's laws, linear circuit theorems, and network analyses of series, parallel, and series-parallel linear circuits.

CREDITS: 3.00

### **EEC 2003 - ELECTRIC CIRCUITS II**

This course introduces transient and steady state analyses of linear reactive circuits. Circuit simulation and practical laboratories are utilised to reinforce concepts.

CREDITS: 3.00

### **EEC 2013 - DIGITAL CIRCUITS**

Introduces fundamental concepts of digital systems, which include numbering systems, digital codes, logic symbols, Boolean expressions, logic minimisation techniques, analysis of combinational and sequential circuits, and classification of various integrated circuit (IC) families.

CREDITS: 3.00

### **EEC 2033 - MICROCONTROLLER SYSTEMS**

Introduces the operation and implementation of microcontrollers to practical applications. Common input and output modules are utilised in typical applications in a laboratory setting.

CREDITS: 3.00

### **EEC 2053 - ELECTRONICS I**

Introduction to the construction, operation, characteristics, and applications of common semiconductor devices such as the diode and transistor.

CREDITS: 3.00

### **EEC 2073 - ELECTRICAL ENGINEERING FUNDAMENTALS**

This course introduces fundamental concepts, components, and test equipment used with electrical circuits.

CREDITS: 3.00

### **EEC 3003 - INSTRUMENTATION AND CONTROL**

Studies the elements of common industrial processes for measurement and control of temperature, flow, pressure, position, level, rotation and torque.

CREDITS: 3.00

### **EEC 3013 - ELECTRONICS II**

Fundamentals of analysis and design of analogue amplifier circuits for various applications. Noise measurement and noise reduction techniques are introduced as appropriate.

CREDITS: 3.00

### **EEC 3043 - COMMUNICATION SYSTEMS**

Fundamentals of electronic communication systems. Topics include analogue modulation and demodulation techniques used in transmitters and receivers, respectively, and propagation characteristics of the transmission channel.

CREDITS: 3.00

### **EEC 3073 - SIGNALS AND SYSTEMS**

Introduces time and frequency domain representation of fundamental, continuous and discrete time signals and systems. Topics include fundamental signals and operations, system properties, representation of linear time-invariant systems, continuous-time Fourier analysis, Laplace transform analysis, discrete-time Fourier analysis and the application of the Z transform to analyse digital systems. MATLAB is used to simulate, implement, and analyse signals and systems accordingly.

CREDITS: 3.00

### **EEC 3103 - DIGITAL COMMUNICATIONS**

An introduction to the fundamental operational principles of digital communication systems. Topics include source coding, channel coding, and modulation techniques for wired and wireless digital communication systems. Application of wave propagation for satellite and fibre optic communications is presented.

CREDITS: 3.00

**EEC 3503 - EMBEDDED SYSTEM DESIGN**

Introduces the specification, design, development, and testing of real-time embedded microcontroller systems. Various architectures, real-time programming, and interface of common peripheral devices are presented. Concepts are introduced in a theoretical but descriptive form, which are reinforced with numerous sample applications. Students apply learned skills and techniques in a laboratory setting.

CREDITS: 3.00

**EEC 4013 - DATA COMMUNICATIONS AND NETWORKS**

An introduction to the fields of data transmission and networks, and covers concepts of digital and data communications. The topics covered by the course include : analogue to digital conversion, PCM, multiplexing, digital modulation techniques, cable networks, OSI model focusing on the Internet model and the TCP/IP protocol as an internet protocol.

CREDITS: 3.00

**EEC 4033 - PROGRAMMABLE DEVICES**

This course introduces programmable devices used to implementing digital circuits. The programmable logic device (PLD) and field-programmable gate array (FPGA) are presented as integrated circuits used to implement combinational and sequential logic circuits. Advantages, cost, programming and reliability are discussed for each type of device. Students use the FPGA prototyping boards to design, develop, synthesise, implement, test, and debug FPGA design project in accordance to a provided specification.

CREDITS: 3.00

**EEC 4043 - CONTROL SYSTEMS**

Studies the use of modelling and simulation to analyse, augment, and improve the performance of analogue single-input single-output LTI control systems for a variety of applications. Typical control systems are modelled by a transfer function and MATLAB Simulink is used to assess the system response and stability. Basic concepts of digital control systems are introduced.

CREDITS: 3.00

**EEC 4053 - VLSI DESIGN**

Introduces the design, simulation, and fabrication of CMOS very large scale integration (VLSI) digital circuits. The course presents the fabrication and layout of basic digital circuits (Inverter, NAND and NOR gates). The VLSI technology scaling at both the transistor and the

interconnects level is reviewed. The time delay and power dissipation are calculated, through simulation of basic digital circuits, such as full adders and n-bit multipliers. State of the art CAD tools are used for design in accordance to fabrication specifications and performance targets through simulation.

CREDITS: 3.00

**EEC 4943 - MOBILE COMMUNICATIONS**

This is an introductory course to the field of mobile cellular communications. Key concepts such as architecture, cell design, frequency reuse, handoff, interference and capacity and grade of service (GoS) are covered. Propagation radio channel which limits the performance of mobile communication is addressed. A study of digital modulation and its performance over fading channels is covered. Multiple access schemes such as TDMA, FDMA, CDMA and spread spectrum systems are presented. Wireless standards and future development are considered in detail.

CREDITS: 3.00

**EEC 4963 - DIGITAL SIGNAL PROCESSING**

A practical understanding of the fundamentals of digital signal processing. Specifically, the time, amplitude, and frequency effects of sampling and digitising continuous-time signals are presented. The Z-transform and signal flow diagrams are used in the design various FIR and IIR filter specifications. MATLAB is used to implement and analyse the frequency response.

CREDITS: 3.00

**EEC 4993 - INTELLIGENT SYSTEMS**

An introduction to artificial intelligence (AI) and related system techniques. Basic AI topics of knowledge representation, search techniques and reasoning are presented. Methods of approximate reasoning, fuzzy sets and systems, and biologically inspired systems such as neural networks and genetic algorithms are discussed and practically applied.

CREDITS: 3.00

**EEL 2003 - POWER ELECTRONICS**

This course introduces control, protection and commutation of power switching devices which includes the diode, thyristor, MOSFET, and IGBT. Various methods for converting electrical power for resistive and inductive loads are presented.

CREDITS: 3.00

### **EEL 2023 - POWER GENERATION AND TRANSMISSION**

Introduces power generation and transmission. The main components and characteristics of thermal power plants, the impact on the environment, and various transmission line models are presented.

CREDITS: 3.00

### **EEL 2043 - PRINCIPLES OF MACHINES AND POWER**

Fundamentals of common electrical machines used in industrial applications. Three-phase electrical circuits are introduced and the operation of electrical transformers is analysed.

CREDITS: 3.00

### **EEL 3003 - ELECTRICAL MACHINES**

Focuses on the construction, operation and testing of three-phase electrical machines. The physical concepts and basic laws governing electrical machines operation, such as Faraday's Law, Ampere-Biot-Savart's Law and Len's Law, are introduced and the principles underlying the performance of three-phase electrical machines are subsequently explained.

CREDITS: 3.00

### **EEL 3013 - ELECTRICAL POWER DISTRIBUTION**

This course introduces students to the fundamentals of electrical power distribution. It presents various distribution system layouts as well as the function of common distribution system substations and equipment. Students are introduced to design procedures and protection methods for power distribution systems of consumer installations.

CREDITS: 3.00

### **EEL 3023 - SYSTEM PROTECTION AND COORDINATION**

Introduces power system protection fundamentals, basic design requirements, and principles of operation for over-current, over-voltage, and under-voltage protection schemes for various power system components. Three-phase short circuit currents are analysed under various conditions are used as a basis to select circuit breaker types and ratings. Various protective devices, such as over current and earth leakage, differential, distance, over voltage, and under voltage relays, are applied as appropriate. Unit protection, back up protection, and protection coordination are introduced.

CREDITS: 3.00

### **EEL 3303 - ELECTRICAL TESTING AND MAINTENANCE**

An introduction to the preventive, corrective and opportunistic maintenance and testing of electrical equipment and subsystems including substations, circuit breakers, power transformers, and industrial machines. The Electrical Preventive Maintenance and Test (EPMT) programme is introduced and utilised, with consideration of electrical safety, switching practices and precautions taken with live circuits. Maintenance options with respect to economic considerations and cost-benefit analysis are also explored.

CREDITS: 3.00

### **EEL 4413 - POWER SYSTEMS ANALYSIS**

Equips students with the ability to analyse and solve problems commonly encountered in electrical power systems. The course includes a revision of complex power calculations, per-unit system of analysis, and electrical network calculations. Topics include system modelling, load flow analysis, symmetrical components theory, fault analysis, and stability problems.

CREDITS: 3.00

### **EEL 4803 - ELECTRICAL DRIVES**

Covers the theory and control methods for DC and AC electrical drive systems. Various methods for controlling the DC and AC motors are presented and mathematical models are used to implement linear control techniques. Various implementations and designs are modelled with the associated control mechanisms using a simulation package, such as MATLAB Simulink, in order to Investigate and test the overall DC and AC drive system performance under various operating conditions.

CREDITS: 3.00

### **EEL 4813 - ELECTRICAL MAINTENANCE OPERATIONS**

Introduces students to the preventive, corrective and opportunistic maintenance and testing of electrical equipment and subsystems including substations, circuit breakers, power transformers, and industrial machines. The Electrical Preventive Maintenance and Test (EPMT) programme is introduced and utilised, with consideration of electrical safety, switching practices and precautions taken with live circuits. Maintenance options with respect to economic considerations and cost-benefit analysis are also explored.

CREDITS: 3.00

**EEL 4903 - MACHINE CONTROL AND DRIVES**

Focuses on the analysis and design of electric motors and drive systems. Students are introduced to the fundamental physical electrical and mechanical properties of DC and AC motors as the basis for understanding the design and control strategies for motor drive systems. Mathematical modelling and software analysis packages are used extensively.  
CREDITS: 3.00

**EEL 4913 - RENEWABLE ENERGY SYSTEMS**

Introduces renewable energy sources and systems for conversion of various forms of energy into electrical power. Common energy sources such as wind, solar, nuclear, fuel cell, hydro, biomass and geothermal are described by operational principles, block diagrams and construction. This course also introduces factors affecting generation, efficiency and integration of power sources to the grid from wind and solar based energy systems.  
CREDITS: 3.00

**EELT N200 - ENERGY PRODUCTION AND TRANSMISSION**

This course introduces students to power generation and transmission. Students are introduced to the main components and characteristics of thermal power plants, including types of boilers, combustion, condenser cooling-water loop, and the impact on the environment.  
CREDITS: 4.00

**EELT N300 - ELECTRICAL POWER DISTRIBUTION**

An introduction to the basic concepts of electrical distribution systems and design methods and practices used in the electrical wiring of domestic and commercial buildings.  
CREDITS: 4.00

**EELT N301 - ELECTRICAL TESTING AND MAINTENANCE**

This course introduces students to the preventive, corrective and opportunistic maintenance and testing of electrical equipment and subsystems including substations, circuit breakers, power transformers, and industrial machines.  
CREDITS: 4.00

**EELT N302 - SYSTEM PROTECTION AND COORDINATION**

Students are introduced to power system protection

fundamentals, basic design requirements, and principles of operation of over-current/over-voltage/under-voltage protection schemes for various power system elements.  
CREDITS: 4.00

**EELT N304 - ELECTRIC MACHINES**

Develops the concepts on the construction, operation and testing of three-phase electrical machines.  
CREDITS: 4.00

**EELT N307 - PROJECT: ELECTRICAL**

Involves completing a project involving the integration and application of technological, organisational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.  
CREDITS: 4.00

**EELT N404 - POWER SYSTEMS ANALYSIS**

Equips students with the ability to analyse and solve problems commonly encountered in electric power systems.  
CREDITS: 4.00

**EELT N411 - POWER ELECTRONICS**

This course introduces control, protection and commutation of power switching devices which includes the diode, thyristor, MOSFET, and IGBT in rectifier, converter, and inverter circuits.  
CREDITS: 4.00

**EELT N412 - ELECTRICAL DRIVES**

Covers the theory and control methods for DC and AC electrical drive systems. Various methods for controlling the DC and AC motors are presented and mathematical models are used to implement linear control techniques.  
CREDITS: 4.00

**EELX N100 - ELECTRIC CIRCUITS I**

This course introduces students to DC linear circuit fundamentals which include appropriately scaled-units of basic quantities, Ohm's law, power dissipation, Kirchhoff's laws, linear circuit theorems, and network analyses of series, parallel, and series-parallel linear circuits.  
CREDITS: 4.00

**EELX N200 - ELECTRIC CIRCUITS II**

Introduces students to linear circuit fundamentals

which include appropriate scaled - units of reactive quantities, the transient response of RL, RC, and RLC circuits, analysis of steady - state reactive circuits, application of circuit theorems to compute AC power at a load, determination of the load for maximum power transfer, and the effect of passive, first order filters on sinusoidal signals.

CREDITS: 4.00

### **EELX N201 - DIGITAL ELECTRONICS**

Fundamental concepts of digital systems, which include numbering systems, digital codes, logic symbols, Boolean expressions, logic minimisation techniques, analysis of combinational and sequential circuits, and classification of various integrated circuit (IC) families, including TTL, CMOS and programmable gate arrays.

CREDITS: 4.00

### **EELX N202 - ENGINEERING PROGRAMMING**

Presents formal, problem solving methods applied to the solution of practical problems.

CREDITS: 4.00

### **EELX N203 - MICROCONTROLLER SYSTEMS**

The course introduces the hardware and software architecture of a microcontroller system.

CREDITS: 4.00

### **EELX N204 - PRINCIPLES OF MACHINES AND POWER**

Covers the fundamentals of common types of electrical machines used in real-life applications.

CREDITS: 4.00

### **EELX N205 - ANALOGUE ELECTRONIC DEVICES**

Explores construction, operation, characteristics, and applications of common semiconductor devices including the rectifier diode, Zener diode, light emitting diode (LED), photo diode, laser diode, opto-isolator, bipolar junction transistor (BJT), junction field effect transistor (JFET), metal-oxide semiconductor field effect transistor (MOSFET), and insulated-gate bipolar transistor (IGBT). Applications of these devices are introduced, which include rectifiers, power supplies, small signal amplifiers, and switching circuits.

CREDITS: 4.00

### **EELX N207 - ELECTRICAL ENGINEERING FUNDAMENTALS**

Covers the basic concepts and fundamental laws of

electrical circuit theory; analysis and applications of series, parallel and series-parallel resistive circuits; mesh and nodal analysis; circuit analysis techniques and network theorems; analysis of resistive circuits; characteristics of inductors and capacitors; analysis of RL, RC, and RLC circuits with DC excitation; basic computer-aided circuit analysis and design.

CREDITS: 4.00

### **EELX N300 - PROJECT: ELECTRONICS**

Involves completing a project involving the integration and application of technological, organisational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 4.00

### **EELX N301 - ANALOGUE CIRCUITS**

Focuses on fundamentals of analysis and design of analogue amplifier circuits for various applications.

CREDITS: 4.00

### **EELX N302 - INSTRUMENTATION AND CONTROL I**

Introduces the elements of common industrial processes for measurement and control of temperature, flow, level, and pressure.

CREDITS: 4.00

### **EELX N304 - TELECOMMUNICATIONS I**

This course introduces the channel physical properties and fundamental theory of modern electronic communication systems.

CREDITS: 4.00

### **EELX N305 - DATA TRANSMISSION AND NETWORKS**

An introduction to the fields of data transmission and networks, and covers concepts of digital and data communications.

CREDITS: 4.00

### **EELX N306 - INSTRUMENTATION AND CONTROL II**

This course introduces process control systems and related topics, which includes fundamental concepts, terminology, performance analysis, and control algorithms with emphasis on on/off, proportional, PI, PD and PID modes of closed loop control and related tuning methods.

CREDITS: 4.00

**EELX N307 - TELECOMMUNICATIONS II**

Builds upon the fundamental theory of electronic communication systems and data networks, topics included in this course are: data encoding, data transmission and multiplexing; satellite communications.  
CREDITS: 4.00

**EELX N402 - ADVANCED MICROPROCESSORS**

Introduces modern microprocessor architecture, programming and the concepts of microcontrollers and its applications. The interfacing techniques of intelligent programmable devices commonly used in microcontrollers are presented.  
CREDITS: 4.00

**EELX N403 - EMBEDDED SYSTEMS DESIGN**

This course introduces the specification, design, development, and testing of real-time embedded microcontroller systems.  
CREDITS: 4.00

**EELX N405 - POWER ELECTRONICS AND DRIVES**

Introduces the basic principles of power electronic drive systems for DC and AC motors including rectifying devices, rectifying circuits, converter operations, AC inverter circuits, frequency conversion, and voltage and torque control. Learning outcomes are reinforced through practical laboratories and projects.  
CREDITS: 4.00

**EELX N406 - INTELLIGENT SYSTEMS**

An introduction to artificial intelligence (AI) and the techniques used in intelligent systems. It covers the basic AI topics of knowledge representation, search techniques and reasoning.  
CREDITS: 4.00

**EELX N407 - SIGNALS AND SYSTEMS**

This course introduces time and frequency domain representation of fundamental, continuous and discrete time signals and systems. MATLAB is used to simulate, implement, and analyse signals and systems accordingly.  
CREDITS: 4.00

**EELX N425 - MOBILE COMMUNICATIONS**

An introductory course to the field of mobile cellular communications. Key concepts such as architecture, cell design, frequency reuse, handoff, interference and capacity and grade of service (GoS) are covered.  
CREDITS: 4.00

**EGEN N100 - ENGINEERING GRAPHICS**

Designed to develop the skills of reading, interpreting drawings and producing neat well proportioned free hand sketches in three dimensions and two dimensions. Communication of ideas and concepts in design should be of an engineering and architectural form.  
CREDITS: 4.00

**EGEN N101 - ENGINEERING MATHEMATICS I**

A first year mathematics course for students in Engineering Technology programmes. It provides the student with background mathematical skills essential for progression to the study of calculus and further engineering mathematics.  
CREDITS: 4.00

**EGEN N102 - ENGINEERING MEASUREMENTS AND WORKSHOP**

Gives the opportunity to learn basic hands-on skills, engineering measurements and underpinning knowledge in the electrical, electronics, mechanical and mechatronics engineering context.  
CREDITS: 4.00

**EGEN N104 - COLLEGE PHYSICS II**

This course is a continuation of introductory level physics that is essential for all engineering programmes.  
CREDITS: 4.00

**EGEN N201 - ENGINEERING MATHEMATICS II**

Students are introduced to calculus mathematics and associated applications. Specifically, students are introduced to the derivative, integration, and sample engineering problems which require application of the derivative and integration operation. The course includes differentiation of transcendental functions, such as, trigonometric, logarithmic, and exponential functions. Throughout the course, a mathematical analyses programme is used to enhance student understanding of the mathematical concepts.  
CREDITS: 4.00

**EGEN N202 - ENGINEERING MATHEMATICS III**

This is the second calculus course in the engineering technology programme. This course covers infinite series, Maclaurin's and Taylor's series as well as the Fourier series. It also includes partial derivatives, differential equations, Laplace transforms and hyperbolic functions. Throughout the course, a

mathematical analysis programme is used to enhance student understanding of the mathematical concepts.

CREDITS: 4.00

#### **EGEN N203 - INTRODUCTION TO ECONOMICS**

This course is a prequalifying Economic course introducing the fields of Macro and Micro economics and explaining their relevance to Transportation public policy and management.

CREDITS: 4.00

#### **EGEN N301 - ENGINEERING MATHEMATICS IV**

This course continues from year 2 Math courses to cover topics on Probability and Statistics, Calculus applications, Numerical Techniques and Analytical Geometry.

CREDITS: 4.00

#### **EGEN N302 - HEALTH, SAFETY AND ENVIRONMENT**

This course includes the most important and comprehensive information and practices for health, safety and environment.

CREDITS: 4.00

#### **EGEN N400 - ENGINEERING ECONOMICS**

Introduces the basics of economic analysis for quantifying engineering business decisions.

CREDITS: 4.00

#### **EGEN N401 - PROJECT MANAGEMENT**

This course introduces the necessary tools and information to manage projects and resources. It covers a range of principles and practices in initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget, and performance.

CREDITS: 4.00

#### **EGEN N481 - TRANSPORTATION ASSET MANAGEMENT**

Explores the key concepts and issues related to the maintenance of highway structures including bridges, tunnels, overpasses, underpasses and culverts.

CREDITS: 4.00

#### **EGEN N482 - TRANSPORTATION ECONOMICS**

Focuses on the tools of micro economic analysis and their applications to the transportation sector.

CREDITS: 4.00

#### **EGEN N486 - PROJECT MANAGEMENT FOR TRANSPORTATION**

Provides the necessary tools and information to manage and control projects and their resources.

CREDITS: 4.00

#### **EGEN N491 - RENEWABLE ENERGY SYSTEMS**

This course introduces renewable energy sources and systems for conversion of various forms of energy into electrical power. Wind and solar based energy systems are emphasised.

CREDITS: 4.00

#### **EGEN N492 - CONTROL SYSTEMS**

Introduces the use of modelling and simulation to analyse, augment, and improve the performance of analogue single-input single-output LTI control systems for a variety of applications.

CREDITS: 4.00

#### **EGEN N493 - ENGINEERING DESIGN**

This course is central to developing students' ability to analyse, design and select engineering components and materials for manufacturing.

CREDITS: 4.00

#### **EGEN N494 - PROGRAMMABLE LOGIC CONTROLLERS**

An introduction to the Programmable Logic Controller (PLC) and its application to industrial control systems. Ladder logic programming and device wiring techniques are used in laboratory applications.

CREDITS: 4.00

#### **EGEN N495 - POWER AND DESALINATION**

Covers power and desalination principles and technology. It includes an overview of power generation systems and applications.

CREDITS: 4.00

#### **EGEN N496 - REFRIGERATION AND AIR CONDITIONING SYSTEMS**

This course covers the classification of refrigeration and air-conditioning systems and their applications. Refrigeration cycles and components are analysed.

CREDITS: 4.00

#### **EGEN N497 - ENGINEERING PROJECT**

Consists of the design, implementation, evaluation, and analysis of an engineering project. Though guided

by faculty, the student team is primarily responsible for the completion of the project milestones and course objectives. The course requires the integration and application of technological, organisational, communication, and interpersonal skills by the student team. Planning, safe implementation, documentation, and presentation skills form the basis for assessment.  
CREDITS: 8.00

### **EGN 1103 - ENGINEERING MEASUREMENTS AND CAD INTRODUCTION**

Gives the opportunity to learn basic hands-on skills, engineering measurements and introduction to CAD.  
CREDITS: 3.00

### **EGN 1203 - INTRODUCTION TO PROGRAMMING**

This course introduces algorithmic problem solving, user interface, and high level coding for computers.  
CREDITS: 3.00

### **EGN 2003 - COMPUTER PROGRAMMING**

Presents formal, problem solving methods applied to the solution of practical, algorithm-based, problems using a high level programming language.  
CREDITS: 3.00

### **EGN 3033 - HEAT TRANSFER**

Involves the study of the basic physical laws of heat transfer including steady-state and transient heat flow, one-dimensional heat conduction in solids, free or forced convection in fluids, radiation and phase change and analysis of heat exchangers. The course enables students to better understand engineering applications involving heat transfer and allows a sound design or selection of pumps, heat exchangers and building insulation materials.  
CREDITS: 3.00

### **EGN 3102 - PROJECT MANAGEMENT**

Introduces the necessary tools and information to manage engineering projects and resources. It covers a range of principles and practices in initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget, and performance. The course strives to strike a balance between the general knowledge of project management and available tools, such as Primavera, OpenProj, and Microsoft Project, to assist in managing real life projects.  
CREDITS: 2.00

### **EGN 3202 - ENGINEERING ECONOMICS**

This course introduces the basics of economic analysis for quantifying engineering business decisions. Topics include time value of money; analysis of single and multiple investments; comparison of alternatives; capital recovery and tax implications; certainty; uncertainty; risk analysis; public sector analysis and break-even concepts. Students discuss, analyse, and present relevant engineering case studies.  
CREDITS: 2.00

### **EGN 3332 - HEALTH SAFETY AND ENVIRONMENT**

An introduction to common industrial procedures for employee health, safety and environment. The course covers hazards identification and control, occupational health, fire protection and prevention, safety management and ethics, safety regulations, safety inspection, accident investigation, personal protective equipment, and safety report documentation. The course also includes topics on environment protection, accident prevention, effective committee operations, accident investigation, and safety training.  
CREDITS: 2.00

### **ELEC N1215 - ELECTRONIC FUNDAMENTALS**

The purpose of this course is to establish the basic principles of semiconductors. Based on the sound understanding of DC/AC circuit behaviour acquired from the prerequisite course ELEC 2106, this course provides a comprehensive and practical coverage of discrete semiconductor electronic components and their applications. Simple methods of circuit simulation and analysis will be followed by experimenting with the real components.  
CREDITS: 4.00

### **ELEC N1220 - DIGITAL TECHNIQUES AND APPLICATIONS**

The purpose of this course is to introduce the fundamental concepts of digital systems, number systems and the basic logic gates. Based on these basic concepts, further study in digital systems will follow. Electronic simulation software such as Electronics Workbench or Multisim will provide easy and quick experimentation during the entire course activities.  
CREDITS: 4.00

### **ELEC N1225 - ELECTRONIC MEASUREMENT AND INSTRUMENTS**

This course covers the fundamental skills required for the student to select and use the correct instruments

required in electronic measurements.

CREDITS: 4.00

### **ELEC N2106 - ELECTRICAL FUNDAMENTALS**

The primary objective of this course is to develop and establish a sound understanding of both DC and AC circuit behaviour. Simple methods of circuit analysis are developed and used. A link between practical measurements and theoretical calculations is established. Although not specified in the course outline, safety issues are introduced, as applicable, and reinforced throughout the course. Computer aided learning techniques (i.e. Multisim) are introduced to compare theoretical and practical measurements.

CREDITS: 4.00

### **ELEC N2130 - ANALOGUE CIRCUITS AND APPLICATIONS**

Provides the student with the opportunity to work with and correct faults in electronic circuits and equipment's. This course develops knowledge and understanding of analogue devices applied in instrumentation. The student will step through a series of tasks which allow them to develop the necessary skills to work safely in an electronic technician environment using measuring instruments making circuits from schematic diagrams and locating and rectifying faults.

CREDITS: 4.00

### **ELEC N2135 - INSTRUMENTATION AND CONTROL**

Introduces the student into the world of instrumentation and control. This course will provide students with an insight into the basic principles of control and the operation of the instruments that are used to measure the value of basic industrial quantities such as temperature, level, pressure and flow. Drawing techniques such as block and pipe diagrams are also introduced within the contexts of the course.

CREDITS: 4.00

### **ELEC N2140 - COMPUTER SYSTEMS AND PROGRAMMING**

This course introduces basic computer architecture including the elements of the CPU, busses and timing, memory systems, computer peripherals and interfacing. It describes types of external devices and introduces methods for interfacing, including polling methods and interrupts. The course provides an introduction to programming microprocessors using assembly language. It introduces concepts of good programming practice using top down design, flow charts and pseudo

code. Concepts are reinforced with the development of a small project to interface to an external device.

CREDITS: 4.00

### **ELEC N2145 - PROGRAMMABLE LOGIC CONTROLLERS**

The Programmable Logic Controller (PLC) has become one of the leading pieces of equipment in process control. This course provides a preparation to the use of PLCs and programming practice to a level acceptable at the entry stage of industrial process control. It covers the operation and application of PLCs including interfacing, debugging and fault diagnosis.

CREDITS: 4.00

### **ELEC N2150 - POWER SYSTEM LAYOUT**

Intended to describe and illustrate, via theoretical and practical examples, the physical arrangements of the typical structure of electrical power systems. An investigation of the operation of three-phase electrical circuits forms a foundational starting point.

CREDITS: 4.00

### **ELEC N2155 - HIGH VOLTAGE SYSTEMS AND EQUIPMENT'S**

Forms part of a group of optional courses available within the Diploma Electrical Technology cluster. This course provides a systematic understanding of high voltage systems and associated equipment. The course introduces a number of topics related to high voltage systems including identification of equipment type and testing of insulation systems and breakdown phenomena in insulation materials and is informed by current areas of research activity undertaken within the Electrical Power Engineering Group.

CREDITS: 4.00

### **ELEC N2160 - MOTOR CONTROLS AND DRIVES**

Students will learn basic principles of electric motor control, DC and AC machines. The course covers control circuits and diagrams, control components such as switches, contactors, relays, timers, sensors and solid state items. Various motor starting methods, speed control and monitoring of induction motors will be discussed and analysed. Attendees will learn through a combination of theoretical notes, tutorial problems, and hands on practical exercises.

CREDITS: 4.00

### **ELEC N2165 - DISTRIBUTED CONTROL**

The aim of the course is to give students an overview

of a distributed control system (DCS) as it is applied to a electrical network.

CREDITS: 4.00

### **ELEC N2170 - POWER GENERATION**

Introduces the main components of the electrical power generation plant. Topics covered include the basic principles of three phase AC, control of synchronous generators including procedures for synchronising generators, sources of energy, conventional and non-conventional power plant technology and safety issues in the power plant.

CREDITS: 4.00

### **ELEC N2246 - TELECOMMUNICATIONS**

An introductory course to the principles of telecommunication systems. Basic telecommunication elements and systems are covered together with test and measurement techniques applied in the field.

CREDITS: 4.00

### **ELEC N2250 - FAULT FINDING TECHNIQUES**

This course involves the fault-finding and troubleshooting of complete electronic systems. Basic engineering techniques are used to identify and analyse circuit faults.

CREDITS: 4.00

### **ELEC N2255 - INDUSTRIAL ELECTRONICS**

Covers the basic principles of power electronic drive systems for DC and AC motors including rectifying devices, rectifying circuits, converter operation, AC inverter circuits with applications to drives and motors.

CREDITS: 4.00

### **ELEC N226 - ELECTRONIC TESTING SKILLS**

This course covers the selection and use of electronic test equipment such as the concepts of digital systems, digital number systems and the basic logic gates. A disciplined approach to electronic circuit fault finding, culminating with the construction and testing of an electronic project.

CREDITS: 4.00

### **ELEC N2260 - ELECTRICAL POWER DISTRIBUTION**

Introduces the main components of the electrical power distribution systems. Topics covered include the final distribution system, system layouts, and management. Moreover, the course introduces the distribution system

components like lines and cables and the associated voltage drop calculations.

CREDITS: 4.00

### **ELEC N2265 - ELECTRICAL SYSTEMS AND EQUIPMENT MAINTENANCE**

This course introduces electrical systems/sub-systems and equipment used in power transmission, motor control and in final distribution networks.

CREDITS: 4.00

### **ELEC N267 - FUNDAMENTALS OF MICROPROCESSOR SYSTEMS**

Covers the hardware and software operation of a microprocessor / microcontroller system. Topics include assembly language programming, timing diagrams, memory mapping and decoding, serial and parallel I/O, interrupts and Programmable devices.

CREDITS: 4.00

### **ELEC N271 - ELECTRICAL AND ELECTRONIC FUNDAMENTALS II**

This course covers the DC and AC behaviour of RC, RL and RLC circuits through the use of phasor diagrams and simulation software. Practical work reinforces important concepts using the experimental method for investigating and reporting results. Safety considerations associated with reactive devices are stressed.

CREDITS: 4.00

### **ELEC N3131 - ELECTRICAL MACHINES**

Fundamentals of the most important types of machines found in the electrical power industry. Emphasis will be placed on the identification of key characteristics and how these characteristics affect the utilisation, control, protection and maintenance of electrical machines. The course aims to comply with the requirements of various technology programmes. Hence, there are optional learning outcomes. The students should complete the first four outcomes in addition to at least one optional outcome.

CREDITS: 4.00

### **ELEC N316 - ENGINEERING PROGRAMMING II**

Concepts of software techniques and tools for implementing computer applications in modern industrial environments are studied. Topics covered include: software development methodologies; object oriented analysis and design; database design; and

networks and data communications. Data structures and networking which form the backbone of the majority of modern computer systems should be dealt with in a practical fashion.

CREDITS: 4.00

### **ELEC N317 - UTILITY POWER SYSTEMS I**

This course intends to familiarise students with the structure, operation and maintenance practices in electrical power distribution systems. It aims to introduce the students to distribution system layouts as well as familiarise them with the equipment used in distribution substations that serves to import electrical energy from the transmission system and exports it to utility customers.

CREDITS: 4.00

### **ELEC N319 - UTILITY POWER SYSTEMS II**

Gives the student the opportunity to understand the basic fundamentals of electrical power generation and transmission systems. Whilst covering the basic relevant fundamental theories, the course emphasises the operation and maintenance rather than the design of the various systems and equipment used. Subjects covered in power generation include thermal electrical power generating plants as well as steam and gas turbines. The basics of power transmission systems, including the construction and operation of most of the equipment that can be found in a transmission substation, shall also be covered.

CREDITS: 4.00

### **ELEC N322 - TELECOMMUNICATIONS I**

Covers the fundamental theory of modern electronic communication systems and the electrical and physical properties of communication channels. Channel and bandwidth requirements will be analysed for both analogue and digital systems. Topics include analogue and digital signal analysis including the effects of noise, modulation techniques for analogue and digital systems, various communication media and channel propagation characteristics. Finally, selected elements of common carrier systems will be examined to show how the fundamental theory is applied to a modern telecommunications integrated network.

CREDITS: 4.00

### **ELEC N324 - ELECTRICAL MACHINE CONTROL I**

The advent of modern semiconductor power devices has led to the development of powerful and flexible

drive systems for DC and AC motors. It is estimated that electric motors account for over half the electricity consumption in a modern industrial economy. High power handling and high switching speeds of devices, smart motor control technologies and DSPs that have been optimised for motor control, promise to usher in a new era of green motors.

CREDITS: 4.00

### **ELEC N3240 - ELECTRONICS PROJECT**

This course covers the interpretation of electronic circuit diagrams, recognition of electronic components, production of circuit diagrams using computer software and the population of a number of printed circuit boards. This course also develops fault-finding skills through a practical project.

CREDITS: 3.00

### **ELEC N3241 - ELECTRICAL PROJECT**

Designed to provide the student with an opportunity to blend together the theoretical knowledge and practical ability in a situation where they can best demonstrate the range and depth of skills.

CREDITS: 3.00

### **ELEC N328 - ANALOGUE CIRCUITS**

Covers the application of analogue principles and design techniques to electronic circuits. The analysis of applications of negative and positive feedback in analogue circuits, analysis of noise performance in circuit design and layout and the use of analogue integrated circuits are covered.

CREDITS: 4.00

### **ELEC N329 - DATA TRANSMISSION AND TELEMETRY SYSTEMS**

With the advent of the digital computer many of the modern communication systems are turning digital. The outputs of many electronic devices be it sensors or transducers are analogue signals.

CREDITS: 4.00

### **ELEC N332 - LIGHTING SYSTEM ANALYSIS AND DESIGN**

This course introduces students to the fundamentals of light and colour and interior and exterior lighting systems design with an emphasis on the electrical characteristics of various sources.

CREDITS: 4.00

**ELEC N333 - POWER ELECTRONICS AND DRIVES**

Introduces the use of electric machines and solid state control technology. Specifically, the course presents the basic principles of power electronic drive systems for DC and AC motors including rectifying devices, rectifying circuits, convertor operation, AC inverter circuits, frequency conversion and voltage and torque control.

CREDITS: 4.00

**ELEC N334 - POWER ELECTRONICS DESIGN**

This course forms part of a group of optional courses available within the Electronics Engineering Technology Bachelor of Applied Science. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the programme.

CREDITS: 4.00

**ELEC N336 - ELECTRICAL MACHINES I**

Develops the concepts previously introduced in ELEC 228 and focuses on the construction, operation and testing of three-phase electrical machines. It starts by applying the physical concepts and basic laws governing electrical machines operation, such as Faraday's Law, Ampere-Biot-Savart's Law and Len's Law. The principles underlying the performance of three-phase electrical machines are subsequently explained. The three-phase asynchronous (induction) as well as synchronous machines are then investigated analytically and experimentally. In covering these machines, equal emphasis is given to the operation and testing. A number of applications of synchronous and asynchronous machines are considered.

CREDITS: 4.00

**ELEC N338 - DATA COMMUNICATIONS I**

Provides students with an opportunity to learn the basic devices, basic transmission modes, error management techniques, standards, framing and selected wireless techniques used in modern data communications networks. The theoretical part of the course is complemented by regular laboratory sessions.

CREDITS: 4.00

**ELEC N339 - ENGINEERING PROGRAMMING II**

This course forms part of a group of optional courses available within the Electronics Engineering Technology Bachelor of Applied Science. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the programme.

CREDITS: 4.00

**ELEC N372 - TELECOMMUNICATIONS II**

This course builds upon the fundamental theory of electronic communication systems and data networks, topics included in this course are: data encoding, data transmission and multiplexing.

CREDITS: 4.00

**ELEC N388 - DATA COMMUNICATIONS II**

Introduces the functions of different layers: network layer, transport layer and application layer including logical or IP addressing, delivery, forwarding and routing of IP packets, network performance, quality of service, common applications in the Internet, network security and multimedia.

CREDITS: 4.00

**ELEC N402 - ADVANCED ELECTRICAL CONTROL SYSTEMS**

The classical methods of analysis and design of electrical and electromechanical control systems are studied in this course. Focus is given to linear, time-invariant systems. Topics include: modelling of such systems in both time and frequency domains; time response, stability, root-locus, steady-state error, frequency response techniques, and state-space and pole-placement methods. A software package such as Matlab/Simulink is used as a computational and graphical tool in order to enhance the students learning.

CREDITS: 4.00

**ELEC N404 - ADVANCED INSTRUMENTATION AND CONTROL APPLICATIONS**

Teaches students to use modern computer-based tools to design and analyse single-input single-output control systems in a variety of applications from motion control to process control. Emphasis is placed on deriving models analytically from schematics, and utilising MATLAB and SIMULINK to predict the response. Theoretical analysis is then reinforced by comparing simulation results to actual results through a series of laboratory assignments. An overview of recent advances in implementing digital control systems in industry is given.

CREDITS: 4.00

**ELEC N406 - ADVANCED POWER ELECTRONICS AND DRIVES**

Focuses on electric motor drives which are a major application of power electronics. Students are supported in their learning through the design of various power-electronic switches, including their drives and heat

sinks. A detailed analysis of the two and three-level voltage source inverters follows. The operation of the voltage source inverter is investigated with both the square-wave and pulse-width modulation techniques. The construction and operation of a typical induction motor drive are explained. Design, simulation and realisation of the three-phase induction motor drive are studied via a group project.

CREDITS: 4.00

### **ELEC N408 - ADVANCED UTILITY GENERATION SYSTEMS**

The aim of this course is to give the students a deeper knowledge in power generation methods, starting at the steam cycle power plant so that students can calculate, design and assess power plants from technical, environmental and economical point of view.

CREDITS: 4.00

### **ELEC N416 - EMBEDDED SYSTEMS DESIGN**

This course introduces embedded microcontroller systems. Specifically, various architectures, real-time programming, and interface of common peripheral devices are explored.

CREDITS: 4.00

### **ELEC N420 - INTELLIGENT SYSTEMS**

Provides an introduction to artificial intelligence (AI) and the techniques used in intelligent systems. It covers the basic AI topics of knowledge representation, search techniques and reasoning. The course introduces methods of approximate reasoning and fuzzy sets and systems. It presents biologically inspired systems, including neural networks and genetic algorithms.

CREDITS: 4.00

### **ELEC N421 - DIGITAL SIGNAL PROCESSING I**

This course is concerned with representing signals in mathematical terms and extracting information by carrying out algorithmic operations on the signal. The course aims to give students some grounding in the theoretical and practical aspects of digital signal processing. Specifically, classification of signals and systems, Fourier analysis, DFT, FFT, Laplace Transform, z-transform and LTI systems. The course will also introduce Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) filter design.

CREDITS: 4.00

### **ELEC N425 - MOBILE COMMUNICATIONS**

This is an introductory course to the field of mobile

cellular communications. Key concepts such as architecture, cell design, frequency reuse, handoff, interference and capacity and grade of service (GoS) are covered. Propagation radio channel which limits the performance of mobile communication is addressed. A study of digital modulation and its performance over fading channels is covered. Multiple access schemes such as TDMA, FDMA, CDMA and spread spectrum systems are presented. Wireless standards and future development are considered in detail. The course provides solid theoretical background supported by practical and real life exercises and simulations.

CREDITS: 4.00

### **ELEC N441 - POWER SYSTEMS ANALYSIS**

Equips students with the ability to analyse and solve problems commonly encountered in electric power systems. The course outline starts with a revision of complex power calculations, per-unit system of analysis and electrical network calculations. Main topics to be covered include system modelling, load flow analysis and symmetrical components theory.

CREDITS: 4.00

### **ELEC N443 - ALTERNATIVE ENERGY SYSTEMS**

Introduces the alternative energy sources and systems. The key issue is the conversion of such forms of energy into electricity. The physical laws governing the operation of individual sources are explained. A description of the most common renewable energy sources such as wind, sun, water (oceans, seas, and rivers), biomass and geothermal is given including the operational principal and construction. Focus is given to the wind and solar energy systems.

CREDITS: 4.00

### **ELEC N444 - ELECTRICAL MACHINES II**

Covers topics related to the theory and applications of electrical machines with basic control mechanisms. Topics covered include DC motors and generators in steady and transient states. Understanding the types and operational modes of DC drives is a major goal for the course. Moreover the students are expected to develop linear models for DC and permanent-magnet machines. Developed models include both time and frequency representations. Then such models are implemented in a proper simulation package such as MATLAB/SIMULINK or PSCAD/EMTDC in order to investigate the time and frequency response of those machines under various operational conditions.

CREDITS: 4.00

### **ELEC N449 - INDEPENDENT WORK-BASED PROJECT**

Uses an independent-work, employment-based project as a practical means of researching a specific industrial problem, assessing possible solutions, choosing the best installation, resolving implementation issues, and evaluating performance results.

CREDITS: 4.00

### **ELME N1105 - ENGINEERING DRAWING - CAD**

Introduces the student to the basic requirements of computer aided drafting (CAD). The student will use a computer as a drafting tool to prepare technical drawings relevant to electromechanical systems. The creation and manipulation of graphical data using AutoCAD systems and commands to produce a major drawing forms the basis of this course.

CREDITS: 3.00

### **ELME N1110 - MECHANICAL WORKSHOP FUNDAMENTALS**

This course introduces the student to the basic requirements of drafting as a language of communication amongst engineers and technologists. This will include types of drafting equipment, drawing proper lines, dimensioning, lettering, geometrical constructions, projections, and free hand sketching. This course also offers mechanical engineering hand skills, safe working practices and strategic planning, laying the foundation for project work. The course is designed to be hands-on with learning outcomes ensuring a natural progression in skill level.

CREDITS: 4.00

### **ELME N2130 - OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENT**

Includes the basic important information and practices of occupational health, safety and environment.

CREDITS: 3.00

### **ELME N2145 - MACHINING AND METAL CUTTING**

Covers the basics of the machining and metal cutting processes used in industry. The machine tools used for material removal are described and their applications identified. The metal cutting process is described through an understanding of the cutting tool geometry and tool nomenclature. The course should be delivered within a framework of applied health and safety with the students having a sound knowledge of general

workshop safety regulations and an appreciation of the devices applicable to machine tool safety.

CREDITS: 3.00

### **ELME N2150 - MAINTENANCE OF ROTARY EQUIPMENT**

Provides the basic theoretical and practical knowledge of the major industrial rotary equipment, including an explanation of their components, functions, and maintenance operations. The course emphasises the practical work in the workshop, where the students will have the opportunity to gain vocational skills, which they can apply in their future work places.

CREDITS: 3.00

### **ELME N2155 - MAINTENANCE OF ELECTRICAL EQUIPMENT AND INSTRUMENTS**

This course forms part of a group of optional courses available within the Electromechanical Technology Diploma programme. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the programme.

CREDITS: 3.00

### **ELME N2215 - PNEUMATICS AND HYDRAULICS**

A comprehensive understanding of hydraulic and pneumatic systems and their safe operation is essential for the mechatronics technician or engineer. An ability to troubleshoot such systems is also essential. In this course the student will learn basic principles of hydraulics and pneumatics and apply those principles in a practical way. Troubleshooting is covered as a separate goal but will also feature in other aspects of the course such as the design goal.

CREDITS: 4.00

### **ELME N2270 - INSTALLATION AND TESTING OF MECHANICAL MACHINERY**

Covers the basic principles, commonly used processes and elements that are essential to the machine installation, commissioning and testing activities.

CREDITS: 4.00

### **ELME N2275 - INSTALLATION AND TESTING OF ELECTRICAL SYSTEMS**

This course introduces site drawings, job preparation, typical installation plan, application of the job, testing, and record keeping.

CREDITS: 4.00

### **ELME N2280 - MAINTENANCE OF AIR CONDITIONER AND REFRIGERATION SYSTEMS**

This course forms part of a group of optional courses available within the Electromechanical Technology Diploma programme. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the programme.

CREDITS: 3.00

### **ELME N3240 - ELECTROMECHANICAL PROJECT**

Gives the students an opportunity to practically apply their previously acquired skills and knowledge.

CREDITS: 4.00

### **ELT 2003 - LANGUAGE ARTS A (SPEAKING, LISTENING AND VOCABULARY)**

Focuses on the teaching of speaking, listening and vocabulary in the English Medium Primary School context. The course stresses the importance of evaluating and synthesising different approaches and styles in facilitating EFL learning.

CREDITS: 3.00

### **ELT 2203 - LANGUAGE ARTS B: TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER A**

Explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Speaking, Listening, and Vocabulary) in an English medium primary classroom.

CREDITS: 3.00

### **ELT 2503 - LANGUAGE ARTS C (READING/WRITING/LITERATURE)**

This course has three main strands: 1) The development and teaching of reading 2) The development and teaching of writing 3) The role of texts in developing literacy in the English Medium Primary School. Throughout the course, students are engaged in an on-going extensive and intensive reading and writing programme in order to develop their own reading and writing fluency and skills.

CREDITS: 3.00

### **ELT 2603 - LANGUAGE ARTS D: TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

Explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Reading, Writing and Literature) in an English medium primary classroom.

CREDITS: 3.00

### **ELT 3003 - CHILD AND ADOLESCENT LITERATURE**

Aims to develop student's awareness of the value of adolescent literature as a tool in language teaching. It explores some theoretical foundations for the use of literature in the classroom, and includes a strong practical component where students will work with stories to develop a bank of classroom applications for the teaching of English as a Second Language (ESL). Students publish and share resources/materials created for use by peers during teaching practice in schools.

CREDITS: 3.00

### **ELT 3203 - LANGUAGE ARTS E: TEACHING METHODS FOR THE SECONDARY SCHOOL ENGLISH**

Focuses on the teaching of reading and vocabulary while giving the students a chance to develop their own reading skills. Students will develop their understanding of what the skill of reading entails and how best to advance this at different age levels in secondary schools. In addition, students will examine concepts in first language literacy development and relate them to the teaching of ESL in schools. Students will also examine the crucial role of vocabulary in second language learning and develop strategies for the teaching of vocabulary in secondary schools.

CREDITS: 3.00

### **ELT 3503 - LITERACY AND GRAMMAR IN THE SECOND LANGUAGE CURRICULUM**

Knowledge of the language is an essential tool for English language teachers. This course will raise awareness of grammar, sensitise students to the language they are teaching, and build on their existing knowledge. Students will analyse grammatical functions and structures in terms of form and use.

CREDITS: 3.00

### **ELT 3703 - LANGUAGE ARTS F: TEACHING METHODS FOR THE SECONDARY SCHOOL ENGLISH**

Enables students to build upon their knowledge of literacy development by examining the teaching and learning of writing and grammar, whilst considering how to plan for these in the second language curriculum. Students start with an examination of the complex skills involved in writing, before moving on to analyse a range of approaches and strategies that can be used to teach writing in secondary schools.

CREDITS: 3.00

**EMC 2003 - COMPUTER AIDED DRAFTING**

Fundamentals of graphical communications, computer aided drafting, orthographic projections, drawing standards, drawing scales and tolerance, geometric modelling, descriptive geometry, problem visualisation and solution in mechanical engineering applications.

CREDITS: 3.00

**EMC 2013 - MATERIALS SELECTION AND TESTING**

Covers the material selection criteria for specific engineering applications by introducing mechanical properties and material defects.

CREDITS: 3.00

**EMC 2023 - STATICS AND DYNAMICS**

Introduces the fundamentals of statics for particles and rigid bodies and covers the principles of dynamics with engineering applications.

CREDITS: 3.00

**EMC 2033 - MANUFACTURING TECHNOLOGY**

Designed to give students a grounding in the processes and technologies relative to manufacturing technology.

CREDITS: 3.00

**EMC 2043 - MECHANICS OF MATERIALS**

This course introduces the fundamental concepts of stress, strain and deformation. It also covers Engineering design concepts.

CREDITS: 3.00

**EMC 2053 - FLUID MECHANICS**

Covers the basic concepts of fluid mechanics including fluid properties, hydrostatics and hydrodynamics.

CREDITS: 3.00

**EMC 2223 - FLUID POWER**

In this course the principles of fluid power and components will be studied together with circuit design.

CREDITS: 3.00

**EMC 2263 - THERMOFLUIDS**

Introduces principles of pressures, pressure differences, manometry and hydrostatic forces together with the application of energy, continuity and momentum principles to non - compressible steady flow processes, piping systems.

CREDITS: 3.00

**EMC 3003 - INDUSTRIAL PLANT MAINTENANCE**

This course covers methods of achieving good organisational and maintenance planning in industrial settings.

CREDITS: 3.00

**EMC 3013 - FABRICATION AND WELDING**

Covers the application of basic fabrication and welding skills and includes quality control checks and health and safety regulations.

CREDITS: 3.00

**EMC 3023 - THERMODYNAMICS I**

This course covers thermodynamic principles and fundamental laws and the application of these concepts to engineering problems.

CREDITS: 3.00

**EMC 3053 - THERMODYNAMICS II**

Explores the applications of the laws of thermodynamics in the design and optimisation of engineering systems. Fundamental thermodynamic properties are analysed including cycle efficiency. The course also includes the principles of design and optimisation of basic energy conversion processes within various power plants.

CREDITS: 3.00

**EMC 3063 - MECHANICAL DESIGN I**

Designed to provide the concepts, procedures, data and decision analysis techniques necessary to design machine elements commonly found in mechanical devices and systems.

CREDITS: 3.00

**EMC 3143 - ROTATING EQUIPMENT**

Provides a broad introduction to the construction and operation of the most common types of prime movers, driven machines and transmission systems found in the manufacturing and process industries, with special emphasis on equipment in the UAE. The course draws on the students' knowledge of engineering principles gained from earlier technical studies.

CREDITS: 3.00

**EMC 3163 - PROCESS CONTROL: MECHANICAL**

Presents the basic application concepts of automatic process control theory, and the usage of these concepts in modern industrial applications. The course looks at two basic concepts of process control (feedback

control, and feed forward control), and variations and extensions of these, to more special purpose concepts and applications found in common practice.

CREDITS: 3.00

### **EMC 4003 - TURBOMACHINERY**

Provides the concepts, procedures, data and dimensional analysis techniques necessary to evaluate the flow and energy transfer through various types of turbo machines. This course builds on students' knowledge gained from various engineering topics, to develop skills to analyse the energy transfer that is taking place between a fluid and a rotating element due to dynamic action.

CREDITS: 3.00

### **EMC 4043 - REFRIGERATION AND AIR CONDITIONING SYSTEM**

Covers the classification of refrigeration and air-conditioning systems and their applications and psychrometrics to determine moist air properties and to analyse air conditioning processes. It introduces cooling loads estimation, air distribution systems and duct design. Vapour compression refrigeration cycles and components, vapour compression system analysis and energy estimation methods are also covered. It includes lab experiments and demonstrations to support key concepts with practical examples and application.

CREDITS: 3.00

### **EMC 4123 - GAS TURBINES**

Introduces thermodynamic concepts of gas turbine cycles. It also focuses on power plant efficiency and output enhancement.

CREDITS: 3.00

### **EMC 4143 - PRODUCTION PLANNING AND CONTROL (PPC)**

This course covers the design, development, implementation and management of production planning systems.

CREDITS: 3.00

### **EMC 4253 - APPLIED THERMODYNAMICS**

Studies the application of thermodynamics through the first and second Laws of Thermodynamics, enthalpy, entropy and reversible and irreversible processes, and to solve a wide range of mechanical engineering problems. Essential thermodynamic components of refrigeration, IC engines, and power cycles are

explained. Heat, work, efficiency and performance calculation procedures are emphasised.

CREDITS: 3.00

### **EMC 4303 - HEALTH, SAFETY AND ENVIRONMENT**

Includes the most important and comprehensive information and practices for health, safety and environment. The course also covers hazards identification and control, occupational health, fire protection and prevention, safety management and ethics, safety regulations, safety inspections, accident investigations, personal protective equipment, and safety reports writing. Environment protection is also covered in many sub outcomes where it is appropriate.

CREDITS: 3.00

### **EMC 4963 - POWER PLANT ENGINEERING**

This course is designed for students to develop necessary knowledge and understanding of power plant technology used in the generation of electrical power. It introduces basic power plant components, operations, economics, design and performance. Power generation applications will be treated with emphasis on thermal systems analysis based on thermodynamics. The course includes thermodynamic and power plant cycle analysis, fossil and nuclear fuels, fuel combustion; power plant economic and environmental aspects; electrical equipment; nuclear power and emerging energy source technologies.

CREDITS: 3.00

### **EMC 4973 - COMPUTER INTEGRATED MANUFACTURING**

An introduction to the technology associated with computer integrated manufacturing (CIM). It introduces Conventional manufacturing technologies, followed by computer automation and CIM. The course will include computer-aided design (CAD), automated manufacturing processes, integrated manufacturing systems and other related topics. In this course, an advanced CAD software will be introduced to guide students in design and manufacture.

CREDITS: 3.00

### **EMCH N200 - COMPUTER AIDED DRAFTING**

Fundamentals of graphical communications, computer aided drafting, orthographic projections, drawing standards, drawing scales and tolerance, geometric modelling, descriptive geometry, problem visualisation

and solution in mechanical engineering applications.  
CREDITS: 4.00

### **EMCH N201 - MATERIALS SELECTION AND TESTING**

This course covers the atomic structure, bonding material transport, mechanical properties of materials, solidification, phase diagrams, and solid state transformations.  
CREDITS: 4.00

### **EMCH N202 - STATICS AND DYNAMICS**

Provides the fundamentals of statics, composition of forces, equilibrium of force systems, and analysis of forces acting on structures, machines and friction.  
CREDITS: 4.00

### **EMCH N203 - MANUFACTURING TECHNOLOGY**

This course is designed to give students a grounding in the processes and technologies relative to manufacturing technology.  
CREDITS: 4.00

### **EMCH N204 - MECHANICS OF MATERIALS**

An introduction to the fundamental concepts of stresses and strains, deformations and displacements, elasticity and in-elasticity, strain energy and load carrying capacity of structural members subjected to tension, compression, torsion and bending.  
CREDITS: 4.00

### **EMCH N205 - FLUID MECHANICS**

Introduces students to fluid mechanics principles. Emphasis will be placed on basic topics including fluid properties, hydrostatics, and hydrodynamics.  
CREDITS: 4.00

### **EMCH N300 - FLUID POWER**

The principles of fluid power and components will be studied together with circuit design.  
CREDITS: 4.00

### **EMCH N301 - FABRICATION AND WELDING**

Covers the application of basic fabrication and welding skills, maintenance of a logbook, joining and cutting metal using selected thermal processes such as the oxy-acetylene, manual metal arc (MMA) and metal inert gas (MIG).  
CREDITS: 4.00

### **EMCH N302 - THERMODYNAMICS I**

This course is designed to provide an understanding of the laws of thermodynamics.  
CREDITS: 4.00

### **EMCH N303 - HEAT TRANSFER**

The overall goal is to teach the students to recognise appropriate modes of heat transfer and apply these engineering principles to physical phenomena in the design of components, and integrate these concepts into a valid engineering design.  
CREDITS: 4.00

### **EMCH N304 - ROTATING EQUIPMENT**

A broad introduction to the construction and operation of the most common types of prime movers, driven machines and transmission systems found in the manufacturing and process industries, with special emphasis on equipment in the UAE.  
CREDITS: 4.00

### **EMCH N305 - THERMODYNAMICS II**

This course covers the applications of the laws of thermodynamics in the design and optimisation of engineering systems.  
CREDITS: 4.00

### **EMCH N306 - PROCESS CONTROL: MECHANICAL**

Presents the basic application concepts of automatic process control theory, and the usage of these concepts in modern industrial applications.  
CREDITS: 4.00

### **EMCH N307 - PROJECT: MECHANICAL ENGINEERING TECHNOLOGY**

This course is a two semester course at the end of which the students are expected to submit, and defend their project in the presence of the department faculty members. Analytical, experimental, or design of industrial oriented projects are undertaken either individually or in teams under faculty supervision.  
CREDITS: 4.00

### **EMCH N400 - PROJECT**

This project-based course is a student-driven learning experience in project design and implementation.  
CREDITS: 4.00

### **EMCH N402 - VIBRATION IN MECHANICAL SYSTEMS**

This course is an introduction to mechanical vibrations of single, double and multiple degree-of-freedom systems including structural dynamics.

CREDITS: 4.00

### **EMCH N405 - MECHANICAL ENGINEERING SYSTEM DESIGN**

Designed to provide the concepts, procedures, data and decision analysis techniques necessary to design machine elements commonly found in mechanical devices and systems.

CREDITS: 4.00

### **EMCH N411 - COMPUTER INTEGRATED MANUFACTURING**

Highlights the importance of seamless integration of technology and manufacturing techniques.

CREDITS: 4.00

### **EMGT N403 - INTERNATIONAL MARKETING AND BUSINESS**

Examines the international business environment and how it relates to engineering companies wishing to compete within international markets. This course will investigate social, political and business cultures around the world and how these influence host country selection.

CREDITS: 4.00

### **EMGT N404 - HISTORICAL PERSPECTIVES OF THE ARAB WORLD**

This seminar type course presents a framework for understanding the peoples and cultures of the Arab world. It emphasises the history of the Arab nation, Islam, and the origins of Arab consciousness. It also examines the inner dynamics of Arab societies and the historical interaction with the West, the diversity of modern Arab societies and its implications on the economy and the future of Arab unity.

CREDITS: 4.00

### **EMGT N416 - REFLECTIVE PRACTICE AND RESEARCH METHODS**

Not offered for the three credits course. Industry and business in general operate with limited resources. Obtaining relevant and valid information for use in decision-making is imperative in modern organisations and critical for success in competitive environments.

This course introduces the concepts of research using qualitative and quantitative methods for decision-making.

CREDITS: 4.00

### **EMGT N417 - BASIC FINANCE AND ACCOUNTING**

The course introduces concepts and skills for using basic financial and accounting information. There are three parts of the course. The first part deals with financial accounting for engineering managers which examines the assumptions and decision usefulness of financial statements that are prepared for creditors and shareholders.

CREDITS: 4.00

### **EMGT N421 - GENERAL MANAGEMENT DESIGN AND SIMULATION**

Requires the integration and application of management theory and work-related experience to a simulated business environment. Competing teams will analyse business environments, formulate and implement strategies, defend decisions, and assess business performance through presentations and reports.

CREDITS: 4.00

### **EMGT N431 - CONTRACT MANAGEMENT**

Gives an overview of the principles and procedures involved in effective administration and management of engineering contracts, from tender to final completion.

CREDITS: 4.00

### **EMGT N435 - TOTAL QUALITY MANAGEMENT**

Provides a fundamental coverage of total quality management (TQM) and presents a useful set of tools and techniques to implement and manage quality programmes in the workplace. Tools and techniques such as statistical process control (SPC), quality systems, quality function deployment (QFD) and the international standard organisation (ISO) are covered.

CREDITS: 4.00

### **EMGT N441 - HUMAN RESOURCE AND RELATION MANAGEMENT**

Human Resource Management concerns the recruitment, selection, development, compensation, retention, and promotion of personnel within an organisation. The human resources of an organisation consist of all people who perform its activities. Human Relations management concerns human behaviour in managerial situations, influencing and motivating performance,

improving morale and discipline, self appraisal and analysis. Yet, Human Resource Management concerns safety and health and the roles of line managers and the HR department in improving safety and health in the context of an engineering environment.

CREDITS: 4.00

### **EMGT N446 - INDEPENDENT WORK BASED PROJECT**

Uses an independent work based project to integrate and apply the management, organisational, communication and interpersonal skills learned in the Engineering Management programme. The development of managerial planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

### **EMGT N454 - OPERATIONS MANAGEMENT**

Aimed at covering a range of principles and practices of operations management in the manufacturing and service sectors of the United Arab Emirates (UAE). Emphasis is on developing and applying problem solving and decision making skills related to operations management through case studies and real life projects.

CREDITS: 4.00

### **EMGT N455 - MANAGEMENT STRATEGY AND POLICY**

This course is integrative in nature and aims to impart an understanding of the strategic management and policy process. A wide range of issues and topics are covered because the policy formulation process emanates from the viewpoint of the organisation as a whole. This requires an analytical and creative approach to strategic analysis. Case studies are used extensively.

CREDITS: 4.00

### **EMM 4003 - ADVANCED HUMAN FACTORS**

Provides knowledge of advanced human factor concepts in an aviation setting, topics covered include; a review of basic human factors topics; further exploration of systemic models in aviation human factors; ergonomics in cockpit and cabin; automation and its effects on human performance; pilot workload; and human factors in aircraft accident investigation.

CREDITS: 3.00

### **EMM 4103 - TOTAL QUALITY MANAGEMENT IN AVIATION**

This course covers the concepts of total quality

management (TQM). Students who complete this course will be able to critically appraise management techniques, choose appropriate statistical techniques for improving processes and write reports to management describing processes and recommending ways to improve them. Tools and techniques such as statistical process control (SPC), quality systems, quality function deployment (QFD) and the international standard organisation (ISO) are covered. In addition, the concept of total productive maintenance (TPM) and failure mode and effect analysis (FMEA) are addressed in relation to an aviation engineering environment.

CREDITS: 3.00

### **EMM 4203 - AVIATION OPERATIONS MANAGEMENT**

Explores the roles and responsibilities of management personnel in relation to airport, airline and ancillary business management. The course covers key concept areas such as; Health, Safety and Security for Aviation, Airline Business Management, Airport Business Management, Aviation Financial Management and Work-based Learning.

CREDITS: 3.00

### **EMM 4303 - AVIATION PROJECT MANAGEMENT**

Covers a range of principles and practices for initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget and performance. The course strives to strike a balance between the general knowledge of project management and the currently available computer based tools to assist in managing projects in a contemporary aviation environment.

CREDITS: 3.00

### **EMM 4403 - HUMAN RESOURCES AND RELATIONS MANAGEMENT**

This course covers the concepts of human resource management, students will consider how the roles and responsibilities of personnel management are distributed internally and externally to a typical aviation organisation. The course takes a very practical view of HRM, using many examples, exercises, and cases. Students are encouraged to think about what HRM means ? how it differs according to the nature of work in the aviation industry, by organisation, and in different regions and countries ? and to consider what constitutes ethical human resource management.

CREDITS: 3.00

**EMT 2003 - APPLIED MECHANICS**

Explains the principles of force and motion and provides the knowledge required to calculate their effects on structural components and machines.

CREDITS: 3.00

**EMT 2023 - ELECTROMECHANICAL SYSTEMS**

This course introduces electromechanical machines and systems for a variety of industrial applications.

CREDITS: 3.00

**EMT 2033 - ELECTRONICS SYSTEMS AND CIRCUITS**

Introduces the application of semiconductor devices and operational amplifiers to digital and analogue circuits.

CREDITS: 3.00

**EMT 3013 - THERMOFLUID SYSTEMS**

Many engineering systems involve energy transfer and its conversion through fluids and the science that deals with this subject is broadly referred to as thermofluid systems. This course covers the basic concepts of fluid mechanics and thermodynamics and the application of these concepts to engineering problems.

CREDITS: 3.00

**EMT 3103 - ENGINEERING MATERIALS**

Covers the material selection criteria for specific engineering applications by introducing the concept of atomic structure, bonding, material transport, solidification, phase diagrams and solid state transformations by relating it to mechanical properties and defects in materials. It also introduces the concepts of material science and the relationship between material structure and mechanical properties such as tensile, compressive, bending and shear.

CREDITS: 3.00

**EMT 4003 - ROBOTICS TECHNOLOGY**

Introduces robotic technology with a focus on the components of computer automated processes. Specifically, a hands-on approach is used to explore robotic embedded systems, associated programming, dedicated controllers, and related applications. The fundamental concepts describing robotics operation including coordinate transformations, sensor and actuator selection and interface, motion analysis, path planning and kinematics are introduced.

CREDITS: 3.00

**EMT 4013 - INDUSTRIAL CONTROL SYSTEMS**

Introduces the concepts and design of industrial based control systems in a modern automated environment. Several types of control systems related to ICS and used in industrial production are covered including supervisory control and data acquisition systems (SCADA), distributed control systems (DCS) and Programmable logic controllers (PLC). The focus is on communication and programming techniques for Programmable logic controllers as well as on automated process systems from mainly electrical and electronic perspective.

CREDITS: 3.00

**EMT 4023 - PROGRAMMABLE LOGIC CONTROLLERS**

This course introduces the Programmable Logic Controller (PLC) and its application to industrial control systems. Ladder logic programming and device wiring techniques are used in laboratory applications.

CREDITS: 3.00

**EMT 4803 - CNC TECHNOLOGY**

Introduces CNC machining concepts and practices. The course describes controlled systems, numerically controlled axes and programme coding systems. The course covers all activities needed to take engineering designs from the form of an engineering drawing or a CAD file to a finished machined part using a CNC milling machine (Tool selection, Work-piece clamping methods, determining tool length offset, determining work-piece offset, correct selection of feed rate and spindle speed, G-code programming, use of canned cycles and integration of CAD and CAM).

CREDITS: 3.00

**EMT 4923 - MECHANICAL VIBRATIONS**

Provides students with an introduction to mechanical vibrations of single, two and multiple degree-of-freedom systems. Students are familiarised with the concepts of vibration control such as vibration isolation and vibration absorbers. The course also provides the basic knowledge of vibration measurement systems.

CREDITS: 3.00

**EMTX N300 - PROJECT: MECHATRONICS ENGINEERING TECHNOLOGY**

This course involves completing a project using the integration and application of technological, organisational, communication and interpersonal

skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 4.00

### **EMTX N417 - ROBOTICS AND AUTOMATION**

The objective of this course is to provide a comprehensive view of automation and robotics with a focus on the components of automation and applications of computers in robotics and the automation of processes. Process automation requires both input and output devices to be interfaced to a PLC, microprocessor or intelligent-memory device. These components and interfacing devices are investigated in detail. A final design project will involve a case study where a process is automated with robotic involvement.

CREDITS: 4.00

### **ENGL N0155 - DIPLOMA FOUNDATIONS ENGLISH**

Enables the students to perform elementary tasks in social, work, and college-related contexts in English. The successful learner can: understand straightforward points of short texts in standard written English; understand straightforward points spoken clearly in standard English; produce clear, straightforward written English with appropriate use of simple vocabulary to present facts, events, and explanations; and produce clear spoken English to give brief information and explanations. The successful learner will have met and exceeded the Basic User level (A2) as defined by the Common European Framework (CEF) of Reference for Languages of the Council of Europe.

CREDITS: 30.00

### **ENGL N070 - ENGLISH COMMUNICATIONS: FOUNDATIONS**

This is an integrated skills, one-year course which is intended to bring the proficiency level of students in listening, speaking, reading and writing up to the minimum standards required for entry to the Career Programmes. The course is aimed at improving the students' proficiency in general English, with the main emphasis on building up a sound grammatical base and the ability to communicate socially and on general and academic topics, both orally and in writing. There is an emphasis on study skills, independent learning and the use of information sources in the Learning Resource Centre, as well as affective domain development.

CREDITS: 30.00

### **ENGL N1155 - ENGLISH I**

This course is the first of three courses which lead to Independent User level. The course enables the learner to perform a range of routine tasks in familiar contexts. The successful learner develops proficiency towards the Independent User Level (B1) as defined by the Common European Framework (CEF) of Reference for Languages of the Council of Europe.

CREDITS: 8.00

### **ENGL N124 - BASIC RESEARCH AND REPORT WRITING**

This is the first of two courses which focus on enabling learners to develop research and academic writing skills in preparation for the requirements of their academic programme. Students learn to use a wide range of resources, to write in an appropriate style and register, and to present their findings orally, in accordance with accepted academic formats and ethical standards.

CREDITS: 5.00

### **ENGL N125 - ENGLISH COMMUNICATIONS I**

This is the first of four courses which enable learners to improve their general English proficiency in support of their chosen academic programme. The course integrates listening, speaking, reading and writing in authentic general and academic contexts. Course delivery includes a range of resources and techniques to cater to individual learning styles with a balance between language accuracy and fluency.

CREDITS: 8.00

### **ENGL N1255 - ENGLISH II**

This course is the second of three courses which lead to Independent User level. The successful learner continues to develop proficiency towards the Independent User B1 Level as defined by the Common European Framework (CEF) of Reference for Languages of the Council of Europe.

CREDITS: 8.00

### **ENGL N174 - BASIC RESEARCH AND REPORT WRITING II**

This is the second of two courses which focus on enabling learners to develop research and academic writing skills to support students in meeting the requirements of their academic programme.

CREDITS: 4.00

### **ENGL N175 - ENGLISH COMMUNICATIONS II**

This is the second of four courses which enable learners

to improve their English proficiency in support of their chosen academic programme. The course integrates listening, speaking, reading and writing in authentic general and academic contexts. Course delivery includes a range of resources and techniques to cater to individual learning styles with a balance between language accuracy and fluency.

CREDITS: 8.00

### **ENGL N214 - ENGLISH COMMUNICATIONS III**

This is the third in a series of four courses which develop learners' language proficiency to Level B2 of the Common European Framework (CEF).

CREDITS: 4.00

### **ENGL N2155 - ENGLISH III**

This course is the final course leading to Independent User level. The successful learner reaches the Independent User B<sub>1</sub> Level as defined by the Common European Framework (CEF) of Reference of Languages of the Council of Europe and is expected to pass a benchmarked exam at this level.

CREDITS: 7.00

### **ENGL N264 - ENGLISH COMMUNICATIONS IV**

This is the final in a series of four courses which develop learners' language proficiency to Level B2 of the Common European Framework (CEF). This forms the preparation needed for the external IELTS exam which is normally taken during this course.

CREDITS: 4.00

### **ENGL N306 - HEALTH COMMUNICATIONS III**

This is a continuation and refinement at a higher level of proficiency of the career-related skills emphasised in Health Communications II. Although the exit competency bands remain the same, the tasks have been lengthened or are performed with greater speed and efficiency. Through case studies, simulation exercises, and role play, the students will experience situations they can expect to meet in their practices and careers.

CREDITS: 4.00

### **ENGL N310 - BUSINESS COMMUNICATIONS III**

Work-place and integrated English skills are refined and practised at a higher level of proficiency. The emphasis in this course is on career programme support, subject area integration and career preparation.

CREDITS: 4.00

### **ENGL N3137 - AVIATION ENGLISH II**

The course will develop the English language skills required to perform a varied range of straightforward routine and some non-routine functions in General English and in work related functions in the aviation field.

CREDITS: 4.00

### **ENGL N320 - TECHNICAL COMMUNICATIONS III**

Focuses on writing skills required for various types of programme and career-related tasks. Previously acquired writing and word processing skills are refined and developed to enable the production of basic types of technical reports.

CREDITS: 3.00

### **ENGL N321 - COMMUNICATION SKILLS FOR ENGINEERS**

This course focuses on writing skills required for programme related tasks, such as report writing, the delivery of formal presentations on project work and the participation in formal meetings.

CREDITS: 4.00

### **ENGL N3236 - AVIATION ENGLISH III**

The course will develop the English language skills required to perform a varied range of straightforward routine and some non-routine functions in General English and in work related functions in the aviation field.

CREDITS: 4.00

### **ENGL N340 - COMMUNICATIONS FOR APPLIED COMPUTING III**

Work-place and integrated English skills are refined and practised at a higher level of proficiency. The emphasis in this course is on career programme support, subject area integration and career preparation.

CREDITS: 4.00

### **ENGL N470 - PROFESSIONAL WRITING AND COMMUNICATION**

Provides support to the capstone project in that it will provide the students with the information required to produce a scientific paper. The students will be provided with chosen material to use in conjunction with the teaching material to enable them to produce a scientific paper. The course will enable students to present their scientific findings in the approved manner and to the highest possible standards.

CREDITS: 3.00

**ENHT N3323 - SURVEYING**

A fundamental course that provides students with appropriate theoretical and practical surveying skills that can be utilised in civil engineering related work. The course also aims to develop group work, problem solving and practical competence amongst students mainly for the purposes of establishing control, topographic data capture and setting out of engineering structures.

CREDITS: 6.00

**ENHT N3353 - HIGHWAY INFRASTRUCTURE MANAGEMENT**

Builds upon the pavement distress and treatments introduced in Highway Maintenance I and continued in Highway Maintenance II from a systems perspective. Additionally, other highway assets are included in the management process. Aspects of the highway asset management system and pavement management systems at the RTA are central components of this course. Site visits to public and private organisations involved in the management of these assets is necessary for students to gain first-hand experience with the tools, software and processes of asset management.

CREDITS: 4.00

**ENHT N3433 - HIGHWAY STRUCTURES MAINTENANCE**

Introduces the key concepts and issues related to the maintenance of highway structures including bridges, tunnels, overpasses, underpasses and culverts. A comprehensive overview of these structures including their historical use across the region and internationally are addressed. The materials used for the various elements of highway structures are explored at length. Inspection topics and techniques as well as modern non-destructive testing methods are incorporated in the course material. Finally, the electro-mechanical equipment used in the operation and control of highway structures and their related maintenance are covered. Site visits and local content will be provided through the relevant departments at the RTA.

CREDITS: 3.00

**ENHT N3453 - HIGHWAY PROJECT**

Designed to give students the opportunity to apply their accumulated learning toward the completion of an integrated highways related project. The project will have a common theme but the outcomes are individual in delivery. Interaction with industry, particularly the

Road and Transport Authority, is a key component. Field work, site meetings, independent research, report writing and oral presentations with computer presentation tools are key components of the course.

CREDITS: 4.00

**EPC 1401 - PRACTICUM 1A**

The practicum component is central to the Bachelor of Applied Science Education. The content and student experiences in the workplace makes it pivotal as it allows them to observe, implement and reflect upon the theories, methodologies and approaches highlighted in the education and methodology strands of the programme.

CREDITS: 1.00

**EPC 1901 - PRACTICUM 1B**

The central component of the education programme is the supervised teaching practicum carried out in a variety of educational settings. This course will allow student teachers to begin to teach an aspect of a class and as the placement progresses, under the close supervision of the class teacher, take on more responsibility in planning, preparing and implementing longer segments of the class.

CREDITS: 1.00

**EPC 2401 - PRACTICUM 2A**

The central component of the education programme is the supervised teaching practicum carried out in a variety of educational settings. This course will allow student teachers to take on more responsibility in the teaching environment. As the placement progresses and under the close supervision of the instructor/mentor, the student will take on more responsibility in planning, preparing and implementing longer segments of teaching sessions.

CREDITS: 1.00

**EPC 2901 - PRACTICUM 2B**

The aim of this course is a detailed observation of learners, teachers/instructors and the educational setting. Depending on the programme, students will conduct the practicum in a relevant setting, e.g. nursery, primary school, special needs centre or training environment etc. This third practicum is for 15 days, students will spend a three-week block in the educational setting. Dates for this practicum may vary across the Emirates. Weeks 6, 7 and 8 are

recommended, but the exact timing will depend upon the educational institution.

CREDITS: 1.00

### **EPC 3403 - PRACTICUM 3A**

Students continue to implement a range of observational and teaching tasks aimed at improving their understanding of how teachers/instructors can facilitate development across domains with particular emphasis on teaching and learning in the areas of literacy, numeracy and new technologies. The practicum is typically 12-15 days and enables students to design and implement a unit of work to suit the given major.

CREDITS: 3.00

### **EPC 3903 - PRACTICUM 3B**

Students continue to implement a range of observational and teaching tasks aimed at improving their understanding of how teachers/instructors can facilitate development across domains with particular emphasis on assessment in the areas of literacy, science or new technologies. The practicum is typically 12-15 days and enables students to design and implement a unit of work to suit the given major.

CREDITS: 3.00

### **EPC 4403 - PRACTICUM 4A**

Student teachers work with children aged between 3-5 years old in local early childhood settings for 15-20 days, typically over a 3-4 week period. During this practicum student teachers explore ways in which to enhance children's learning and plan and undertake family involvement initiatives, field trips and a class performance that support the curriculum. They also commence collecting data for their action research project.

CREDITS: 3.00

### **EPC 4909 - PRACTICUM 4B (INTERNSHIP)**

Student teachers complete Internship of 35-40 days, typically over an 8-10 week period, ideally at the educational setting where they completed their Teaching Practice in Semester 7. Student teachers typically spend 4 days a week at their school and return to college one day per week.

CREDITS: 9.00

### **EPR 2003 - LANGUAGE ARTS A (SPEAKING, LISTENING AND VOCABULARY)**

In this course students examine significant international

models of learning and teaching as well as examining approaches to the teaching of Speaking, Listening and Vocabulary to EFL learners aged 9-12. Microteaching and observation of microteaching, with a focus on accurate target language will support students' ability to evaluate these approaches.

CREDITS: 3.00

### **EPR 2203 - LANGUAGE ARTS B (TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER A)**

Explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Speaking, Listening, and Vocabulary) in an English medium lower primary classroom. By identifying and evaluating a variety of international models for teaching the principles, concepts and skills of English, students can consider the implications for integrated content delivery in schools. Microteaching and the observation of microteaching support students' ability to evaluate these approaches.

CREDITS: 3.00

### **EPR 2503 - LANGUAGE ARTS C (READING/WRITING/LITERATURE)**

This course has 3 main strands: 1) The development and teaching of reading 2) The development and teaching of writing 3) The role of texts in developing literacy in the English Medium Primary School. Throughout the course, students are engaged in an on-going extensive and intensive reading and writing programme in order to develop their own reading and writing fluency and skills.

CREDITS: 3.00

### **EPR 2603 - LANGUAGE ARTS D (TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER)**

Explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Reading, Writing and Literature) in an English medium primary classroom. By identifying and evaluating a variety of international models for teaching the principles, concepts and skills of English, students will be able to consider the implications for integrated content delivery in schools.

CREDITS: 3.00

### **EPR 3003 - MATHEMATICS FOR THE PRIMARY SCHOOL TEACHER**

Prepares student teachers with a current view of contemporary primary mathematics by integrating

several key concepts necessary to equip them with knowledge, skills and attitude to teach mathematics at the primary school level effectively. Student teachers will be exposed to issues and standards influencing primary mathematics education. Links will also be made between teaching and learning in primary mathematics to key theories such as learning theories and motivation theories. .

CREDITS: 3.00

### **EPR 3203 - MATHEMATICS TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

Equips student teachers with a broad range of teaching strategies to effectively teach mathematics to primary school students. Student teachers will delve deeper into the underlying concepts and principles that are linked to various teaching methods. There will be a strong emphasis on problem solving strategies and model drawing. Explicit links are made between instruction and assessment. In addition, student teachers will learn about resource management such as the use of ICT, learning aids and other informal resources related to teaching and learning of primary mathematics.

CREDITS: 3.00

### **EPR 3503 - SCIENCE FOR THE PRIMARY SCHOOL TEACHER**

Prepares student teachers with a view of contemporary primary science by integrating several areas necessary to equip them with the knowledge, skills and attitude to teach at this level effectively. They learn more about the nature of science and make links to scientific inquiry. Associations will also be made between teaching and learning in primary science to key learning theorists such as Piaget, Vygotsky, Bruner and Gardner. During this course, student teachers acquire science content and process skills by participating in various life and physical science inquiry activities.

CREDITS: 3.00

### **EPR 3703 - SCIENCE TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

Equips student teachers with a broad range of teaching strategies to teach science at the primary school level effectively. Student teachers will delve deeper to better understand the characteristic of a scientific inquiry classroom. Underlying concepts and principles in these methods are highlighted. Explicit links are made between instruction and assessment. Various types and uses of assessment are addressed including

constructing a test paper. Student teachers are also introduced to management and use of ICT, learning aids and resources for science teaching and learning.  
CREDITS: 3.00

### **ERK 3002 - WORK PLACEMENT**

Requires the student to gain relevant engineering experience in an actual working environment in order to provide an opportunity to develop and apply professional work ethics and practices. Transfer of engineering skills learned at college to the workplace is a major feature of this course.

CREDITS: 2.00

### **ETD 1022 - TECHNICAL MATHEMATICS I**

Introduces the fundamental mathematical concepts necessary for further study in applied engineering technology. Course topics include whole numbers, fractions, decimals, proportions, percent's, measurement with engineering applications, data analysis and statistics, real numbers, algebraic expressions and equations, graphs of linear equations, and exponents and polynomials.

CREDITS: 2.00

### **ETD 1042 - ENGINEERING MEASUREMENT AND WORKSHOP**

Mechanical measurement and workshop skills are introduced in this course. Safe working practices, selection of materials, use of tools, construction of a specified mechanical project, and measurements of the resulting project form a basis of assessment in the course.

CREDITS: 2.00

### **ETD 1051 - INTRODUCTION TO ENGINEERING TECHNOLOGY**

Introduces the professional fields of Engineering Technology industries in the United Arab Emirates. Specifically, the roles, duties, responsibilities, fundamental skills, and knowledge required engineering technologists, technicians, and operators are presented. The course includes seminars on engineering technology as a profession, professional ethics, professionalism, and social responsibility.

CREDITS: 1.00

### **ETD 1062 - INTRODUCTION TO CAD**

This course introduces the fundamentals of computer aided drafting (CAD). The student uses AutoCAD

as a drafting tool to read, understand, and prepare technical drawings relevant to engineering technology. The course includes orthographic projections and the production of a dimensioned assembly drawing.

CREDITS: 2.00

### **ETD 1072 - APPLIED PHYSICS I**

CREDITS: 2.00

### **EETEC N155 - MATHEMATICS II: ENGINEERING**

This course is a second mathematics course for students in Engineering Technology programmes. Topics included are quadratics, radicals, complex numbers, exponential and logarithmic functions, trigonometric equations and plane analytic geometry. Software applications such as Excel and Derive are used as tools for solving engineering problems.

CREDITS: 4.00

### **EETEC N305 - ORGANISATIONAL BEHAVIOUR AND MANAGEMENT**

Provides an introduction to the nature of organisations in relation to management practices. The course examines the internal nature of organisations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behaviour of people within organisations and the significance of organisational design and characteristics. It also aims to provide the basis for, and to underpin further study in, specialist areas of business.

CREDITS: 4.00

### **EETEC N410 - INTERNATIONAL AND UAE ECONOMICS**

Builds upon prior knowledge of basic micro and macro economic concepts, and students' experience of working within the UAE economy to develop an analytical approach to current issues arising from the historical development of the oil-based UAE economy.

CREDITS: 4.00

### **EETEC N435 - ETHICS AND PROFESSIONAL PRACTICE**

This course is a philosophical introduction to the area of applied ethics.

CREDITS: 4.00

### **EETEC N450 - PROJECT MANAGEMENT FOR ENGINEERING**

Provides the necessary tools and information to

manage and control projects and their resources. It covers a range of principles and practices in initiating, planning, staffing, coordinating and completing a project within the triple constraint of schedule, budget and performance. The course strives to strike a balance between the general knowledge of project management and the tools that are available (e.g. Microsoft Project 2003 or later version) to assist in managing real life projects.

CREDITS: 4.00

### **EWRK N300 - WORK PLACEMENT**

Requires students to gain experience in an actual working environment and provides the opportunity to develop good work ethics, habits and practices. Transfer of skills learned at college to the workplace is a major feature of this course

CREDITS: 8.00

### **EWRK N301 - WORK EXPERIENCE (4 WEEKS)**

This course provides work experience in an environment related to the student's discipline.

CREDITS: 4.00

### **EWRK N302 - WORK EXPERIENCE (4 WEEKS)**

This course requires students to gain experience in an actual working environment and provides the opportunity to develop good work ethics, habits and practices.

CREDITS: 4.00

### **FASH N210 - FABRICS AND TEXTILES I**

Combines the study of fabrics and textile design as applied in fashion design. The course also enables students to recognise the main qualities of textiles and fabrics; and to understand the differences between natural and man made fibres and textiles.

CREDITS: 4.00

### **FASH N212 - PATTERN MAKING II**

Introduces students to the next level of Pattern Making skills. Students learn how to integrate draping on a dress form, drafting paper patterns and drawing flats (technical drawings) into one continuous process of Technical Design in Fashion.

CREDITS: 4.00

### **FASH N214 - FASHION DRAWING II**

Introduces students to the next level of Fashion Drawing and Illustration skills. Students expand their drawing

and two - dimensional design skills and advance their visual communication abilities by exploring a variety of compositional and aesthetic concepts, and media and techniques including computer software (Illustrator, Photoshop and Kaledo) to create fashion croquis, fashion illustrations, flat (technical) sketches of apparel and texture drawing (fabric studies).

CREDITS: 4.00

### **FASH N220 - FABRICS AND TEXTILES II**

This course introduces students to the intermediate level of the science of textiles and fabrics as applied in fashion design. It covers such topics as the creation of fabrics (woven, non-woven), their usage, their performance, production, post-production care, and issues of labelling.

CREDITS: 4.00

### **FASH N222 - PATTERN MAKING III**

This course further develops the student's skills in practicing the principles of pattern making. Starting with the draping, trueing and drafting process and manipulation of basic patterns involved in the creation of simple apparel, students should progress through a series of exercises in practical work to make prototypes using industrial equipment (sewing machines).

CREDITS: 4.00

### **FASH N224 - FASHION DRAWING III**

In this course, students will further develop their fashion drawing skills beginning with an exploration of the basic elements and principles of design applied in the drawing and fashion design process.

CREDITS: 4.00

### **FASH N226 - COMPUTERISED PATTERN DRAFTING**

This course provides students with an intermediate level of flat-pattern production, introducing them to the basics of pattern digitising and finalising using industry-specific CAD/CAM applications.

CREDITS: 4.00

### **FASH N310 - GRADING**

The Grading Course introduces students to the principles and methods of pattern grading for fashion design as determined by industrial standards. Methods of resourcing and applying sizing standards to produce a range of sizes from a master pattern will be presented as well as concepts of body growth, figure

types, standardised sizing and grade distribution. The contemporary CAD systems for pattern grading will be briefly explained and compared. Major emphasis is placed on the application of grading techniques through various semester exercises and fashion projects.

CREDITS: 4.00

### **FASH N312 - PATTERN MAKING IV**

Introduces students to an advanced level in practicing pattern making methods. Through complex and continuous exercises students should further develop their technical skills and start experimenting with pattern making techniques aiming to produce original garments and a coherent mini fashion collection. This level includes fully lined garments, design details and fitting process applied at the final stage of garment production. At the end of this course students should be able to make the best combination of patterns and fabrics to match their design, evaluate pattern accuracy, garment quality, comfort and fall. Students will present their advanced pattern making skills by developing a sample portfolio and final project.

CREDITS: 4.00

### **FASH N314 - FASHION DRAWING IV**

Introduces students to an advanced level of fashion design, illustration and professional presentation. Focusing on complex relations in research, inspiration, design and creation, types of collection and fashion markets, students are encouraged to integrate all these components of design process into one final professionally produced and presented fashion project and portfolio. Continuous student practice with the professional CAD Kaledo-LECTRA software together with Adobe Illustrator and Photoshop is required.

CREDITS: 4.00

### **FDSA N404 - FOOD SAMPLING TECHNIQUES**

The aim of this course is to familiarise students with the legislative requirements and objectives of food sampling. Topics covered in detail include methods of planning a sampling programme together with analysis of a risk-based approach to sampling, sampling levels and frequency and procedures to be used on site. The statistical methods related to sampling will be analysed. The course addresses the systems for recalling sub-standard product that may have entered the retail food chain.

CREDITS: 4.00

**FDSA N406 - FOOD SAFETY SYSTEMS**

Enables students to effectively implement and undertake food safety management systems audits. Students will compare GMP and HACCP with ISO 22000 and assess methodology in selecting an audit programme. The major elements of ISO 22000:2005 Food Safety Management Systems for organisations in the food chain are analysed. Students will perform an ISO 22000 compliance audit on a selected food industry.  
CREDITS: 4.00

**FDSA N408 - FOOD LEGISLATION**

Completion of this course will enable students to analyse the systems of food regulation practiced in different regions of the world. Students will explore selected cultural and socio-economic factors that influence the regulation of food products in the GCC region, including issues such as genetic modification, importation laws, food additives, and regulatory compliance.  
CREDITS: 4.00

**FDSA N416 - REGULATORY TOXICOLOGY AND Fd SAF**

Applies the toxicological principles to major classes of food borne and waterborne toxicants (metals, organics, food additives, nutrients, and naturally occurring toxins). Students study toxicant metabolism and detoxification strategies, mechanisms of toxicity and design of HACCP plans for food borne toxicants. Risk assessment and regulatory toxicology of food toxicants are discussed.  
CREDITS: 4.00

**FDSA N422 - ADVANCED FOOD MICROBIOLOGY**

Provides the opportunity to discuss, examine and analyse the emerging issues for food safety, food processing and engineering, emerging food pathogens and the epidemiology of the latest major food related diseases. In addition issues concerning world food trade, food supply and food security are examined.  
CREDITS: 4.00

**FDST N401 - RESEARCH PROJECT**

Students, upon satisfactory completion of the course, are able to apply research knowledge and skills to the food science and technology environment. Students will understand the scientific method and the steps involved in the research process. Experimental design, sampling theory and data collection techniques

are examined. Students undertake a field or laboratory based research project, including a literature review, in the discipline of food science.  
CREDITS: 6.00

**FDST N403 - RISK ANALYSIS**

Upon successful completion of this course students will be able to describe theoretical information related to the concepts of risk analysis in relation to food supply. Topics covered in this course include a detailed investigation of the process and elements of risk analysis namely risk assessment, risk management and risk communication in relation to food. This course will also provide an overview of biological risk assessment.  
CREDITS: 4.00

**FDST N405 - RECALL AND TRACEABILITY SYSTEMS**

Examines the systems for the recall of sub-standard product which has entered the retail system. Relevant legislation related to recall and traceability is examined, including European Union (EU) legislation. Topics include: designing an effective system, documenting practical recall procedures, designing recall notices, making the recall decisions, the levels of recall, deciding the recall method and handling potential and actual crisis's.  
CREDITS: 4.00

**FDST N407 - HUMAN NUTRITION IN HEALTH AND DISEASE**

Enables students to understand the importance of nutrition as a key contributor to individual and population-based health, particularly in relation to the burden of chronic diseases. Learners develop a critical approach to an understanding of the relationship between diet and health issues at varying life stages and the implications for public health. The roles of the food chain and associated industries in enhancing nutritional health are explored.  
CREDITS: 4.00

**FDST N409 - FOOD BIOTECHNOLOGY**

Upon successful completion of this course students will have the knowledge and understanding of the development and application of food biotechnology in its broadest sense, including genetically engineered foods, biotechnological foods and their regulations and the social and ethical aspects of food biotechnology. Students will be able to assess both the biochemistry

and technology of food, and recognise food borne diseases related to biotechnology.

CREDITS: 4.00

### **FDST N410 - QUALITY SYSTEM AUDITING IN THE FOOD INDUSTRY**

Concentrates on the principles of quality systems auditing and deal with the requirements of the ISO 9001:2000 standard and ISO 15161:2002 - Guidelines for the implementation of ISO 9001:2000 for the food and drinks industry. Students will gain experience in auditing skills and techniques, including audit planning, executing and reporting, working and leading audit teams. In addition they will acquire an increased knowledge of ISO 9001:2000, the Food and Drinks Industry and associated standards and guidelines (British Retail Consortium (BRC), EUREPGAP, and ISO 22000:2005).

CREDITS: 4.00

### **FND 0010 - PRE-FOUNDATIONS ENGLISH I**

This is the first level of the Pre-Foundations course. Students who have a CEPA score of up to 139 can be admitted to this course which is equivalent to the beginning levels of the CEFR A1. This is a general English proficiency course with a focus on all four language skills (reading, writing, speaking & listening), grammar, vocabulary, study skills, and IT literacy.

CREDITS: 16.00

### **FND 0020 - PRE FOUNDATION ENGLISH II**

This is the second level of the Pre-Foundations programme. Students with a CEPA score of 140-149 can attend this course which is at the CEFR A1+ level. This is a general English language proficiency course that focuses on all four language skills (reading, writing, listening and speaking), grammar, vocabulary, study skills and IT literacy.

CREDITS: 16.00

### **FND 1016 - FOUNDATIONS ENGLISH LEVEL 1**

This is the first of four English language courses at Foundations level, starting at CEFR A2 level and exiting around CEFR A2+. The course focuses on building a repertoire of basic grammatical structures and common phrases, with a strong emphasis on building good vocabulary study habits. Students will read short simple texts on familiar topics demonstrating understanding of both global and specific detail. They will be expected to speak about familiar topics related to themselves

and to understand similarly simple utterances.

CREDITS: 16.00

### **FND 2016 - FOUNDATIONS ENGLISH LEVEL 2**

This is the second of four English language courses at Foundations level, starting at CEFR level A2+ and exiting around CEFR B1. The course focuses on continued building of basic grammatical structures and common phrases, with a strong emphasis on building good vocabulary study habits that enable students to have sufficient vocabulary to conduct tasks involving familiar situations and topics.

CREDITS: 16.00

### **FND 3016 - FOUNDATIONS ENGLISH LEVEL 3**

This is the third of four English language courses at Foundations level, starting at CEFR level B1 and exiting around CEFR B1+. The course focuses on the continued building and use of a reasonably accurate repertoire of frequently used routines and patterns associated with predictable and unfamiliar situations that are reflected through grammatical structures and common phrases, with a strong emphasis on building good vocabulary study habits that enable students to have sufficient vocabulary to express opinions on abstract/cultural matters in a limited way or offer advice within a known area.

CREDITS: 16.00

### **FND 4016 - FOUNDATIONS ENGLISH LEVEL 4**

This is the fourth of four English language courses at Foundations level, starting at CEFR level B1+ and exiting at CEFR B2 emergent. The course focuses on continuing to build an accurate repertoire of grammatical structures. This final level also continues to emphasise building good vocabulary study habits that enable students to develop a sufficient vocabulary to engage in academic study in English. Students will be expected to read multiple paragraphed abstract texts containing unfamiliar information. Student will read and understand general meanings in texts that describe unpredictable situations, explain the main points of a text with reasonable precision, scan text for relevant information and read for specific in detail.

CREDITS: 16.00

### **FND C010 - COMPUTING LEVEL 1**

This practical, hands-on course covers the basic computer skills needed for study and later employment.

CREDITS: 4.00

**FND M010 - FOUNDATION MATHEMATICS 1**

This course is the first of two mathematics courses in the New Foundations Studies Programme. Foundation Mathematics 1 (M010) focuses on basic numerical skills to provide a solid mathematical foundation for applications in subsequent courses.

CREDITS: 5.00

**FND M020 - FOUNDATION MATHEMATICS II**

This course is the second of two mathematics courses in the New Foundations Studies Programme. Foundation Mathematics II (M020) focuses on the use of prior foundational knowledge to develop understanding and proficiency in the use and application of mathematical skills and concepts.

CREDITS: 5.00

**FOOD N2115 - FOOD SAFETY AND HYGIENE I**

Provides an overview of the importance of food safety monitoring and maintenance in food establishments. Students will acquire basic skills with appropriate scientific background to participate in food safety programmes in food industries and government. This course will familiarise them with basic information about microbial hazards, hygiene practices, food poisoning and its causes, different types of food hazards and handling procedures in order to develop risk reduction strategies for food safety.

CREDITS: 2.00

**FOOD N3110 - FOOD CHEMISTRY AND ANALYSIS**

Upon completion of this course students will develop an understanding of the chemistry and analysis of carbohydrates, oils, fats, proteins, minerals and vitamins, contaminants and additives found in food.

CREDITS: 3.00

**FOOD N3115 - FOOD SAFETY AND HYGIENE II**

Participants of this course study various food-borne illnesses, food hazards and principles of hygiene, and cleaning chemistry to evaluate sanitation programmes for specific food processes. Graduates of this course are able to implement statistical quality control plans and quality audits in various food processing facilities. The course will also describe the importance of personal hygiene and various food safety programmes include GMP (Good manufacturing practices) and HACCP (Hazard analysis critical control points).

CREDITS: 3.00

**FOOD N3210 - WATER QUALITY AND SUPPLY**

Students, upon completion of this course, will be able to understand the theory and laboratory procedures required for the analysis of water according to accepted standards. Routine water testing including the physical and chemical parameters, is the practical part of this course. The course also provides an introduction to the technology of municipal water processing and water distribution systems.

CREDITS: 3.00

**HCL 1103 - SOFTWARE APPLICATIONS FOR HEALTH**

This is an introductory course on software applications. Correct keyboarding technique is emphasised (must achieve 20 wpm with 98% accuracy). Basic software applications are introduced including internet, email, MS Word, Excel, and basic desktop publishing. Selected applications in healthcare are discussed and demonstrated.

CREDITS: 3.00

**HCL 1113 - SOFTWARE APPLICATIONS FOR HEALTH**

This is an introductory course on software applications for healthcare. Basic software applications are introduced including internet, email, MS Word, MS Excel, MS PowerPoint and basic desktop publishing. Selected applications in healthcare are discussed and demonstrated. Correct keyboarding technique is emphasised.

CREDITS: 3.00

**HCL 1403 - HEALTH BUSINESS RECORDS PROCESSING**

This course provides the student with a working knowledge of business records processing involved in the management of health information in the healthcare industry. Students will understand the business and legal benefits of establishing a records retention programme. Students will utilise basic accounting skills required to address business practices in private and public healthcare sectors.

CREDITS: 3.00

**HCL 1413 - HEALTHCARE INFORMATION SYSTEMS**

Introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in healthcare environments.

In this course, students will create intermediate level spread sheets and databases to query, report, analyse problems and provide solutions for healthcare settings.  
CREDITS: 3.00

### **HCL 2103 - HEALTHCARE INFORMATION SYSTEMS**

This course introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in healthcare environments. The course reflects the challenges of healthcare information management in this dynamic environment. Case studies are incorporated to illustrate how information systems can support high-quality patient care and improve management decisions.  
CREDITS: 3.00

### **HCL 2203 - INTRODUCTION TO FINANCIAL MANAGEMENT IN HEALTHCARE**

Provides an overview in accounting systems and controls in healthcare, the accounting cycle and books of original entry, accrual accounting and reporting, and interpreting financial statements. Topics include assets, liability, equity, balance sheets, income statements, cash flow, inventory, depreciation, managerial accounting, cost accounting, budgeting and decision making as related to cost control. Financial concepts are covered in terms of its applications to the healthcare industry with emphasis placed on staffing.  
CREDITS: 3.00

### **HCL 2503 - BILLING AND REIMBURSEMENT**

This course introduces students to the basics of billing and reimbursement. On the completion of this course, students will show an understanding and appreciation of economic analysis of the healthcare market; identify and assess factors that control healthcare cost control, including case mix funding systems and managed care programmes; describe and discuss the impact of adopting new technologies on the cost of healthcare services; and consider and discuss the ethical and political aspects of these new healthcare funding models from a global perspective.  
CREDITS: 3.00

### **HCL 2603 - HEALTHCARE LAW AND ETHICS**

Upon completion of this course, students will understand the principles of ethical decision making in a healthcare administrative environment; be able to analyse different decision possibilities; and apply

decision making skills based on their understanding of the ethical issues involved. Through readings, case studies and presentations, students will examine topics such as moral and ethical reasoning, codes of ethics in health sciences, key laws in UAE healthcare, and specific ethical issues such as hospital organisations and staff, doctor/patient responsibilities, consent, patient information, confidentiality, autonomy, beneficence and nonmaleficence, paternalism and malpractice.  
CREDITS: 3.00

### **HCL 2703 - OVERVIEW OF HEALTH CHALLENGES**

Provides a broad overview of common healthcare challenges experienced by clients/patients in the healthcare system. Health promotion and prevention is covered in relation to healthcare outcomes. It is intended to provide healthcare administrators and leaders with a working knowledge of common health promotion and prevention issues and diseases in the UAE. Implications for the healthcare system, and quality management in relation to healthcare challenges are covered.  
CREDITS: 3.00

### **HCL 2713 - WORKFLOW MANAGEMENT FOR HEALTHCARE**

In this course, students will learn how workflow management is developed and monitored through the use of health information technology and the understanding of systems management. Students will review current workflow processes in a local government or private healthcare setting and recommend changes based on international standards.  
CREDITS: 3.00

### **HCL 2773 - HEALTHCARE CUSTOMER RELATIONSHIP MANAGEMENT**

Focuses on the concepts and processes of service quality improvement and customer care and how they are applied in healthcare facilities. The role of the healthcare administrator will be linked to customer and stakeholder expectations through applying concepts of quality improvement, quality control, quality assurance, risk management and utilisation review.  
CREDITS: 3.00

### **HCL 2803 - INTRODUCTION TO HEALTH INFORMATICS**

Upon successful completion of this course, students understand and are able to apply concepts related to strategic planning, analysis, design, evaluation,

selection, and implementation of health information systems. Students are introduced to and understand new concepts in health informatics and their applications. Students understand and are able to apply knowledge related to different patient care applications and are able to understand, describe, and apply principles and concepts related to administrative, clinical, decision support, and e-health applications.

CREDITS: 3.00

### **HCL 3003 - ELECTRONIC RECORDS PROCESSING FOR HEALTHCARE**

Provides students with an overview of and hands-on experience with a comprehensive and integrated business and patient records processing system. Students will explore records systems commonly used in business and healthcare settings in the UAE and will become familiar with using at least two modules in the electronic records system.

CREDITS: 3.00

### **HCL 3903 - HEALTHCARE PRECEPTORSHIP**

This course is a preceptorship. Students are supervised in the professional set by experienced professional preceptors. Faculty are responsible to coordinate experience, visit students and preceptor on a regular basis, observe student performance, confer with preceptor on student performance. Faculty are expected to assign grade for course to student based on their observations, anecdotal data from preceptor, and student reflection and insight into performance.

CREDITS: 4.00

### **HCL 4003 - RESEARCH METHODS IN HEALTHCARE**

Introduces qualitative and quantitative research methods in healthcare. The emphasis of the course is on applying a scientific approach to the evaluation of literature on healthcare related states and events in specific populations.

CREDITS: 3.00

### **HCL 4103 - HEALTHCARE POLICIES**

Provides an overview to the development of healthcare policies at a legislative and institutional level. Assessment, planning, and structural development of policies are covered. Simulated experience in policy development is provided.

CREDITS: 3.00

### **HCL 4113 - PROCESS QUALITY MANAGEMENT**

This course will require students to analyse and evaluate existing quality improvement processes in a hospital setting in order to recommend a continuous quality improvement (CQI) programme or to meet international accreditation standards. Students will explore international models of success and will apply the theories to a local government or private healthcare setting.

CREDITS: 3.00

### **HCL 4203 - BIostatISTICS AND EPIDEMIOLOGY**

Provides students with a basic understanding of epidemiology and the use of descriptive and inferential statistics in healthcare. It describes the history and purposes of epidemiology including relevant terminology, data sources, and measures used as well as the application of various epidemiological study designs. Principles, methods and data interpretation issues are included as the student achieves skills in research methodologies using data from health information sources. Application is made, wherever possible, to the specialisation of Health Information Management.

CREDITS: 3.00

### **HCL 4303 - GLOBAL TRENDS IN HEALTHCARE SYSTEMS AND ISSUES**

This course provides the opportunity to examine and analyse current healthcare system issues and trends. The course provides the foundation for a working knowledge to critically assess and appraise current healthcare systems and to proactively consider emerging healthcare system issues and their impact on healthcare system outcomes.

CREDITS: 3.00

### **HCL 4906 - HEALTHCARE ADMINISTRATION PRECEPTORSHIP/CAPSTONE PROJECT**

Students are engaged in professional practice in addition to the development and implementation of an approved capstone project. This will be a substantial project with sessions and materials development included, that forms part of the graduate portfolio. The student will in agreement with the preceptor, identify a management related issue, write up a proposal with research and theoretical support and propose a set project plan with clear objectives and deliverables

CREDITS: 8.00

**HDH 1203 - CHEMISTRY FOR DENTAL HYGIENE**

Introduces general concepts of chemistry including basic knowledge on the analysis of subatomic and atomic properties based on the periodic table of elements; integration of concepts of higher order of organisation of elements to molecules and polymers; molecular modelling; and practical aspects of chemical reactions and quantities. Chemical nomenclature and the analysis of molecules of organic origin is included. CREDITS: 3.00

**HDH 1303 - ORGANIC AND BIO CHEMISTRY FOR DENTAL HYGIENISTS**

An introduction to the chemistry of organic compounds, and biochemistry as it applies to the organisation, function, and regulation of living systems, especially in humans. Topics in this course include, chemical and molecular structure, functional group classification and their properties. The laboratory work covers basic organic and biochemistry laboratory techniques, including, organic modelling, functional group identification with special emphasis on differences. Safe practice within the chemistry laboratory is an important aspect of this course. CREDITS: 3.00

**HDH 2003 - HEAD AND NECK ANATOMY**

Upon successful completion of this course, students will be able to recognise the basic concepts in the anatomy and physiology of the head and neck. Students will gain the foundation knowledge regarding the bones, muscles, glands, blood supply, lymphatic drainage, as well as the components of innervation to the head and neck. CREDITS: 3.00

**HDH 2006 - PRECLINICAL DENTAL HYGIENE**

Preclinical dental hygiene emphasises the role of the dental hygienist in relation to other healthcare professions. Dental hygiene model, theories, and practice of care are described. Infection control procedures, principles and protocols are highlighted. Theoretical material will be applied in the dental lab. Dental professional instruments will be identified in conjunction with recognising main procedures needed in cleaning, sterilising and maintaining instruments and dental units. CREDITS: 6.00

**HDH 2103 - ORAL HISTOLOGY**

Provides the students with the basic concepts and

fundamental knowledge with regards to the histology of the oral tissues. The microscopic anatomy of the soft and hard tissues of the teeth will be discussed. The histology of the periodontium, oral mucosa, salivary glands and the tongue will be highlighted. CREDITS: 3.00

**HDH 2203 - DENTAL ANATOMY AND OCCLUSION**

Upon successful completion of this course students will be able to explain the major terminology used in dental anatomy, development and sequence of tooth eruption, temporomandibular joint, and inter- and intra-arch relationships. This course is a major foundational course in the education of dental hygiene students. CREDITS: 3.00

**HDH 2303 - GENERAL AND ORAL PHARMACOLOGY**

Upon successful completion of this course the dental hygiene students will have a satisfactory knowledge of the principles of pharmacology and the application of these principles to the dental hygiene practice. They will be able to identify the major groups of drugs they will use throughout their career, as well as the systemic drugs that have an effect on the dental hygiene practice. CREDITS: 3.00

**HDH 2403 - GENERAL AND ORAL PATHOLOGY**

Upon successful completion of this course students will have a satisfactory knowledge of the general concepts of pathology. Students will be able to relate these concepts to the specific health conditions that affect the oral cavity. Students will learn how to do an effective visual examination and how to recognise common oral diseases. CREDITS: 3.00

**HDH 3003 - DENTAL RADIOLOGY THEORY AND PRACTICE**

Covers the characteristics, production, and control of dental radiographs. Upon successful completion of this course students will have the skills and the knowledge to interpret extra and intra-oral radiographs identifying and recognising any significant and common discrepancies and technical errors. CREDITS: 3.00

**HDH 3103 - COMMUNITY DENTAL HEALTH I**

An introduction to the concepts and methods used in promoting dental health and preventing oral and dental

diseases. Topics include major concepts of dental health education and methods of delivering oral health to the community.

CREDITS: 3.00

### **HDH 3203 - DENTAL HYGIENE THEORY I**

Introduces concepts related to periodontology. This includes the aetiology and pathophysiology of the periodontal diseases. An introduction to the principles and methods used in comprehensive periodontal assessment of patients is discussed in detail.

CREDITS: 3.00

### **HDH 3403 - DENTAL HYGIENE THEORY II**

This course is a continuation of Dental Hygiene Theory 1. In this course the students will focus on the comprehensive examination of the oral cavity (extra-orally and intra-orally). They will be able to recognise the normal variations and early signs of diseases within and around the oral cavity. They will also learn how to evaluate the therapeutic implementation of different instruments used in periodontal therapy

CREDITS: 3.00

### **HDH 3503 - APPLIED NUTRITION IN DENTAL PRACTICE**

Provides a fundamental understanding of the effect of nutrition on general and oral health. Recognition of nutritional deficiencies is covered in detail. A major aspect of the course includes the accurate and comprehensive conduction and evaluation of nutritional surveys for clients and patients in dental practice.

CREDITS: 3.00

### **HDH 3603 - LAW AND ETHICS FOR DENTAL HYGIENE**

This course provides the knowledge of the concepts and principles of ethics and law in healthcare. Additionally, the course gives a background in the foundation of UAE laws that govern the practice of dentistry, medicine and allied health (Medical Responsibility Law and Medical Practice Law).

CREDITS: 3.00

### **HDH 3923 - DENTAL HYGIENE PRACTICE I**

This is a clinical education practice based course for the acquisition and application of knowledge and skills related to infection control and ergonomics in the dental clinic. Skill acquisition and knowledge application in relation to patient and client's medical, dental, and social history is applied.

CREDITS: 4.00

### **HDH 3955 - DENTAL HYGIENE PRACTICE II**

This is a clinical education course increasing the application of knowledge and skills in dental hygiene practice. This course provides an opportunity under expert supervision to perform extra and intra-oral examination, dental and periodontal charting. Real life acquisition of accurate assessment and development of dental hygiene diagnoses is provided.

CREDITS: 6.00

### **HDH 4003 - EPIDEMIOLOGY AND PREVENTIVE DENTISTRY**

Epidemiology and Preventive Dentistry provides the basic understanding of the scope of epidemiology and discuss the methods used to assess the oral health status of the community. Etiology and prevention of common oral conditions like caries, gingivitis, and periodontitis are outlined. Benefits of fluoride and fissure sealants are summarised. This course also prepare the students for planning oral health educating sessions.

CREDITS: 3.00

### **HDH 4103 - DENTAL HYGIENE THEORY III**

Dental Hygiene Theory III will assist the dental hygiene students in the understanding of dental stains, and the professional treatment options available to remove these stains. They will also be introduced to the principles and methods used in periodontal surgery including suture materials, design and techniques, as well as the treatment procedures that may need maintenance visits and the strategies used to improve patient compliance.

CREDITS: 3.00

### **HDH 4203 - MANAGEMENT AND SUPERVISION OF DENTAL PRACTICE**

Management and Supervision of Dental Practices allows exploration of dental hygiene clinics as a working business. Clarification of all the various types of dental hygiene treatments with particular attention to dealing with patient accounts is studied. Patient medical records and application of patient appointment systems completes the course.

CREDITS: 3.00

### **HDH 4403 - SCHOLARSHIP AND RESEARCH FOR EVIDENCE BASED PRACTICE**

The aims of this course are to develop a research proposal, report and literature review. The process allows the student to explore the pathway for producing the end product: a research document.

The latter includes the scientific method of research, how a research topic is chosen, writing a proposal for research, types of research quantitative, qualitative, theory, hypothesis, research tools, testing, statistical analysis, and finally the ethical aspects of the research methods.

CREDITS: 3.00

### **HDH 4503 - DENTAL HYGIENE THEORY IV**

Applied nutrition in dental practice gives students a fundamental understanding of the effect of nutrition on general and oral health. Upon successful completion of this course, students will be able to assess the nutritional status of the dental patients.

CREDITS: 3.00

### **HDH 4903 - COMMUNITY DENTAL HEALTH II**

This course is a continuation of Community Dental Health I. Community Dental Health II focuses on the students role as dental health promoters and programme planners. Needs analysis for community programmes will also be examined. Critical analysis of current literature and health promotion activities in dental health form part of the curriculum.

CREDITS: 4.00

### **HDH 4925 - DENTAL HYGIENE PRACTICE III**

Dental Hygiene Practice III will assist the dental hygiene students in integrating oral malodour management strategies throughout the preventive and therapeutic appointment. They will be able to differentiate the various kinds of dental stains, and will be able to professionally remove these stains. At the end of this course, the students should be able to assist healthcare professionals in the selection, use and removal of periodontal sutures and dressings, and explain the use of these materials to patients.

CREDITS: 6.00

### **HDH 4953 - DENTAL HYGIENE PRACTICE IV**

Upon successful completion of this course students will have the skills and the knowledge to demonstrate tooth whitening techniques, taking care of hypersensitivity and the application of liners, bases, matrices and rubber dam throughout the therapeutic appointment. They should be able to differentiate the various kinds of impression materials and should be able to professionally take impressions. They should also be able to advise proper post operative instructions for various inter disciplinary specialties.

CREDITS: 4.00

### **HED 1103 - UNDERSTANDING DISEASES**

The course introduces the disease processes related to selected health conditions prevalent in the UAE. Emphasis is placed on basic pathophysiology, manifestation and management. The course emphasises the strategies and healthcare and management guidelines of the World Health Organisation (WHO) and the UAE.

CREDITS: 3.00

### **HED 1203 - INTRODUCTION TO HEALTH PROMOTION**

The course provides broad understanding of health promotion and its links to health education within healthcare systems. Students will study concepts related to the promotion of healthy lifestyles and appropriate responses to human health needs. The principles of learning, teaching methodologies and evaluation will also be introduced and applied to health education.

CREDITS: 3.00

### **HED 2003 - MATERNAL AND CHILD HEALTH**

Provides an overview of the local and international key issues in reproductive , maternal and child health. It explores the Millennium Development Goals relevant to maternal and child health and how they are being implemented. Topics will include safe motherhood, fertility regulation, gender and health, child mortality, integrated management of childhood illness, and perinatal interventions.

CREDITS: 3.00

### **HED 2103 - PREVENTION AND CONTROL OF DISEASES**

Focuses on disease processes, disease prevention and control. This course covers communicable diseases; including methods of transmission, basic pathophysiology, management, control and prevention. An emphasis is placed on the strategies and guidelines developed by the World Health Organisation and the Centres for Disease Control in disease prevention. Special issues related to current disease trends globally and in the UAE are explored, and appropriate health promotion responses are discussed.

CREDITS: 3.00

### **HED 2203 - FOUNDATIONS OF HEALTH BEHAVIOUR**

Fundamental concepts in social-behavioural sciences and health; social behavioural factors identified as causes and antecedents to health; mechanisms for changes in health, prevailing health behaviour change

concepts and models; and methods for developing, implementing and evaluating health behaviour interventions.

CREDITS: 3.00

### **HED 3003 - MODELS OF NEEDS ASSESSMENT**

This course provides an understanding of the various approaches to health needs analysis. Emphasis is placed on collaboration and multidisciplinary approaches to understanding basic health needs. Key issues in community development such as community participation are highlighted.

CREDITS: 3.00

### **HED 3103 - ADVANCED PUBLIC COMMUNICATION**

Designed to develop advanced skills in public communication; it includes concepts such as persuasive and effective writing, preparation for news release and evolution of technology and the digital environment on delivery of health promotion campaigns and media strategies. Emphasis is placed on interpersonal communication and leadership skills needed to successfully manage communication projects.

CREDITS: 3.00

### **HED 3153 - COMMUNITY MENTAL HEALTH**

Provides an overview of models and theories of health promotion as applied in mental healthcare. Topics pertinent to mental healthcare such as mental health promotion, the socio-cultural context, stress, adaptation mechanisms, grief and loss are presented.

CREDITS: 3.00

### **HED 3203 - TECHNICAL ARABIC COMMUNICATION**

Focuses on the development of communication skills needed in future roles as health educators in the UAE. It introduces skills of translation from English to formal and informal Arabic. Students learn to take part in academic discussions and to make presentations in a comprehensible and concise manner. Emphasis is placed on developing learners' ability to communicate effectively, competently, and ethically in Arabic and English in public situations to achieve health education goals

CREDITS: 3.00

### **HED 3253 - PLANNING HEALTH PROMOTION**

Explores the demography and epidemiology of the

increasing population of those aged 65 and older. Physiological, psychological and social aspects of aging are covered. By the end of the course, students appreciate and understand the economic, social and cultural factors that affect the agencies, services and health education programmes serving the aged. Having a thorough understanding of this particular age group will become increasingly important as the population of aged increases, in order to provide adequate health education initiatives to improve quality of life and health for this group. The course applies concepts learned to producing a health education initiative or a UAE audience.

CREDITS: 3.00

### **HED 3303 - TEACHING SCHOOL HEALTH**

The course focuses on the theories and practices that contribute to the need for and successful implementation of a wide range of health education activities in schools. Students will recognise the generic aspects of school and the role of international and local agencies in promoting health for school going children.

CREDITS: 3.00

### **HED 3353 - IMPLEMENTING HEALTH PROMOTION**

Emphasises the translation of theoretical processes, health related information and data, into a programme for an identified at risk community group (communicable or non communicable diseases). Students review current health promotion practice and literature in applying evidence based practice. Students identify and support their identification of a target audience and their use of marketing and communication theories in the UAE culture.

CREDITS: 3.00

### **HED 3403 - EVALUATION OF HEALTHCARE**

This course is the last stage of core health education competencies. It provides progression from previous courses - Planning and Implementation of health promotion. Students are introduced to the best practices of evaluation processes. Emphasis is on multidisciplinary approaches to evaluation of effectiveness of health promotion programmes.

CREDITS: 3.00

### **HED 3503 - OCCUPATIONAL HEALTH**

Provides the basic principles and concepts of occupational health practice with special focus on

the interdisciplinary healthcare approaches. Emphasis will be on the health educator's role as a member of the occupational health team, establishment of an occupational health service, prevention of injury and disease, health promotion and protection of worker populations. It focuses on creating better working conditions and supporting healthy lifestyles of both workers and management by identifying health hazards, adverse physical conditions; consequences of overexposure to major risks.

CREDITS: 3.00

### **HED 3904 - COMMUNITY HEALTH/PRACTICUM**

Focuses on the practices that contribute to the need for and successful implementation of a wide range of health promotion/education activities for women, mothers and children under the age of five. Learners are provided opportunities to apply theory in a healthcare setting, collaborate with multidisciplinary teams to assess, plan, develop, and evaluate health promotion.

CREDITS: 6.00

### **HED 3944 - PATIENT EDUCATION/ PRECEPTORSHIP**

This Patient Education practicum is designed to enable students to plan, implement, and evaluate health education programmes and/or strategies in a patient care setting. This setting will provide opportunities to practice a variety of teaching and health counselling techniques as appropriate for the audience, while functioning as a full-time health educator for four weeks. Development of appropriate health education materials for a defined patient group will be part of the experience.

CREDITS: 6.00

### **HED 4003 - ADVANCED MANAGEMENT IN HEALTHCARE**

Looks at the fundamentals of strategic Healthcare management and how it relates to planning, implementing and evaluation of Healthcare provision within a global and regional context. This will include strategic management models of healthcare delivery systems in different countries. Major areas will be analysis of healthcare data, licensing and accreditation, and marketing health promotion.

CREDITS: 3.00

### **HED 4103 - HEALTH ASPECTS OF AGING**

Explores the demography and epidemiology of the

increasing population of those aged 65 and older. Physiological, psychological and social aspects of aging are covered. By the end of the course, students appreciate and understand the economic, social and cultural factors that affect the agencies, services and health education programmes serving the aged. Having a thorough understanding of this particular age group will become increasingly important as the population of aged increases, in order to provide adequate health education initiatives to improve quality of life and health for this group. The course applies concepts learned to producing a health education initiative or a UAE audience.

CREDITS: 3.00

### **HED 4403 - RESEARCH METHODS I**

Designed to introduce different research methods and to provide health sciences students with the foundation to the process of scientific inquiry. Both quantitative and qualitative methods will be covered. Emphasis is on developing a critical scientific approach to evaluating scientific literature, developing a research proposal, and outlining method including the data collection tool.

CREDITS: 3.00

### **HED 4453 - RESEARCH METHODS II**

Provides a supervised experience in planning and implementation of an empirical research study designed and developed in Research Methods I. A range of statistical methods and techniques learned in Biostatistics will be utilised to analyse data. Students are expected to demonstrate professionalism and competence in data collection, data analysis, writing up and presentation of the research report

CREDITS: 3.00

### **HED 4924 - OCCUPATIONAL HEALTH/ PRACTICUM**

Focuses on the practices that contribute to the need for and successful implementation of a wide range of health promotion/education activities in the workplace. Students will recognise the generic aspects of the work environment and the role of international and local agencies in promoting health for the working populations. It covers major trends of processes involved in conducting health needs assessment, designing and implementing various intervention approaches to help meet the needs of working individuals and groups.

CREDITS: 6.00

### **HEM 4954 - HEALTH EDUCATION INTERNSHIP/ CAPSTONE PROJECT/PRACTICUM**

This course is a synthesis of various elements and concepts for successful transition into professional life. Students will be expected to integrate all of the dimensions of health into a holistic approach to health education practice and demonstrate their knowledge and competence in the practice of health education and health promotion.

CREDITS: 6.00

### **HEM 1208 - FIRST RESPONDER**

Provides the basic knowledge and skills required to assess and treat patients with medical illness or traumatic emergency. Topics include personal safety, scene management, emergency care, immobilisation, patient handling, and basic first aid skills. Opportunities to learn and practice the use of basic life support equipment (oropharyngeal airway, bag-valve-mask, stethoscope, sphygmomanometer, splints, bandages, the performance of CPR, and Automated External Defibrillator (AED)) is provided. Successful completion of course provides an internationally recognised First Responder Certificate (Harrisburg Area Community College).

CREDITS: 8.00

### **HEM 2104 - EMT BASIC (I)**

Provides the knowledge and skills required for emergency pre-hospital care involving basic medical conditions. Outcomes include the theory and practice related to a range of emergency technical skills, including medical assessment, defibrillation, suctioning, airway management and the fundamentals of competent drug administration.

CREDITS: 4.00

### **HEM 2204 - EMT BASIC (II)**

Provides the knowledge and skills required for emergency pre-hospital care and management of patients experiencing trauma to the upper and lower body including the abdomen. Theory and practice is provided related to trauma assessment, splinting, spinal immobilisation, and emergency transport.

CREDITS: 4.00

### **HEM 2304 - EMT ADVANCED (I)**

Provides students with the knowledge and skills required for EMT-Basics to progress to competency as an advanced EMT. Students will understand the

roles and responsibilities of the advanced EMT within the EMS system. The assessment of emergency medical patient along with pathophysiology, the roles and responsibilities of the advanced EMT, and communication in the prehospital setting will be addressed.

CREDITS: 4.00

### **HEM 2404 - EMT ADVANCED (II)**

This course provides students with the knowledge and skills required for EMT-Paramedic to progress to competency as a Paramedic. Students will understand the roles and responsibilities of a Paramedic within the EMS system. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the prehospital setting will be addressed.

CREDITS: 4.00

### **HEM 2508 - EMT ADVANCED (III)**

This course provides students with the knowledge and skills required for the EMT-Advanced (Intermediate) to provide competent patient care in a variety of settings. Students will understand the roles and responsibilities, medical/legal issues, and importance of communication for an EMT-Advanced within the EMS system. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the prehospital setting will be addressed.

CREDITS: 8.00

### **HEM 2902 - AMBULANCE PRECEPTORSHIP I**

This course provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician

CREDITS: 3.00

### **HEM 2922 - AMBULANCE PRECEPTORSHIP II**

This course provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician

CREDITS: 3.00

**HEM 3108 - EMT PARAMEDIC (I)**

This course provides students with the knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. Students will understand the roles and responsibilities of a Paramedic during complicated situations involving cardiovascular, pulmonary, and neurological emergencies. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.

CREDITS: 8.00

**HEM 3208 - EMT PARAMEDIC (II)**

This course provides students with the knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. Students will understand the roles and responsibilities of a Paramedic during complicated situations involving paediatric, obstetrical, gynaecological, geriatric, endocrine, urological, toxicological and traumatic emergencies.

CREDITS: 8.00

**HEM 3902 - HOSPITAL AMBULANCE PRECEPTORSHIP I**

Provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician- Advanced.

CREDITS: 3.00

**HEM 3922 - HOSPITAL AMBULANCE PRECEPTORSHIP II**

This course provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician- Advanced (Intermediate).

CREDITS: 3.00

**HEM 3944 - SUMMER PRECEPTORSHIP**

This course provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff

and related to the required skills of the Emergency Medical Technician.

CREDITS: 5.00

**HEM 4003 - ADVANCED PHARMACOLOGY**

Provides high level training for paramedic students to provide patient care using advanced pharmacological intervention. This course prepares students to utilise international EMS statistics for the introduction of new policies on pharmacological intervention in advanced emergency care. Students will follow oversight and control procedures using the QA/QI process. An opportunity will be given to develop teaching and training materials regarding advanced pharmacology in emergency care.

CREDITS: 3.00

**HEM 4103 - EMERGENCY MEDICAL SERVICES MANAGEMENT**

Prepares the learner to critically consider the environmental constraints and resource limitations that exist in the United Arab Emirates and similar healthcare systems throughout the developing world. Students are required to develop consistency in basic management, leadership and administrative skills with a clear understanding of the concepts. Students become critically aware of different theories of management and management styles.

CREDITS: 3.00

**HEM 4203 - EVIDENCE BASED MEDICINE AND RESEARCH ANALYSIS**

Covers reading and analysis of peer-reviewed scholarly papers to prepare EMS responders to make practice recommendations and decisions about all aspects of EMS in light of evidenced-based research. The topics covered include levels of evidence, detection of bias, research study designs, and statistical analysis.

CREDITS: 3.00

**HEM 4303 - ADVANCED CLINICAL PRACTICE**

Provides the opportunity for paramedics to review and learn advanced level patient care in all environments. This course prepares students to provide advanced medical and trauma care by utilising student prepared workshops and audio-visual/multi media training materials. Opportunity will be given to present the advanced level training material to groups of students.

CREDITS: 3.00

### **HEM 4458 - DISASTER MANAGEMENT AND RESCUE**

Explores the emergency medical function in disaster response operations. The importance of an integrated, all-hazards response will be stressed. The nature of specialised treatment and triage is examined, along with the identification of hazardous conditions and dealing with ethical dilemmas. Advanced rescue medical response teams are discussed, including their purpose and method of operation. The review of disaster response AAR's will review previous disaster medical response highlighting the lessons learned from previous incidents.

CREDITS: 8.00

### **HEM 4944 - INTERNATIONAL PRECEPTORSHIP**

Provides students with the required opportunity for Advanced Life Support (ALS) clinical practice in the prehospital and hospital setting in the United States or with an equivalent ALS provider. Clinical practice will be under the supervision of Harrisburg Area Community College or delegated to local prehospital and hospital staff. All clinical experiences are related to the required skills of the Emergency Medical Technician-Paramedic.

CREDITS: 5.00

### **HEM 4964 - SPECIALITY PARAMEDIC ADVANCED PRECEPTORSHIP**

Provides the student with the opportunity for Advanced Life Support (ALS) clinical practice in the pre-hospital and hospital setting in the United States or with an equivalent ALS provider. This clinical practice will be under the supervision of qualified local prehospital or hospital staff. An optional international EMS work experience is available under the supervision of the Harrisburg Area Community College if the student is academically eligible and able to obtain a visa.

CREDITS: 5.00

### **HGEN N120 - ANATOMY AND PHYSIOLOGY II**

This course is the second in a two-semester sequence and is designed to build upon certain concepts covered in the Anatomy and Physiology I course. The aim is to extend the students' understanding of the workings of the body systems and the communication processes required to coordinate their activities. The topics covered will include the structure and function of the endocrine, nervous, integumentary, cardiovascular, respiratory, immune and reproductive systems. A laboratory component will allow students to explore

physiological concepts through a range of laboratory based activities.

CREDITS: 4.00

### **HIM 1203 - HEALTH INFORMATION CODING I (INTRODUCTION)**

Introduction to Health Information Coding covers the basics in applying appropriate codes from the latest International Classification of Diseases (ICD) to classify events of morbidity, mortality, surgical procedures and other non-surgical interventions with an emphasis on accuracy, completeness, and sequencing. It covers all body systems. Maternity, oncology, and external causes of morbidity and mortality are covered. Factors influencing health status and contact with health services are included.

CREDITS: 3.00

### **HIM 2003 - HEALTH INFORMATION CODING II (INTERMEDIATE)**

Comprehensive approach to incorporate coding principles from theory to practice at an intermediate level as well as introducing the student to the science of pharmacology, focusing on the rational for appropriate code assignment. Students are required to apply their knowledge of pharmacology when coding case studies.

CREDITS: 3.00

### **HIM 2103 - APPLIED PATHOPHYSIOLOGY FOR HEALTH INFORMATION MANAGEMENT**

Introduces the student to the pathophysiological processes of the body systems. The etiology, clinical features, diagnostic testing procedures and management of a selection of disorders affecting the major body systems is studied namely: gastrointestinal, respiratory, cardiovascular including blood and lymphatic, nervous and endocrine, musculoskeletal, urinary and reproductive systems. Students get an understanding of medical terminology used in describing clinical signs and symptoms, diagnostic techniques (laboratory based and radiological), surgical and medical procedures performed that comprise the patient's record. The course emphasises the application of knowledge of pathophysiology to Health Information Management.

CREDITS: 3.00

### **HIM 2203 - HEALTH INFORMATION MANAGEMENT STUDIES**

Encompasses comprehensive health information management skills; categorisation and processing of

patient information into indexes, registers, registries, as well as the more common nomenclatures and classification systems including the activities and functions of a typical health information management department. Introduction of computerised record processing systems, using related patient data systems as examples whilst managing data quality and maintaining patient's confidentiality.

CREDITS: 3.00

### **HIM 2303 - HEALTH INFORMATION CODING III (ADVANCED)**

Apart from further developing knowledge on health information coding using the latest ICD version, abstracting and coding audits are covered in this unit to give the students a deeper understanding of the coding process, its intricacies and the wider implication of this into the provision of better health planning, financing and administration. The course will also introduce the link between case mix, diagnostic related groups and health funding models and how these tools contribute to the provision of better health outcomes.

CREDITS: 3.00

### **HIM 2403 - INTRODUCTION TO MANAGEMENT IN HEALTHCARE**

Healthcare management is a continually changing and evolving discipline. Basic understanding in organisational management, motivation, leadership and conflict management are covered in this course alongside the functions of management from the viewpoint of a manager who is responsible for creatively solving problems as well as facilitating creative problem solving efforts in others.

CREDITS: 3.00

### **HIM 2903 - HEALTH INFORMATION MANAGEMENT HOSPITAL PRECEPTORSHIP**

A clinical education and practice course providing opportunity for the application of knowledge and skills in an active health record department. Students acquire knowledge in, and experience with the structure and responsibilities of a health record department and interdepartmental relationships. Students gain procedural experience in assembly, analysis, filing, management of master patient index, management of incomplete record processing, record-tracking, and release of health information.

CREDITS: 4.00

### **HIM 2923 - CODING PRACTICUM**

A practicum course where students apply the coding theory to actual patient records in an acute care practice environment. The current version of the International Classification of Diseases (ICD) is utilised in this practicum in alignment with best practice. During the practicum students are exposed to and code increasingly complex medical, surgical, obstetrical, and new-born records with an emphasis on coding speed, accuracy, completeness and sequencing. The practicum provides an opportunity to identify suggest improvements to coding practices which may not comply with best practice standards.

CREDITS: 4.00

### **HIM 3003 - BIostatISTICS**

The course introduces statistical concepts applied in health information management. It emphasises the basic concepts and processes that use data to enhance understanding of health information. Topics include measures of central tendency, distributions and hypothesis testing. Emphasis is on application of knowledge.

CREDITS: 3.00

### **HIM 3103 - HEALTH INFORMATICS I**

Introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in healthcare environments. Upon successful completion of this course, students are expected to assess and appreciate the appropriateness of computer hardware, software, and networking technologies in healthcare settings.

CREDITS: 3.00

### **HIM 3203 - HEALTH INFORMATICS II**

Upon successful completion of this course, students understand and apply concepts related to strategic planning, analysis, design, evaluation, selection and implementation of health information systems. Students are introduced to and understand new concepts in health informatics and their applications. Students understand and are able to apply knowledge related to different patient care applications and are able to understand, describe and apply principles and concepts related to administrative, clinical, decision support, and e-health applications.

CREDITS: 3.00

**HIM 3303 - EPIDEMIOLOGY**

Provides the basic understanding of core and central concepts in epidemiology. The course will include historical origins, purpose and uses of epidemiology. Emphasis is on measurement as well as data interpretation. Epidemiological study designs will be used to enhance understanding of investigation of disease outbreak.

CREDITS: 3.00

**HIM 3902 - WORK EXPERIENCE FOR HEALTH INFORMATION MANAGEMENT**

This practicum course is designed to allow Health Information Management students to work on specific projects related to the programme goals. The supervisor for the student at the work placement site coordinates these projects. Projects will be selected from any of the major health information management functions and also in relation to the requests and needs of the host site. During this practicum, students are expected to work independently and apply work ethics and professionalism. Student submit a final project report to the host site supervisor and college instructor.

CREDITS: 5.00

**HIM 4003 - INTERMEDIATE MANAGEMENT IN HEALTHCARE**

An introduction to two areas of management, Financial and Human Resource Management in the Healthcare industry. For Financial Management an overview of accounting systems and controls in healthcare, managerial accounting, budgeting, staffing and reporting tools will be included. Human Resource Management will cover an introduction to Human Resource Management, strategy and planning. Students will examine processes such as recruitment, selection, training, performance appraisals, counselling, disciplinary action, grievance and dismissal management as well as Occupational Health and Safety in the workplace environment.

CREDITS: 3.00

**HIM 4103 - HEALTH DATA ANALYSIS**

Students will examine the collection, interpretation and uses of health data beyond the client/patient treatment and disease/operation classification stages. Key emphases include: health data applications in management and clinical decision-making; performance indicators for healthcare funding, use and evaluation of coded and non-coded sources of health data for

research, data management for clinical trials and regulatory and management issues surrounding registries and databases. Students will gain experience applying coded data in clinical and non clinical studies; comparing key health classifications via analysis of historical coded data.

CREDITS: 3.00

**HIM 4203 - RESEARCH METHODS IN HEALTHCARE**

Designed to introduce different methods to provide health sciences students with the foundation to the process of scientific inquiry. Both quantitative and qualitative methods will be covered. Emphasis is on developing a critical scientific approach to evaluating scientific literature, developing a research proposal and data collection tool. The course provides theoretical background to the implementation of research projects in programme.

CREDITS: 3.00

**HIM 4303 - HEALTHCARE ECONOMICS AND HEALTH INSURANCE**

Introduces students to the basics of health economics. Upon completion of this course, students show an understanding and appreciation of economic analysis of the healthcare market, identify and assess factors that control the healthcare insurance industry, describe and discuss the different models of healthcare cost control, including case mix funding systems and managed care programmes, describe and discuss the impact of adopting new technologies on cost of healthcare services, and finally, consider and discuss the ethical and political aspects of these new healthcare funding models from a global perspective.

CREDITS: 3.00

**HIM 4403 - ADVANCED MANAGEMENT IN HEALTHCARE**

Focuses on strategic management and its application in healthcare. Topics covered in this course are strategic planning and forecasting, marketing, organisational assessment, benchmarking, quality improvement, workplace re-design and process re-engineering. Upon completion of this course, students develop a departmental strategic plan and manage its implementation at departmental and organisational levels.

CREDITS: 3.00

**HIM 4924 - PROFESSIONAL EXPERIENCE**

This is an application course at selected healthcare facilities which is affiliated with management. In cooperation with the facility mentor and their teacher, students select, plan and present a major project. Students are guided through independent activities in which they use many of the skills they have developed throughout their entire curriculum. Special emphasis is placed on professionalism, leadership and creative problem solving in the healthcare setting. The course cumulates in a formal paper which is presented to invited community guests, college teachers and students.

CREDITS: 5.00

**HIMP N202 - APPLIED PATHOPHYSIOLOGY I**

Introduces the student to the pathophysiological processes of the body systems. The etiology, clinical features, diagnostic testing procedures and management of a selection of disorders affecting the following body systems is studied: cardiovascular, respiratory, blood and lymphatic, gastrointestinal and endocrinal systems, along with diseases of the eye and ear.

CREDITS: 4.00

**HIMP N205 - RECORD PROCESSING SYSTEMS I**

This course provides an introduction to health information management, including the activities and functions of a typical health information management department. The structure, content, assembly, analysis, storage and retention of records are covered together with form development and design. The course introduces the student to computerised record processing systems, utilising the MEDICOM software as well as other related patient data systems as examples.

CREDITS: 5.00

**HIMP N210 - HOSPITAL ROTATION**

The aim of this course is to allow students to practice in an active health record department the theory they study in HIMP N205 Record Processing Systems I. Students learn about the structure and responsibilities of a health record department and interdepartmental relationships; they complete several procedures including assembly, analysis, filing, management of master patient index, management of incomplete record processing, record-tracking, and release of health information. In addition, it provides an opportunity for discussion on best practices both at the site and in the classroom.

CREDITS: 3.00

**HIMP N235 - LEGAL AND ETHICAL ASPECTS IN HEALTH INFORMATION MANAGEMENT**

Upon successful completion of this course, students possess knowledge of medical-legal issues and how this affects the health information manager. Students learn to appreciate the ethical challenges in the management of health information in contemporary healthcare settings. Throughout the course, they study law in relation to ethics, principles of liability, aspects of informed consent as well as moral and ethical reasoning. Student learning is facilitated through group discussions, mock trials, debates, and case analyses as well as standard classroom lectures.

CREDITS: 3.00

**HIMP N250 - HEALTH INFORMATION CODING**

Covers the basics in applying appropriate codes from the International Classification of Diseases, Tenth Revision, Australian Modification (ICD-10-CM) to classify events of morbidity, mortality, surgical procedures and other non-surgical interventions with an emphasis on accuracy, completeness, and sequencing. Students learn how to apply coding conventions and realise the importance of their profession in meeting stakeholder needs. Each of the body systems is covered with realistic exercises as well as maternity, neoplasm, and external causes of morbidity and mortality.

CREDITS: 5.00

**HIMP N252 - APPLIED PATHOPHYSIOLOGY II**

This course is a continuation from the HIMP 202 Applied Pathophysiology I. The etiology, clinical features, diagnostic testing procedures and management of disorders affecting the following body systems is studied: male and female reproductive systems including obstetrics and genetics, as well as the urinary, musculoskeletal and nervous systems.

CREDITS: 4.00

**HIMP N255 - RECORD PROCESSING SYSTEMS II**

Covers the categorisation and processing of patient information into indexes, registers, registries, as well as the more common nomenclatures and classification systems. The importance of data quality is emphasised when categorising and processing patient clinical information. Students achieve an understanding of legal and ethical issues as they relate to patient clinical information. They also become familiar with the organisational structure and responsibilities of the medical staff realising the participative role of health information management in clinical services.

CREDITS: 4.00

**HIMP N265 - CODING PRACTICUM I**

This is a co-requisite course with HIMP N250 Health Information Coding as it provides an opportunity for students to apply the coding theory they have learned in the classroom to actual patient records in an acute care facility by using the latest International Classification of Diseases, (ICD). Students code medical, surgical, obstetrical, and new-born records with emphasis on coding accuracy, completeness, and sequencing. It also provides an opportunity to identify and comment on coding practices which may not comply with standard guidelines.

CREDITS: 4.00

**HIMP N312 - BIostatISTICS**

Introduces the student to the use of descriptive and inferential statistics in healthcare. The course builds upon statistical applications and concepts taught in HIMP 200 Healthcare Statistics; it includes examples for applying statistics in problem solving, and techniques for data collection, presentation and analysis. Students identify and apply frequency measures and techniques for graphical display of data and understand concepts and practices in measurement.

CREDITS: 4.00

**HIMP N315 - INFORMATION SYSTEMS IN HEALTHCARE**

This course introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in healthcare environments. The course reflects the challenges of healthcare information management in this dynamic environment. Case studies are incorporated to illustrate how information systems can support high-quality patient care and improve management decisions.

CREDITS: 5.00

**HIMP N356 - INTRODUCTION TO MANAGEMENT IN HEALTHCARE**

Covers organisational management, motivation, leadership, and conflict management. Managerial functions are examined from the perspective of a healthcare manager who is responsible for solving and facilitating the creative solutions process for others in the healthcare environment. The nature of change and the management of change are discussed.

CREDITS: 4.00

**HIMP N360 - EPIDEMIOLOGY**

Provides students with a basic understanding of epidemiology. It briefly describes the history and

purposes including relevant terminology, data sources, and measures used as well as the application of various epidemiological study designs. Screening for diseases, infectious diseases and environmental epidemiology are also discussed.

CREDITS: 4.00

**HIMP N366 - CODING PRACTICUM II**

A continuous opportunity for students to apply the coding theory they have learned in the classroom to actual patient records in an acute care facility by using the latest International Classification of Diseases version, (ICD). Students code more complex medical, surgical, obstetrical, and new-born records with emphasis on coding speed, accuracy, completeness and sequencing. It also provides an opportunity to identify and improve on coding practices which may not comply with standard guidelines.

CREDITS: 4.00

**HIMP N368 - WORKPLACE ROTATION**

This practicum course is designed to allow Health Information Management students to work on specific projects related to the programme goals. The supervisor for the student at the work placement site coordinates these projects. Projects will be selected from any of the major health information management functions and also in relation to the requests and the needs of the host site. During this practicum, students are expected to work independently and apply work ethics and professionalism. Students submit a final project report to the host site supervisor and the college instructor.

CREDITS: 4.00

**HIMP N371 - INTERMEDIATE HI CODING**

Builds upon the knowledge acquired in HIMP 250 Health Information Coding and is further expanded by incorporating pharmacology. It provides a comprehensive approach to incorporate coding principles from theory to practice at an intermediate level as well as introducing the student to the science of pharmacology, focusing on the rationale for appropriate code assignment. Students are required to apply their knowledge of pharmacology when coding the case studies.

CREDITS: 4.00

**HIMP N375 - HEALTH INFORMATICS**

Upon successful completion of this course, students understand and are able to apply concepts related to strategic planning, analysis, design, evaluation, selection, and implementation of health information

systems. Students are introduced to and understand new concepts in health informatics and their applications. Students understand and are able to apply knowledge related to different patient care applications and are able to understand, describe, and apply principles and concepts related to administrative, clinical, decision support, and e-health applications.

CREDITS: 5.00

### **HIMP N401 - RESEARCH PROJECT I**

Designed to introduce different research methods and to provide health sciences students with the foundation to the process of scientific inquiry. Both quantitative and qualitative methods will be covered. Emphasis is on developing a critical scientific approach to evaluating scientific literature, developing a research proposal, and outlining method including the data collection tool. The course provides theoretical background to the implementation of research in HIMP N402 - Research Project II.

CREDITS: 5.00

### **HIMP N402 - RESEARCH PROJECT II**

Provides a supervised experience in planning and implementation of an empirical research study designed and developed in Research Project I. A range of statistical methods and techniques learned in Biostatistics will be utilised to analyse data. Students are expected to demonstrate professionalism and competence in data collection, data analysis, writing up and presentation of the research report

CREDITS: 4.00

### **HIMP N416 - INTRODUCTION TO FINANCIAL MANAGEMENT IN HEALTHCARE**

An introductory course providing an overview in accounting systems and controls in healthcare, the accounting cycle and books of original entry, accrual accounting and reporting, and interpreting financial statements. Topics include assets, liability, equity, balance sheets, income statements, cash flow, inventory, depreciation, managerial accounting, cost accounting, budgeting and decision making as related to cost control. Financial concepts are covered in terms of its applications to the healthcare industry with emphasis placed on staffing.

CREDITS: 4.00

### **HIMP N418 - QUALITY MANAGEMENT IN HEALTHCARE**

Focuses on the concepts and processes of quality and how quality is applied throughout healthcare. It

discusses activities and methods of quality improvement in healthcare facilities generally, and in the health information management department specifically where quality improvement process is a project within the course. It also addresses the attributes of an effective quality improvement team. In addition, the course includes an introduction to the concept of risk management and utilisation review processes.

CREDITS: 4.00

### **HIMP N419 - HUMAN RESOURCES MANAGEMENT IN HEALTHCARE**

Provides an introduction to human resource management, strategy and planning. The course covers the basic functions of human resource management and examines processes such as recruitment and selection, orientation and training, development and performance appraisals, establishing good relationships between management and staff including problem situation in the employer-employee relationship, as well as staff retention. Disciplinary action, grievances, dismissals, redundancy and outplacements are also addressed. Throughout, students become cognisant of relevant terms relative to human resources.

CREDITS: 4.00

### **HIMP N425 - ADVANCED HEALTH INFORMATICS**

Builds upon the knowledge acquired in HIMP 375. It introduces students to the concepts of telemedicine, telehealth and e-health including e-health records. This course also discusses the impact of information and communication technologies on health consumers, health economics, and health providers. This course also introduces students to the different evaluation and assessment techniques of e-health applications and communication technologies.

CREDITS: 5.00

### **HIMP N426 - RESEARCH METHODS IN HEALTHCARE**

Designed to introduce the student to the methods and techniques of research in general as well as in Health Information Management. Various research methodologies are presented. The course provides theoretical background to the implementation of research in HIMP 410.

CREDITS: 5.00

### **HIMP N456 - ADVANCED MANAGEMENT IN HEALTHCARE**

Builds upon the management skills learned in HIMP326 Human Resource Management and HIMP355 Quality

Management in Healthcare, and focuses on strategic management and its application in healthcare. Topics covered in this course are strategic planning and forecasting, marketing, standards for accreditation and licensure, preparing for accreditation surveys, compliance with governmental regulations in healthcare, organisational assessment and benchmarking.

CREDITS: 5.00

### **HIMP N460 - HI SYSTEMS PROJECT MANAGEMENT**

Further develops student knowledge gained from HIMP 315 Information Systems in Healthcare, HIMP 375 Health informatics, and HIMP 425 Advanced Health Informatics. The course introduces Health Information Management students to project management concepts and applications as they relate to the implementation of healthcare management information systems in hospitals and other healthcare settings.

CREDITS: 5.00

### **HIMP N471 - ADVANCED HI CODING AND CASEMIX**

This course builds upon the knowledge acquired in HIMP 250 Health Information Coding and HIMP 371 Intermediate Health Information Coding, and further develops the student knowledge of health information coding using ICD-10-CM. Writing abstracts and coding audits is covered in this unit to give the students a deeper understanding of the coding process, its intricacies and the wider implication of this into the provision of better health planning, financing and administration. The course will also introduce the link between case mix, diagnostic related groups and health funding models and how these tools contribute to the provision of better health outcomes.

CREDITS: 5.00

### **HIMP N494 - PROFESSIONAL EXPERIENCE**

This is an applications course at selected healthcare facilities which is affiliated with management. In cooperation with the facility mentor and their teacher, students select, plan and present a major project. Students are guided through independent activities in which they use many of the skills they have developed throughout their entire curriculum. Special emphasis is placed on professionalism, leadership and creative problem solving in the healthcare setting. The course cumulates in a formal paper which is presented to invited community guests, college teachers and students.

CREDITS: 4.00

### **HIMP N495 - HEALTH FUNDING AND REIMBURSEMENT**

Introduces students to the basics of health economics. On completion of this course, students show an understanding and appreciation of economic analysis of the healthcare market, and can identify and assess factors that control the healthcare insurance industry.

CREDITS: 5.00

### **HIMP N510 - PROFESSIONAL EXPERIENCE II**

This is an applications course at selected healthcare facilities which is affiliated with management. In cooperation with the facility mentor and their teacher, students select, plan and present a major project. Students are guided through independent activities in which they use many of the skills they have developed throughout their entire curriculum. Special emphasis is placed on professionalism, leadership and creative problem solving in the healthcare setting. The course cumulates in a formal paper which is presented to invited community guests, college teachers and students.

CREDITS: 4.00

### **HIMP N516 - HEALTH FUNDING AND REIMBURSEMENT**

Introduces students to the basics of health economics. On completion of this course, students show an understanding and appreciation of economic analysis of the healthcare market, and can identify and assess factors that control the healthcare insurance industry.

CREDITS: 5.00

### **HIST N401 - HISTORICAL PERSPECTIVES OF THE ARAB WORLD**

This seminar-type course presents a framework for understanding the peoples and cultures of the Arab world. It emphasises the history of the Arab nation; analyses the emergence of Islam; and explains the concept behind the sense of identity and the beginnings of modern Arab consciousness. It also examines the inner dynamics of Arab societies and the historical interaction with the West, the diversity of modern Arab societies and its implications on the economy and the future of Arab unity.

CREDITS: 4.00

### **HLED N256 - MID CHILDHOOD/ADOLESCENT HEALTH**

This course continues from Maternal and Child Health, and explores the health and well being of school

aged children, particularly those in middle childhood (five- ten years), the pubertal years (eleven-thirteen), and adolescence (fourteen-eighteen). Social and environmental influences on the child which could affect health are explored. Issues of family life and lifestyle will be discussed in relation to their impact on the physical and mental health of children. Adolescent health behaviours and health problems will be covered and related to their social and biological effects.

CREDITS: 4.00

### **HLED N260 - BIostatISTICS**

Provides an overview of biostatistics. The types of quantitative analysis used in health education/promotion programmes will be covered. The aim of the course is to provide students with learning opportunities to: gain an understanding of the concepts underlying biostatistical tests; perform basic biostatistical calculations mathematically and using the SPSS programme; understand and use the biostatistical data they meet during their work.

CREDITS: 4.00

### **HLED N307 - TECHNICAL ARABIC HEALTH COMMUNICATION**

Focuses on the development of communication skills needed in future roles as health educators in the UAE. Students learn to take part in academic discussions and to make presentations in a comprehensible and concise manner. Cases are used to enable students to translate texts from English to Arabic.

CREDITS: 4.00

### **HLED N308 - IMPLEMENTING HEALTH PROMOTION**

Programme requires students to translate theoretical processes and health related information and data into a programme for an identified group at risk of an identified communicable or non communicable disease. Students will be required to review current health promotion practice and literature and use this as evidence on which to base their rationale for their practice. This will also support their identification of the target audience and rationale for the use of social marketing and communication theories and practice in UAE.

CREDITS: 4.00

### **HLED N355 - OCCUPATIONAL HEALTH**

Introduces occupational health and safety as it relates to workplace safety and work-related adverse health

effects that health educators may encounter. The first part of this course provides an introduction to: the modern workplace and its health hazards; consequences of overexposure to chemical and physical agents and adverse physical conditions; methods to evaluate the workplace; and regulatory activities in occupational health globally and locally.

CREDITS: 3.00

### **HLED N365 - HEALTH ASPECTS OF AGING**

Explores the demography and epidemiology of the increasing population of those aged 65 and older. Physiological, psychological and social aspects of aging are covered. By the end of the course, students appreciate and understand the economic, social and cultural factors that affect the agencies, services and health education programmes serving the aged.

CREDITS: 3.00

### **HLED N370 - METHODS AND MATERIALS IN HEALTH EDUCATION II**

This second course in developing methods and materials for health education focuses on developing theory and skills to implement and evaluate a variety of health education programmes for various settings and audiences. Students are encouraged to utilise appropriate instructional methodologies such as discussion, lecture, problem solving, demonstration, experiment, role play, gaming, newsletter, brochure, television, radio and computer assisted instruction.

CREDITS: 4.00

### **HLED N380 - PRACTICUM: COMMUNITY HEALTH (4 FULL WEEKS)**

This Community Health practicum course relates the theoretical knowledge and practical skills gained within the college to specific duties and responsibilities of practicing health educators. Placements are chosen to enable students to plan, implement, and evaluate health education programmes in a community setting. There should be an opportunity to utilise a variety of health education techniques as appropriate for the target audience. Students are expected to maintain a portfolio of materials used during the practicum, and complete a reflective journal of their experiences.

CREDITS: 4.00

### **HLED N405 - BIOETHICS**

Designed for students to explore the various bioethical issues that may impact on their health education practice. Bioethics is introduced as an interdisciplinary

subject though critical thinking, writing and debating contemporary issues. The course intends to develop moral wisdom and the ability to think ethically using the Code of Ethics for Health Education framework.

CREDITS: 3.00

### **HLED N407 - TECHNICAL HEALTH COMMUNICATION**

The purpose of this course is to provide training about how to use various communication media for social marketing to plan, set up and produce resources and media for health related activities like academic writing, writing for the appropriate health audiences and specific health related topics such as, nutrition, physical activity and obesity prevention programmes. Also, to outline the theory and practice of health communication within promotion of health and wellbeing in a community setting.

CREDITS: 4.00

### **HLED N412 - RESEARCH METHODS I**

This course is the first of two which present research methods used in health promotion/education. Various approaches based on qualitative and quantitative methods are presented. Emphasis is placed throughout the course on developing a practical understanding of why, when, and how to use research methods to support high quality, effective health education interventions.

CREDITS: 4.00

### **HLED N416 - COUNSELLING**

The aim of health counselling is to assist clients to achieve healthier lifestyles, or to adjust to changes in physical, psychological or emotional well-being. This introductory course examines counselling for health as an interchange between counsellor and client which requires the effective communication of information relevant to the client's needs. The course provides a theoretical background for health counselling of individuals and groups, based mostly on cognitive behaviour change. Recognition of differing backgrounds, perspectives, and motivations of clients will be a focus of the course. Goal setting, motivational counselling and counselling interaction skills are practiced in the college environment.

CREDITS: 5.00

### **HLED N417 - RESEARCH METHODS II**

Follows on from HLED 412, where students developed a proposal and research instrument to complete an

individual health research project. During this course, the emphasis is on students implementing the data gathering phase and applying data analysis techniques using SPSS to reach conclusions about their research question. The completed project is then written up in thesis format, and as a journal article. By way of their completed research project, students will demonstrate skills, knowledge and ability in literature research, research design, data collection, data analysis and formal academic writing.

CREDITS: 5.00

### **HLED N430 - PRACTICUM: PATIENT EDUCATION**

Practicum courses relate the theoretical knowledge and practical skills gained within the college to specific duties and responsibilities of practicing health educators. This Patient Education practicum is designed to enable students to plan, implement, and evaluate health education programmes and/or strategies in a patient care setting. This setting will provide opportunities to practice a variety of teaching and health counselling techniques as appropriate for the audience, while functioning as a full-time health educator for four weeks. Development of appropriate health education materials for a defined patient group will be part of the experience.

CREDITS: 4.00

### **HLED N450 - INTERVENTION PLANNING**

Successful health interventions are a planned combination of theoretical methods delivered through a series of strategies organised into an event. The practice of health education and health promotion involves three major programme planning activities: conducting a needs assessment; developing and implementing a programme; and evaluating the programme's effectiveness. This course provides learners with a framework for designing, implementing and evaluating a health intervention strategy. Through the development and evaluation of an intervention linked to instructor provided community profile information, learners can demonstrate abilities related to the seven CHES competencies and HCT Graduate Outcomes. This course provides the foundation for completing the Internship Capstone Project (HLED N481) and contributes to their professional portfolio.

CREDITS: 5.00

### **HLED N455 - MANAGEMENT OF ORGANISATIONS AND INDIVIDUALS**

An introduction to management functions and processes

as applied to organisations and to individuals in organisations. The theory and communication principles included in the course are designed to give beginning practitioners an understanding of workplace dynamics and processes prior to employment. Topics covered include strategy and planning; job and organisation design; ethics and social responsibility; global influences; leadership; motivation; and organisational change.

CREDITS: 4.00

### **HLED N480 - PRACTICUM (ENVIRONMENTAL OR OCCUPATIONAL)**

Each Health Education practicum seeks to provide opportunities for students to participate in the educational and administrative aspects of health education in a community-based organisation/agency. The focus of this practicum will be either environmental or occupational health. The practicum is meant to provide structured, meaningful, 'hands-on' experiences that apply and consolidate the knowledge and skills acquired during college-based study.

CREDITS: 4.00

### **HLED N481 - INTERNSHIP/CAPSTONE PROJECT**

The Health Education Internship is a concentrated pre-professional experience that provides an opportunity for Community Health students to apply theories, knowledge and experiences gained from their undergraduate programme to real life situations. The programme integrates coursework, knowledge, skills and experiential learning to enable students to demonstrate mastery of learning across various disciplines in the curriculum. Students will utilise an electronic format to present the capstone project.

CREDITS: 8.00

### **HLTH N1215 - HEALTH BUSINESS COMPUTING I**

Provides students with basic knowledge about computers and their hardware components, how to distinguish between system and application software, and how computers can be connected to form networks. The course also focuses on common key elements of MS Office programmes, file management, use of search engines, and understanding the fundamentals of email systems using an email application to support day-to-day operations in the healthcare industry. Students will also develop speed and accuracy in keyboarding. The course will further develop computer skills in the medical administration business environment using

desktop publishing software.

CREDITS: 6.00

### **HLTH N1220 - ARABIC COMPUTING I**

Studies computer skills using Arabic software. Arabic keyboarding skills and technique are emphasised. Word-processing, spread sheet and presentation software in Arabic are used to produce a variety of business documents. Students create, design and present a slide show presentation in Arabic. Arabic applications in designing brochures and flyers are included. This course will be project-based to allow for more realistic applications.

CREDITS: 2.00

### **HLTH N209 - IMMUNOLOGY**

Introduces theoretical concepts in immunology and their application in practical techniques used in laboratory medicine. Topics will include innate and adaptive immunity, development of the immune system, induction and expression of the immune response, structure and function of antigens and antibodies, antigen-antibody reactions, MHC and aspects of immunology in disease.

CREDITS: 3.00

### **HLTH N2115 - HEALTH BUSINESS COMPUTING II**

This second course in a series of three provides students with a working knowledge to perform common administrative tasks in the healthcare industry using up-to-date Microsoft technology. Students will learn how to provide office support for healthcare professionals to ensure patient information is stored and used appropriately. Initially, students will learn to produce, edit, and format documents, letters, faxes and reports using MS Word. Students also focus on developing keyboarding speed and accuracy to an intermediate level.

CREDITS: 5.00

### **HLTH N2120 - ARABIC COMPUTING II**

This course will review, consolidate and build upon previously acquired computer skills from Arabic Computing I while introducing advanced features of word processing with Arabic software used in the health industry. Arabic keyboarding skills and technique are emphasised. Students will create, design and present an intermediate-level slide show presentation in Arabic. This course will enable the students to do project-based scenarios to develop more realistic applications.

CREDITS: 2.00

### **HLTH N2125 - INTRODUCTION TO ORGANISATIONAL BEHAVIOUR**

Provides students with a working knowledge of Organisational Behaviour. Students will explore approaches to improving services and standards of healthcare delivery. Students will develop the skills required to work effectively with other members of the multidisciplinary healthcare team. Students will utilise interpersonal communication skills and techniques in order to effectively respond to the needs of the working team and customers in an effective and professional manner.

CREDITS: 2.00

### **HLTH N2130 - MEDICAL TERMINOLOGY I**

Designed to provide students with a working knowledge and understanding of medical language used by healthcare professionals. Students will acquire skills to pronounce, define, and spell basic medical vocabulary associated with a wide range of areas such as cardiovascular, respiratory, digestive, renal and reproductive. Graduates will be able to analyse and interpret medical reports related to specific body system.

CREDITS: 4.00

### **HLTH N2131 - MEDICAL TERMINOLOGY AND TRANSCRIPTION I**

This is an introductory course which integrates medical terminology and medical transcription. It focuses on recognising and articulating medical roots, prefixes and suffixes, in order to analyse medical terms including those used in radiology and pharmacology. This will be reinforced with the introduction to medical transcription including understanding the purpose and content of medical reports, formatting and applying transcription rules and the use of reference materials for assistance. Grammar, punctuation, accuracy and speed are important aspects that will be emphasised through copy typing of a variety of medical and health related reports.

CREDITS: 6.00

### **HLTH N2210 - WORK EXPERIENCE PREPARATION**

This course prepares students for work placement. The student will be able to organise and document work skills, life skills and personal characteristics in an individual inventory. They will be able to prepare documents used in a job search to industry standard and orally present personal skills and strengths,

backed up by documented evidence, to make them an ideal choice for a posting, in a simulated or real employment interview. In addition to workplace performance expectations, students will develop an awareness of the basics of Occupational Health and Safety to facilitate an appreciation of healthy and safe practice in workplace settings.

CREDITS: 3.00

### **HLTH N2215 - HEALTH BUSINESS COMPUTING III**

This final course in a series of three courses provides students with a working knowledge to perform common administrative tasks in the healthcare industry using Microsoft up-to-date technology. Students will learn how to focus on the fundamentals and importance of Healthcare database information systems while providing office support for healthcare professionals to ensure patient information is stored, and used appropriately. This course also focuses on developing keyboarding speed and accuracy to an advanced level.

CREDITS: 3.00

### **HLTH N2220 - ARABIC COMPUTING III**

Builds upon the skills previously acquired in Arabic Computing I and II while introducing advanced features of word processing used in the health industry. An Arabic word processing package will be used to produce business documents. It is a practical, hands-on course and covers essential computer skills needed for further study and employment in the health industry. Skills are developed through online materials, college based materials and projects.

CREDITS: 2.00

### **HLTH N2225 - HEALTH BUSINESS/RECORDS PRACTICES**

Provides the student with a working knowledge of the clerical processes involved in the management of health information in the healthcare industry. Students will gain an understanding of the methods involved in health data collection, storage and retrieval. Students will develop skills required to perform patient scheduling and registration. Students will also utilise basic accounting skills required to address business practices in private and public healthcare sectors.

CREDITS: 4.00

### **HLTH N2230 - MEDICAL TERMINOLOGY II**

This course is a progression of Medical Terminology 1. It provides students with advanced medical terminology

skills for use in healthcare facilities with a special emphasis on understanding symptoms, pathology, medical specialties, specialists, diagnostic and drug terminology. Graduates will develop medical vocabulary related to specific forms of medical specialties.

CREDITS: 4.00

### **HLTH N2231 - MEDICAL TERMINOLOGY AND TRANSCRIPTION II**

This course is a progression of Medical Terminology and Transcription I where the students' knowledge of medical terminology as well as transcription skills at a professional level is further enhanced. Students' proficiency in analysing, spelling and defining medical terms will be further complemented with terms, abbreviations, symbols and medical tests associated with each of the body systems.

CREDITS: 6.00

### **HLTH N306 - RESEARCH METHODS FOR HEALTH SCIENCES**

This course is designed to introduce learners to the techniques and methods of research.

CREDITS: 4.00

### **HLTH N420 - RESEARCH I**

This course is an introductory module for all students. It provides a broad overview of quantitative and qualitative research methodologies, research philosophy and research ethics. Students also develop basic research skills such as using technology to locate relevant information, carrying out a literature review, using a research log, as well as analysing and evaluating information.

CREDITS: 5.00

### **HLTH N425 - RESEARCH II**

Students develop a deeper understanding of the research process through applying some of the general principles underpinning quantitative and qualitative research methodologies. Students learn how formulate research questions, gather data, interpret and analyse, set out their arguments within the context of their research findings and the research literature, and draw conclusions. Students also use software tools that are particularly relevant for research analysis and discussion purposes.

CREDITS: 5.00

### **HMI 1103 - INTRODUCTION TO MEDICAL IMAGING**

Introduces students to core aspects of the medical imaging profession and to the BSc Medical Imaging (MI) programme. Students will study the history of medical imaging, the roles and responsibilities of medical imaging personnel, the application of core diagnostic imaging modalities, radiation safety practices, elementary aspects of patient care and clinical ethics. This course develops knowledge and understanding of the role and responsibilities of the radiographer in modern medical imaging practice.

CREDITS: 3.00

### **HMI 2001 - PATIENT CARE I**

Focuses on developing understanding in the fundamentals of patient care in medical imaging environments. Specifically the course covers infection control, manual handling, patient communication and data confidentiality. Successful course completion indicates an understanding of patient care for mobile and restricted mobility patients and clients frequently encountered in non-critical medical imaging departments.

CREDITS: 1.00

### **HMI 2002 - MEDICAL IMAGING TECHNOLOGY I**

Introduces the basic design and function of standard medical X-ray equipment, of X-ray image receptors and X-ray image processing. In addition, students learn to identify and explain the function of the various parts of an X-ray unit, how X-rays are produced, how X-rays interact with matter and the various factors that affect the quality and quantity of the X-rays produced. Students also learn to describe the quality of medical images in precise terms such as spatial and contrast resolution with regard to ALARA principles.

CREDITS: 3.00

### **HMI 2102 - MEDICAL IMAGING TECHNOLOGY II**

Examines how digital medical images are produced, manipulated and transmitted between medical imaging modalities and hospital information systems. Students will discuss dedicated digital imaging systems such as Patient Archive and Communication Systems (PACS), Radiology Information Systems (RIS) and the parameters used in analysing digital image quality. Students will also investigate the design, function and operation of fluoroscopic, mobile and theatre X-ray equipment.

CREDITS: 3.00

### **HMI 2303 - MEDICAL IMAGING POSITIONING AND PROCEDURES I**

Teaches students the art of radiographic positioning for plain X-ray imaging focusing on the upper and lower extremities, the spine, pelvis, hips, and chest. Students will learn through a mix of theory and simulated practice using medical imaging terminology to develop radiographic positioning and patient care skills in for plain X-ray imaging. On successful completion of this course students will have acquired the knowledge and skills required for plain X-ray imaging of the appendicular skeleton, spine and chest in modern medical imaging practice.

CREDITS: 3.00

### **HMI 2403 - MEDICAL IMAGING ANATOMY AND PATHOLOGY I**

Studies image critique skills for diagnostic images of the upper and lower extremities, the spine, pelvis, hips, and chest. This enables students to recognise, identify and describe normal medical imaging anatomy and commonly encountered pathologies on a range of X-ray examination. Students will apply specific image interpretation terminology to evaluate image content in terms of normal and abnormal findings and to assess image quality. This course also promotes an understanding the nature of disease and the role of X-ray imaging in patient care and clinical management.

CREDITS: 3.00

### **HMI 2503 - MEDICAL IMAGING POSITIONING AND PROCEDURES II**

Teaches the art of radiographic positioning for plain X-ray imaging of the abdomen, skull, maxillary-facial structures and dentition. This course also examines mobile and theatre imaging and introduces the fundamentals contrast media imaging. Students will learn through a mix of radiographic theory and simulated practice using medical imaging equipment to develop radiographic positioning and relevant patient care skills. On successful completion of this course students will have acquired further knowledge and skills in plain X-ray imaging and the role of mobile, theatre and contrast media examinations in modern medical imaging practice.

CREDITS: 3.00

### **HMI 2603 - MEDICAL IMAGING ANATOMY AND PATHOLOGY II**

This course teaches image critique skills for diagnostic X-ray images of the abdomen, skull, maxillary-facial

structures and dentition to include fluoroscopic, mobile and theatre images and basic contrast media studies as appropriate. Students will develop further skills in basic anatomical image interpretation, image critique and disease classification to recognise, identify and describe normal anatomy and commonly encountered pathologies. On successful completion of this course, students will have developed enhanced image critique skills in a range of diagnostic imaging examinations and an understanding of their role in modern medical imaging practice.

CREDITS: 3.00

### **HMI 2904 - CLINICAL PRECEPTORSHIP I**

This introductory clinical preceptor course is the first of eight clinical experiential learning courses to provide students with opportunities to translate previously taught medical imaging technique and patient care theory into authentic clinical practice. Learning takes place within safe, supervised clinical learning sites facilitated by partner health authorities and associated clinical preceptors. In this course, students will be orientated to safe clinical practice and develop specific radiographic and patient care skills in plain X-ray imaging of the upper and lower extremities, spine and chest, the theory of which has been taught prior to clinical learning.

CREDITS: 5.00

### **HMI 3001 - PATIENT CARE II**

The fundamentals of patient care for ward, theatre, trauma and acute care medical imaging environments. In particular, students will develop applied understanding of the safe administration of radiological contrast agents to include precautions of use and emergency responses to adverse contrast media reactions. Students will also learn safe patient handling for therapeutic interventions such as drips, oxygen, suction and electronic patient monitoring. Successful completion of this course indicates knowledge and applied understanding of patient care in acute care medical imaging environments.

CREDITS: 1.00

### **HMI 3002 - MEDICAL IMAGING TECHNOLOGY III**

This technical course teaches the design, use and function of fluoroscopy equipment as used in diagnostic, angiographic and interventional radiology to enable students evaluate radiation doses in those specialist modalities to determine best clinical

application. Students will also study the design and use of dedicated mammography units and mammography accessories so that they can compare mammographic equipment with standard X-ray equipment. This course also allows students to establish a knowledge base in the design of equipment used to produce images in Nuclear Medicine (NM) examinations including DEXA scanning equipment used in bone densitometry.  
CREDITS: 3.00

### **HMI 3102 - MEDICAL IMAGING AND POSITIONING III**

Focuses on the theory and application of specialist medical imaging modalities to include paediatric imaging, mammography, diagnostic and interventional fluoroscopy, Nuclear Medicine and DXA relating pathology to imaging practice. Successful conclusion of this course indicates knowledge and applied understanding of these specialist imaging modalities such that students will be able to evaluate their best use and discuss their role in modern medical imaging practice.  
CREDITS: 3.00

### **HMI 3202 - SPECIALISED IMAGING I**

Designed to ensure students develop their technical knowledge of specialised imaging modalities including an understanding of the scientific principles that form the basis of each imaging system. Students will study the design and function of specific equipment used in Computerised Tomography (CT), Medical Ultrasound (US), Magnetic Resonance Imaging (MRI) and acute trauma. Students will develop the skills to explain and evaluate the technical aspects of these advanced imaging systems and their clinical applications.  
CREDITS: 2.00

### **HMI 3212 - RADIATION SAFETY AND BIOLOGY**

This course teaches the theory and practice of radiation protection for both patients and healthcare professionals. Students will examine the theories of cell biology, the units of radiation dose and the biological effects of ionizing radiation interaction with human tissues. Factors affecting biological response are studied, including acute and chronic effects of radiation exposure, dose limitation guidelines and radiation protection regulations and codes of practice. Successful conclusion of this course indicates knowledge and applied understanding of best radiation safety practices such that students will be able to evaluate and apply

ALARA principles in modern medical imaging practice.  
CREDITS: 2.00

### **HMI 3312 - CROSS SECTIONAL ANATOMY**

Develops applied skills in recognising and describing cross-sectional anatomy and commonly encountered pathologies for CT, MRI, US and relevant multi-planar imaging modalities. Students will learn through authentic viewing and analysis of cross-sectional images relating appearances to normal anatomy and abnormal pathologies. Successful conclusion of this course indicates an ability to evaluate cross-sectional images and discuss the value of multi-planar imaging in modern medical imaging practice.  
CREDITS: 2.00

### **HMI 3922 - CLINICAL PRECEPTORSHIP II**

This Clinical Preceptor course is a four week summer clinical experiential learning course which provides students with opportunities to translate previously taught imaging technique and patient care theory into authentic clinical practice. Learning takes place within safe, supervised clinical learning sites facilitated by partner health authorities and associated clinical preceptors. In this course, students will continue to develop previously acquired radiographic and patient care skills and develop further skills in plain X-ray imaging the theory of which has been taught prior to clinical learning.  
CREDITS: 5.00

### **HMI 3934 - CLINICAL PRECEPTORSHIP III**

This Clinical Preceptor course is one of eight clinical experiential learning courses which provide students with opportunities to translate previously taught medical imaging technique and patient care theory into authentic clinical practice. Learning takes place within safe, supervised clinical learning sites facilitated by partner health authorities and associated clinical preceptors. In this course, students will continue to develop previously acquired radiographic and patient care skills in general X-ray including theatre and mobile imaging, and in addition will be introduced to mammography, nuclear medicine and fluoroscopy, the theory of which has been taught prior to clinical learning.  
CREDITS: 5.00

### **HMI 3944 - CLINICAL PRECEPTORSHIP IV**

This clinical Preceptor Course is one of eight clinical

experiential learning courses which provide students with opportunities to translate previously taught medical imaging technique and patient care theory into authentic clinical practice. Learning takes place within safe, supervised clinical learning sites facilitated by partner health authorities and associated clinical preceptors. In this course, students will continue to develop previously acquired radiographic and patient care skills in general X-ray, theatre and mobile imaging, mammography, nuclear medicine and fluoroscopy and where clinically appropriate be introduced to angiography, advanced trauma, CT, MRI and ultrasound imaging modalities.

CREDITS: 9.00

### **HMI 4002 - SPECIALISED IMAGING II**

Provides the opportunities to develop understanding of the theory, practice and clinical application of specific cross sectional imaging modalities to include CT, MRI, US and advanced trauma imaging. This course prepares students for advanced clinical education in specialised elective imaging courses. Specifically this course covers patient preparation care during and after cross sectional imaging and addresses relevant common clinical pathologies.

CREDITS: 2.00

### **HMI 4003 - QUALITY MANAGEMENT IN MEDICAL IMAGING**

Develops student skills in explaining and evaluating international quality management systems that are used to maintain and improve performance in healthcare organisations and justify their application in medical imaging. Students learn to apply basic quality measurement tools and critically appraise the results they provide. Students analyse how quality management tools are used by healthcare organisations to deliver quality improvement that is timely, effective and patient centred. The course focuses on how quality standards are used to maintain and improve medical imaging services as an integral part of a total quality management programme.

CREDITS: 3.00

### **HMI 4102 - SPECIALISED IMAGING ELECTIVE**

Provides opportunities for students to extend their knowledge and applied understanding of an elected area of specialist practice such as CT, MRI, US, or advanced trauma. Modalities offered for elective study are based on clinical availability to support the development of

advanced clinical practice skills. Students will reflect upon personal competencies in a specialist imaging modality to evidence understanding of clinical practice to an advanced level.

CREDITS: 3.00

### **HMI 4103 - RESEARCH PROJECT I**

Develops applied understanding of the fundamental principles of scientific research methodology and skills in the construct of a research proposal. Students will learn how to formulate research questions, identify a suitable method of inquiry, plan a primary research project and contemplate ethical considerations surrounding research efforts to competently construct an authentic research proposal. On successful conclusion of this course, students have the necessary applied understanding and experience to competently construct a research proposal at a novice level.

CREDITS: 3.00

### **HMI 4203 - PROFESSIONAL PRACTICE**

Builds upon knowledge, understanding and skills developed in course HMI 4103 by allowing students to apply fundamental research skills in the form of a specific intended small scale research study. Students will also demonstrate competence in analysing collected data by means of appropriate software and in reporting the outcomes of their completed study. On successful completion of this course, students will have the necessary understanding and experience to successfully complete all elements involved in the execution of a small scale scientific research study.

CREDITS: 3.00

### **HMI 4303 - RESEARCH PROJECT II**

This course builds on knowledge; understanding and skills developed in course HMI 4103 by allowing students to apply fundamental research skills in the form of a specific intended small scale research study. Students will also demonstrate competence in analysing collected data by means of appropriate software and in reporting the outcomes of their completed study. On successful completion of this course, students will have the necessary understanding and experience to successfully complete all elements involved in the execution of a small scale scientific research study.

CREDITS: 3.00

### **HMI 4952 - CLINICAL PRECEPTORSHIP V**

This four week summer clinical preceptor experiential

learning course provides students with opportunities to translate previously taught medical imaging technique and patient care theory into authentic clinical practice. Learning takes place within safe, supervised clinical learning sites facilitated by partner health authorities and associated clinical preceptors.

CREDITS: 9.00

#### **HMID N402 - LEGAL, BIO-ETHICAL, AND SOCIO-CULTURAL ISSUES FOR MIDWIFERY**

Examines the theory of and the application of laws and legislation related to midwifery practice inclusive of scope and standards of practice, and Codes of Ethics. In addition, there is a focus on the socio-cultural aspects of health and health services in the UAE trends and issues in maternal - child care, and models of midwifery practice. Understanding the cultural, and social perspectives of the UAE culture is discussed as a critical framework to the development of best practices in midwifery care in the UAE.

CREDITS: 2.00

#### **HMID N405 - MIDWIFERY THERAPEUTICS I**

Focuses on the requisite theory and competencies for midwives in managing the childbearing process for the low risk pregnancy from preconception to post partum. Woman and family centred care are emphasised as a framework for evidence informed midwifery practice.

CREDITS: 2.00

#### **HMID N406 - MIDWIFERY THERAPEUTICS II**

Focuses on the requisite theory and competencies for midwives in recognising and managing the women experiencing health challenges during pregnancy, at any point from preconception to post partum. Early detection and risk assessment are covered as well as collaborative inter-disciplinary practice. Woman and family centred care are emphasised as a framework for evidence informed midwifery practice.

CREDITS: 2.00

#### **HMID N407 - MIDWIFERY THERAPEUTICS III**

This course focuses on the requisite advanced theory and competencies for midwives in recognising and working with the childbearing woman and family with complex health challenges from preconception, conception, through pregnancy, birth and post partum. Specialised competencies related to both non invasive and invasive monitoring and interventional therapies are covered. Emergency and critical care health challenges are covered in detail in relation to the midwifery role.

CREDITS: 2.00

#### **HMID N408 - MIDWIFERY THERAPEUTICS IV**

This course focuses on the consolidation of theory and competencies for midwives in recognising and working with the childbearing woman and family who are low risk, medium risk, and experiencing complex health challenges from preconception, conception, through pregnancy, birth and post partum. This course utilises the theoretical and competency background acquired in previous courses to the entire student to develop their base in anticipation of graduate outcomes and prepare them for their internship/preceptorship experience.

CREDITS: 2.00

#### **HMID N411 - INFORMATION LITERACY I - BIostatISTICS**

A general overview of biostatistics with an emphasis on how to access and retrieve data; understand statistics with an emphasis on case scenarios related to research and the childbearing process. Statistical data related to births; maternal morbidity and mortality; premature birth; stillbirths and infant mortality are covered. Software tools that are particularly relevant for research analysis and discussion purposes are discussed.

CREDITS: 2.00

#### **HMID N413 - MIDWIFERY THERAPEUTICS IV**

Focuses on the consolidation of theory and competencies for midwives in recognising and working with the childbearing woman and family who are low risk, medium risk, and experiencing complex health challenges from preconception, conception, through pregnancy, birth and post partum. This course utilises the theoretical and competency background acquired in previous courses to the entire student to develop their base in anticipation of graduate outcomes and prepare them for their internship/preceptorship experience.

CREDITS: 2.00

#### **HMID N414 - INTRODUCTION TO BASIC RESEARCH**

Builds upon the two previous courses and provides students with an in-depth look at the research process and explores naturalistic inquiries (qualitative studies) and traditional scientific research (quantitative studies); research philosophy and research ethics. Students develop skills enabling them to critically read and analyse the strengths and weakness of sample research studies and will undertake the critical steps in developing a novice research project.

CREDITS: 4.00

**HMID N415 - RESEARCH METHODS I**

Covers research methods used in health, with particular application to midwifery. Methodologies of both quantitative and qualitative processes are covered. Students develop a research plan as an outcome of this course.

CREDITS: 2.00

**HMID N416 - RESEARCH METHODS II**

Builds upon the two previous courses and provides students where students developed a quantitative or qualitative research plan. During this course students will implement the data gathering phase in relation to their identified methodology using appropriate data analysis techniques in relation to their research question. Students will carry out project or a mock project, if resources or other factors prevent implementation.

CREDITS: 4.00

**HMID N420 - PRACTICUM I**

Provides the student with the opportunity to apply theoretical knowledge and skills to plan, implement, and evaluate midwifery care for the low risk childbearing woman and family. The practicum occurs in a clinical placement providing clinical education with a focus on the low risk childbearing family.

CREDITS: 7.00

**HMID N421 - PRACTICUM II**

Builds upon the experience gained in working with low risk childbearing families, to provide the student with the opportunity to apply theoretical knowledge and skills to plan, implement and evaluate midwifery care for the medium risk childbearing woman and family. The practicum occurs in a clinical placement, providing clinical education with a focus on caring for both the low and medium risk childbearing family in all phases of the childbearing experience.

CREDITS: 8.00

**HMID N422 - PRACTICUM III**

Builds upon the experience gained in working with low and medium risk childbearing families, to provide the student with the opportunity to advance their application of theoretical knowledge and skills to plan, implement, and evaluate midwifery care for more complex groupings of childbearing women and families in all phases of the childbearing experience. Students in advancing their practice utilise previously acquired midwifery practice skills to initiate and propose recommend plan of care in an increasingly independent

manner.

CREDITS: 8.00

**HMID N423 - PRACTICUM IV**

This course builds on the three previous practicums to provide students with the opportunity to advance and consolidate their theoretical knowledge and skills to assess, plan, implement, and evaluate midwifery care an increasingly complex in all phases of the childbearing experience. Students demonstrate increasingly independent performance (within scope of practice) as they move towards programme exit competencies.

CREDITS: 8.00

**HMID N451 - MIDWIFERY TRANSITION TO PRACTICE**

Covers the transition to professional midwifery practice. This course covers preparation to undertake criterion and competency based licensing exam, developing and maintaining currency in evidence informed practice, and exploring current legislation and trends in midwifery care in the UAE and globally.

CREDITS: 2.00

**HMID N455 - INTRODUCTION TO MANAGEMENT FOR HEALTH PROFESSIONALS**

An introduction to management for health professionals. Students will learn the primary functions and processes as applied to organisations and to individuals in organisations. Topics include strategy and planning; organisational design and behaviour; communication theory; workplace dynamics and processes; job and organisation design; change management; leadership; motivation; performance management.

CREDITS: 2.00

**HMID N477 - MIDWIFERY COMMUNITY HEALTH AND HEALTH EDUCATION**

Students explore theoretical frameworks and healthcare policies underpinning community health and relate them to parenting and family demographics. Primary healthcare is the focus. Students will apply a community orientated, evidenced based approach to primary healthcare and education for maternal, infant and family care. Students will have the opportunity to prepare health education and health promotion materials with an emphasis on the postpartum period.

CREDITS: 2.00

**HMID N480 - MIDWIFERY INTERNSHIP**

This internship provides the opportunity for the

student to advance satisfactorily meet programme exit competencies at the entry level of midwifery practice. Students under the guidance of an experience midwifery preceptor carry out the full scope of practice with the childbearing family in all phases.

CREDITS: 20.00

### **HML 1003 - HAEMATOLOGY I**

Provides an introduction to the work carried out in a haematology laboratory and emphasises the importance of correct and complete sample collection on the quality of results. Students learn about normal haemopoietic cell production, the use of blood cell counters and data interpretation. Students will recognise normal and abnormal red cells and describe the causes and effects of various types of anaemia.

CREDITS: 3.00

### **HML 1103 - MICROBIOLOGY I**

Introduces theoretical concepts and practical techniques used in the classification, isolation and identification of microorganisms. The course comprises study of the concepts of infection, transmission of disease, pathogenicity, body defence mechanisms, prevention and control of infections. Students learn techniques used in the diagnosis of bacterial infections. Instruction in safe working practices and the concept of and the need for quality control are an integral part of the course.

CREDITS: 3.00

### **HML 1203 - CLINICAL CHEMISTRY I**

Covers the theory and practical aspects of clinical chemistry. Laboratory safety, mathematics, quality assurance, and analytical principles of basic clinical chemistry procedures are covered. At a novice level an introduction to normal physiology and common pathologies are discussed in relation to analysis. Theoretical learning is applied through manual techniques during laboratory exercises applying principles to the analysis of the chemical constituents of blood and other body fluids.

CREDITS: 3.00

### **HML 1302 - BASIC LABORATORY SKILLS**

Designed to provide an overview of theory, application, and hands-on experience in a medical laboratory. It is also intended to develop the psychomotor skills needed to work safely and efficiently in the laboratory setting. Procedure recording, calculations, data acquisition, and analysis of laboratory activities are

covered. Experimental techniques, including reagent preparation, filtration, centrifugation, spectroscopy, and microscopy is examined in detail appropriate to a novice laboratory scientist.

CREDITS: 2.00

### **HML 2003 - HAEMATOLOGY II**

Begins with instruction on the detection, diagnosis and laboratory investigation of the haemoglobinopathies. The importance of conditions such as sickle cell disorders and thalassaemia will be discussed with particular reference to their prevalence and importance in the UAE. This will be followed by a study of normal and abnormal white blood cell formation. Subjects to be discussed will be changes in systemic and infectious diseases and in haematological malignancies. The structure and importance of the HLA system and stem cell transplantation will also be discussed.

CREDITS: 3.00

### **HML 2023 - HAEMATOLOGY III**

Explains normal haemostasis. The roles and interactions of the blood vessels, platelets, and coagulation and fibrinolytic systems are discussed. The inherited and acquired disorders of haemostasis will be studied and students will carry out the practical tasks needed to differentiate and diagnose these disorders. The causes and clinical effects of thrombosis will be discussed and, again, students will have the opportunity to carry out the appropriate laboratory tests involved in the diagnosis and treatment of these disorders.

CREDITS: 3.00

### **HML 2103 - MICROBIOLOGY II**

Follows up on further identification and clinical correlations of bacteria encountered in clinical specimens. This involves procedures and interpretation of microscopic, cultural, biochemical and serological techniques used in the isolation and identification of bacteria commonly encountered in the medical microbiology laboratory. There is a continued instruction in the dangers of handling bio hazardous clinical specimens and how to perform all tasks safely following accepted aseptic procedures. Performance and interpretation of antimicrobial susceptibility tests is also covered.

CREDITS: 3.00

### **HML 2123 - MICROBIOLOGY III**

This course follows up on further identification and clinical correlations of bacteria encountered in clinical

specimens, mainly blood and body fluids. In addition, the course includes the study of parasitic, viral, fungal infections and their diagnosis. The student learns about and performs, as appropriate the specimen collection and processing, microscopic, cultural and immunological techniques used in the isolation and identification of fungi and parasites.

CREDITS: 3.00

### **HML 2203 - CLINICAL CHEMISTRY II**

Upon completion of this course students are able to perform a range of manual techniques for analysis in Clinical Chemistry and are introduced to automated chemistry analysers. Students understand and are able to apply the principles of enzymology along with measurement techniques. Students comprehend normal physiology and pathology related to each of the analytes including liver function tests and cardiac enzymes. Students complete laboratory exercises which reinforce application of principles in manual and automated analysis.

CREDITS: 3.00

### **HML 2223 - CLINICAL CHEMISTRY III**

Upon completion of this course, students understand advanced topics in Clinical Chemistry including: lipid metabolism and its relationship to cardiovascular disease; prostate diseases; mineral metabolism (calcium, inorganic phosphate, and magnesium); human Chronic Gonadotropin; thyroid function; introduction to therapeutic drug monitoring; and immunoassay methods, acid base balance and Ion Selective Electrodes. Students learn the inter-relationships of disease and clinical chemistry values along with related analytical techniques in assessing the previous topics. Laboratory exercises complement the concepts covered in the classroom. Proficiency in running, calibrating and trouble shooting the instruments used in the lab is an expected outcome. Students are exposed to more advanced forms of analysis in a hospital laboratory.

CREDITS: 3.00

### **HML 2302 - TRANSFUSION SCIENCE I**

Begins with a discussion of the nature of antigen-antibody reactions and the inheritance and structure of blood group antigens. Laboratory exercises reinforce the students' understanding by providing the opportunity to perform a variety of blood grouping techniques. Blood donation, screening and processing of blood and blood products, and the testing of donors and recipients to ensure safe transfusion practice will be

discussed. The importance of effective quality control and quality assurance in blood transfusion centres and laboratories will be presented.

CREDITS: 2.00

### **HML 2342 - TRANSFUSION SCIENCE II**

This course will teach the students about the laboratory testing procedures necessary to ensure the safe provision of blood products. Students will learn in both theory and practical sessions how to carry out the required grouping and matching procedures, and how to detect and identify clinically significant antibodies. Instruction will be given about the possible adverse effects of transfusion procedures and students will learn how to investigate an alleged blood transfusion reaction.

CREDITS: 2.00

### **HML 3006 - CLINICAL CORRELATIONS**

Brings together the various streams of knowledge taught in Microbiology, Haematology, Clinical Chemistry and Blood Banking in the context of the clinical case of patients. Students study a selection of diseases and disorders. The emphasis is on the correlation of the laboratory data with pathophysiology, diagnosis and treatment and biomedical ethics of major disease categories and body systems to include, renal, cardiovascular, hepatic, endocrine, respiratory, CNS, skeletal and areas of neoplasia, trauma, inheritance and pregnancy.

CREDITS: 6.00

### **HML 3022 - INTRODUCTION TO BASIC HEALTH RESEARCH**

Students are introduced to the fundamental principles of research methodology and how these principles are applied for conducting research in health sciences. The students will learn how evidence produced through research is applied to solving problems in everyday healthcare. The course addresses qualitative as well as quantitative research issues. In this course students are introduced to the fundamental ethical rules on which health science research is based. The students learn how to plan and write research studies, including how understanding of the supervision process.

CREDITS: 2.00

### **HML 3102 - CELL PATHOLOGY I**

Introduces the principles and practices of cellular pathology used in the investigation of disease and disease processes. Instruction will also concentrate

on safe working and good laboratory practices. The module will introduce cell injury, tissue preservation, tissue processing, microtomy, tissue recognition and preparation of tissue samples for diagnosis. Through laboratory practical instruction, the role of the technologist in the cellular pathology laboratory will be understood.

CREDITS: 2.00

### **HML 3122 - CELL PATHOLOGY II**

Builds upon on the basic principles introduced in HML 3102, Cellular Pathology I. The unit will introduce population screening, collection of cytology samples, preparation of cytology samples, staining cells for diagnosis and cell recognition. Through laboratory practical instruction, the role of the technologist in the cytology laboratory will be understood.

CREDITS: 2.00

### **HML 3302 - IMMUNOLOGY**

Introduces theoretical concepts in immunology and their application in practical techniques used in laboratory medicine. Topics will include innate and adaptive immunity, development of the immune system, induction and expression of the immune response, structure and function of antigens and antibodies, antigen-antibody reactions, MHC and aspects of immunology in disease.

CREDITS: 2.00

### **HML 3913 - CLINICAL PLACEMENT I**

This is a student preceptorship course in the medical laboratory field setting. Students under the supervision of professional medical laboratory technologists observe and perform routine and specialised medical laboratory procedures, and analysis of laboratory data. Competence levels in medical laboratory procedures are set at the appropriate standard for third year students and teaching, assessment, and evaluation are reflective of the indicated standard.

CREDITS: 4.00

### **HML 3925 - CLINICAL PLACEMENT II**

This is a student preceptorship course in the medical laboratory field setting. Students under the supervision of professional medical laboratory technologists perform routine and specialised medical laboratory procedures, and analysis of laboratory data. Competence levels in medical laboratory procedures are set at the appropriate standard for third year students and teaching, assessment, and evaluation are

reflective of the indicated standard.

CREDITS: 6.00

### **HML 4003 - BIOLOGY OF DISEASES**

Introduces students to the biological principles of human disease and the transition from health to disease. The course will synthesise the biological (physiological and biochemical) process underlying the clinical manifestations of disease and thereby bring together material from a variety of sources. The clinical relevance, and the laboratory investigation thereof, is stressed by the inclusion of relevant case studies, particularly those prevalent within the region.

CREDITS: 3.00

### **HML 4004 - LABORATORY MANAGEMENT**

This course will introduce students to the concepts of management in the hospital laboratory. The course will develop skills essential to quality management: individual performance; collective performance within unit of responsibility; and external stakeholders. The course will enable the student to recognise the requirements for good management, organisational excellence and monitoring to benchmark standards. The course will depend on students participating in group work (management teams) and will involve problem-solving and role-playing.

CREDITS: 4.00

### **HML 4005 - LABORATORY METHODOLOGIES**

This course introduces the students to the principles and applications of contemporary methodologies used in the analysis of biological materials. The course builds on previous knowledge and experience of routine laboratory methods. Laboratory exercises emphasise instrumentation as aids in diagnosis. Students will apply knowledge of instrumentation through performance of practical demonstrations and routine maintenance including near patient testing.

CREDITS: 5.00

### **HML 4102 - CELL PATHOLOGY III**

Builds upon the basic principles introduced in MLAB 252 and 254, Cellular Pathology I and II. Instruction in the classroom and laboratory will enable the student to understand the role of histochemistry in differentiating cellular diseases in the cellular pathology department. Emphasis will be placed on trouble-shooting histochemical methods and advanced techniques used in tissue diagnosis. The course will also introduce

immunohistochemistry and quality assurance systems.  
CREDITS: 2.00

### **HML 4303 - TECHNIQUES IN MOLECULAR BIOLOGY**

Designed to introduce students to a variety of current techniques in molecular biology. The focus of this course will be on analysis of nucleic acids: Polymerase chain reaction (PCR), gel electrophoresis and blotting techniques (Northern, Southern), real-time PCR, microarrays (DNA chips), recombinant DNA technology (cloning of DNA fragments), DNA sequencing and methods to study gene function. Manipulation and analysis of gene expression in prokaryotic systems, though eukaryotic tools will be briefly described. Students will become familiar with common wet-lab methods used in various fields in biology, and gain an understanding of the objectives, applicability and limitations underlying each of these methods. Upon completion of this course, each student will have resources (experience and detailed protocols) to use these molecular techniques in their own research and work environment.

CREDITS: 3.00

### **HML 4936 - CAPSTONE PROJECT FOR MEDICAL LABORATORY SCIENCE**

This capstone project is an applied experience that integrates the principles, theories, and concepts of the student's career concentration with problems or issues existing in the health field. The emphasis is on practical application of the student's career concentration area. After completing the course the students will be able to work effectively in a biomedical environment, including identification of facilitative and disruptive factors to project progress.

CREDITS: 8.00

### **HNR 1002 - CONCEPTS AND PROCESSES OF PROFESSIONAL NURSING**

Focus is on the overview of nursing practice, including historical and contemporary nursing practice and nursing theory and conceptual frameworks. Nursing as part of the collaborative healthcare system is examined, along with legal and ethical aspects of nursing care. The fundamentals of nursing practice and process are introduced.

CREDITS: 2.00

### **HNR 1101 - INTRODUCTION TO NURSING HEALTHCARE TERMINOLOGY**

An introductory course covering the basics of healthcare

terminology to baccalaureate nursing students. Utilises a system of recognising word components advancing to identification, analysis, spelling, and pronunciation of terms. Covers all body systems and specific components of selected health challenges.

CREDITS: 1.00

### **HNR 1201 - HEALTH PROMOTION SKILLS ACROSS THE LIFESPAN I**

An introductory course providing an overview of theory and skills related to professional nursing practice in relation to health promotion and prevention.

CREDITS: 1.00

### **HNR 1602 - INTRODUCTION TO PHARMACOLOGY**

Introduces pharmacology and describes the differences between pharmacology, clinical pharmacology, and therapeutics. Topics covered include the basic principles of pharmacokinetics and pharmacodynamics, characteristics of an ideal drug, drug administration routes and dose calculation, relevant international and regional legislation, drug development, and classification. Also discussed are adverse drug reactions, drug-drug and drug food interactions, and the drug responses for select groups of patients/clients.

CREDITS: 2.00

### **HNR 1702 - MICROBIOLOGY FOR NURSING**

Provides students with theoretical and practical techniques in the classification, isolation and identification of microorganisms. The course comprises study of the concepts of infection, transmission of disease, pathogenicity, body defence mechanisms, prevention and control of infections. Students acquire an understanding of the purposes of various microbes and the underlying pathophysiology pertaining to select microbial diseases. Instruction in safe work practices and the concept of the need for quality control are integrated parts of the course.

CREDITS: 2.00

### **HNR 1905 - INTEGRATED NURSING THERAPEUTICS I - FUNDAMENTALS**

An introduction to the theory and practice of nursing. Professional values, nursing skills, and best practice are covered in theory, lab, and clinical practicums. Students demonstrate beginner professional practice in the lab and practicum setting, deliver consistently safe and competent care, and start to develop clinical decision making skills. Theory, lab and practicum are combined

to introduce students to basic professional nursing skills and practice in relation to assessment, protection, mobility, nutrition, and hygiene competencies.

CREDITS: 5.00

### **HNR 2925 - INTEGRATED NURSING THERAPEUTICS IV - MENTAL HEALTH NURSING**

An introduction to intermediate clinical skills pertaining to the care and management of individuals with acute health challenges. Students are expected to acquire intermediate practitioner skills through the application of scientific principles and the nursing process for a variety of procedures including: nasogastric tubes and specialised enteral feeding; peripheral intravenous therapy; infusion of intravenous medications; and blood product transfusions. Additionally, students will undertake training pertaining to basic life support in accordance with the current guidelines set forth by the American Heart Association. Finally, the students will be introduced to a variety of strategies pertaining to the care of the client with a tracheostoma.

CREDITS: 5.00

### **HPH 1204 - FOUNDATION CHEMISTRY FOR PHARMACY**

Introduces students to subatomic/ atomic and periodic properties, chemical bonding, structural features, physical/ chemical properties and molecular interactions; acid/base, complex formation, precipitation and oxidation/reduction chemical equilibrium reactions of pharmaceutical interest, chemical nomenclature and concepts of chemical reactions and quantities to problem solving in the laboratory.

CREDITS: 4.00

### **HPH 1504 - INTRODUCTION TO PHARMACY**

Outlines the history and evolution of pharmacy to current practice areas, drug sources and stages of development of drug products from source to final dosage form, drug classification, nomenclature, legislation, routes of administration and dosage forms, reading, interpretation, evaluation and process of prescriptions and labels for dispensing.

CREDITS: 4.00

### **HPH 2002 - PHARMACEUTICAL MICROBIOLOGY**

Examines the nature of microorganisms and their roles in causing disease and spoilage of pharmaceuticals; microbiological laboratory procedures and assays, chemical agents and physical procedures used to

control/kill microorganisms, sterilisation techniques, sterilants, disinfectants, antiseptics, preservatives; therapeutic agents and their use for major infectious diseases; resistance to antimicrobials; aseptic/ sterile processing and preservation of pharmaceutical products, the use of clean rooms and the microbiology of GMP sterile manufacture.

CREDITS: 2.00

### **HPH 2004 - BIOLOGICAL ORGANIC CHEMISTRY**

Introduces students to the analysis of structure and reactivity of alkanes, alkenes, alkynes, cyclo/aromatic hydrocarbons, alcohols, phenols, thiols, ethers, aldehydes, carboxylic acids, esters, amines and amides; molecular properties and physiological roles of carbohydrates, amino acids-proteins-enzymes-co-enzymes and co-factors; nucleic acids and lipids; cycles of transformation of the matter and energy production; bio-chemical basis of physiological functions and disorders.

CREDITS: 4.00

### **HPH 2103 - IMMUNOLOGY**

Introduces students to the role and process of non-specific and specific immunity, the principles of passive and active immunisation; their benefits and risks, the fundamental immunological principles towards understanding disorders of excessive or abnormal immune responses, the process and control of Graft versus Host reactions and the principles of immunotherapy.

CREDITS: 3.00

### **HPH 2204 - MEDICINAL CHEMISTRY I**

An introduction to the concepts of molecular properties of drugs which include acid-base characteristics, polarity, solubility and partition between phases, stereo-specificity and selectivity; biopharmaceutical features: absorption, transport, distribution, intermolecular interactions and receptor binding, biotransformation and elimination; the dynamics and kinetics of quantitative degradation; drug classification according to sources, therapeutic use and structural features.

CREDITS: 4.00

### **HPH 2303 - PHARMACEUTICS I**

Covers the fundamentals of pharmaceutical calculations: International System of units; Density, specific gravity and specific volume; Expressions of concentration;

Alteration of product strength; Pharmaceutical measurement and weighing; Calculation of doses; Intravenous infusions and parenteral admixtures; Calculations in contemporary compounding.

CREDITS: 3.00

### **HPH 2405 - PHARMACOLOGY**

Introduces the basic principles of pharmacokinetics and pharmacodynamics, neurotransmission, chemical mediators and drug targets through the pharmacology of the autonomic nervous system, drug therapy in high risk groups.

CREDITS: 5.00

### **HPH 3013 - PATHOPHYSIOLOGY AND THERAPEUTICS I**

Provides essential knowledge to make judgments in regards to the effects, therapeutic rationale and selection of drugs for specific disorders. These include disorders of the central nervous system, respiratory system and drugs with important actions on smooth muscle, joints and those agents used in the management of pain.

CREDITS: 3.00

### **HPH 3023 - MEDICINAL CHEMISTRY II**

Examines the phases, technologies and methods of discovery, design and development of drugs; Natural products; Molecular factors affecting the modes of formulation, delivery and interactions with biochemical systems, transporters, receptors and metabolism, drug stability and kinetic behaviour.

CREDITS: 3.00

### **HPH 3033 - PHARMACEUTICS II**

Explores key physical-chemical and mathematical concepts to interpret the properties of solutions. The laboratory component provides opportunities to develop practical competencies in formulation, packaging, labelling and presentation procedures of pharmaceutical solutions. It also examines the effect of physical-chemical properties of drugs, dosage forms and route of administration on the rate and extent of drug absorption.

CREDITS: 3.00

### **HPH 3103 - PHARMACEUTICS III**

This course examines the key pharmaceutical/biopharmaceutical and mathematical principles, which are essential to product design, development,

presentation and testing of liquid, semi-solid and solid pharmaceutical dosage forms. The laboratory components helps to develop practical competence in compounding, packaging and testing dosage forms that are directly applicable to the manufacturing procedures of pharmaceuticals.

CREDITS: 3.00

### **HPH 3123 - PHARMACEUTICAL ANALYSIS**

Covers the theory and practice of wet chemical, chromatographic and spectroscopic methods of chemical analysis; the control of quality during drug analysis (instrumentation, reagents, limit test, standard solutions, sampling, calculations of results and errors, general operations); statistical treatment and interpretation of experimental data; performing assays based on general-, special-, physical-chemical concepts of analytical procedures.

CREDITS: 3.00

### **HPH 3163 - PATHOPHYSIOLOGY AND THERAPEUTICS II**

The focus is on pathophysiology and applied therapeutics of common chronic and acute cardiovascular conditions, including Hypertension, Heart Failure, Ischemic Heart Disease, Atherosclerosis and Vascular Obstructive Disease, Angina Pectoris, Myocardial Infarction and Acute Coronary Syndrome. The role of evidence based medicine in regard to therapeutic decisions is emphasised and builds upon basic pharmacological and pharmaceutical sciences. Developing pharmaceutical care plans that build skills on recommending therapy, evaluating and monitoring the efficacy and safety of medications for an individual patients is also emphasised. The students are as well introduced to blood drugs, i.e. platelet inhibitors, anticoagulants, thrombolytic agents with emphasis on the pharmacist's role in selecting most appropriate drug, individualising dosages and monitoring patients while on them.

CREDITS: 3.00

### **HPH 3904 - COMMUNITY PHARMACY PRECEPTORSHIP I**

Provides opportunities for students to gain experience in current professional practice in private community/retail pharmacies. Students further develop in the role of the community pharmacist. The course utilises students theoretical and lab knowledge in the evaluation of over the counter (OTC) products for the treatment of

common ailments (i.e. colds, headaches etc.). Students also develop practice knowledge of dermatological conditions; ophthalmic and optic preparations; herbal and complementary medicines; vitamin and nutritional supplements.

CREDITS: 5.00

### **HPH 3954 - CLINICAL PHARMACY PRECEPTORSHIP I**

Facilitates gaining experience in providing patient-centred pharmaceutical care in institutional outpatient and inpatient settings. Students will develop medication management and use competencies and fundamental skills in medication therapy and medication management. Technical communication with prescribing physicians and third party payers, to manage medication related problems, will be enhanced.

CREDITS: 5.00

### **HPH 4003 - BIO-TECHNOLOGY**

Covers the concepts of major techniques which include rDNA, Hybridoma Technology (Monoclonal Antibodies), Antisense Technology, PCR, Genomics, Proteomics, Gene Therapy, Transgenics, Glycobiology, Cloning, Peptidomimetics; specific preformulation procedures; parenteral, oral and specialised delivery procedures of biotech products and the impact of biotechnology on pharmaceutical care

CREDITS: 3.00

### **HPH 4013 - COMPLEMENTARY MEDICINE**

Prepares students for the role of the pharmacist in providing medication therapy management services focused upon the safe, appropriate, and effective selection, use, and monitoring of non-prescription, herbal, nutritional and other alternative/complementary medication therapies as well as prevention of health risks and fostering healthy lifestyles

CREDITS: 3.00

### **HPH 4023 - CLINICAL BIOCHEMISTRY AND TOXICOLOGY**

Introduces the concepts of interpretation of clinical laboratory investigations of body fluids and the correlation of these results to biochemical changes of specified disorders; application of basic toxicological principles to an initial approach to the management of the poisoned patient; assessment of the degree of toxicity of selected therapeutic and non-therapeutic agents then possible treatment strategies.

CREDITS: 3.00

### **HPH 4073 - PATHOPHYSIOLOGY AND THERAPEUTICS III**

An introduction to the main concepts of pathophysiology and principles of antimicrobial chemotherapy, antineoplastic and immunomodulating drugs. Students are introduced to the therapeutic management of infectious, liver and gastrointestinal tract diseases based on the pharmacological feature of drug entities.

CREDITS: 3.00

### **HPH 4102 - PHARMACEUTICAL CARE**

Discusses the concepts, principles and functions, the general framework and the systematic method for the process of pharmaceutical care, the application of pharmaceutical care, critical thinking and problem-solving skills to the assessment, resolution of and monitoring of patients drug-therapy needs and problems and the commitment to improving patient outcomes.

CREDITS: 2.00

### **HPH 4112 - RESEARCH PROJECT FOR PHARMACY**

Provides an opportunity for students to apply theoretical knowledge learned to demonstrate research competencies in a field of study related to pharmacy. It involves preparing a research topic, writing a research protocol, conducting the research, evaluating the data and presenting the findings.

CREDITS: 2.00

### **HPH 4904 - CLINICAL PHARMACY PRECEPTORSHIP II**

This course provides opportunities to consolidate pharmaceutical practice competencies at patient-centred pharmaceutical care in outpatient and inpatient settings. Students will apply the knowledge and principles of fundamental practice skills by providing pharmaceutical care with the goal of optimising patient care and inter-professional relationships. An expansion of general ability- based and professional practice-based competencies along with advanced effective clinical decision making skills, through continuous education and practice, will be established.

CREDITS: 5.00

### **HPH 4924 - COMMUNITY PHARMACY PRECEPTORSHIP II**

This advanced community Pharmacy Practice rotation provides opportunities for students to enhance their practical experience in various aspects of community pharmacy practice. This may include, but is not limited

to, provision of products, clinical pharmacy services, and pharmacy management.

CREDITS: 5.00

### **HPH 4952 - INDUSTRIAL PHARMACY PRECEPTORSHIP**

Provides opportunities where the student can learn about responsibilities of the industrial pharmacist and also about the variety of career opportunities in the pharmaceutical industry. The student observes various activities of the drug manufacturing industry, such as research and development, manufacturing quality control, clinical testing, information support, marketing, and regulatory affairs. Students with an interest in an industrial pharmacy career can use this rotation opportunity to explore, focus and refine their career goals.

CREDITS: 2.00

### **HSC 0090 - HEALTH AND PHYSICAL EDUCATION I**

This course will run in Foundations over the course of semester 1 as a 90 minute practical class once a week. The programme will focus on many elements of physical fitness and skill acquisition to prepare students for not only lifelong healthy practices but for the general studies HAPE course which runs as part of the year 1 bachelor courses. A variety of fitness and fundamental motor skill development concepts will be presented throughout a variety of sporting pursuits. Students will also be given the opportunity to develop their leadership and motivational skills through rock climbing and low ropes activities aimed at challenging them in supportive environment.

CREDITS: 1.00

### **HSC 0100 - HEALTH AND PHYSICAL EDUCATION II**

This course will run in Foundations over the course of semesters 2 as a 90 minute practical class once a week. It will be an extension on Foundations Health and Physical Education A, aiming to continue to improve skill acquisition, fitness and introduce competitive and constructive game play and technique understanding. This will form the base for the student's progress into the general studies HAPE course which runs as part of the year 1 bachelor courses. A variety of fitness and fundamental motor skill development concepts will be presented throughout a variety of sporting pursuits. Students will also be given the opportunity to develop their leadership and motivational skills through rock climbing and low ropes activities. A component of

gymnastics in addition to the fundamental skill set will aim at challenging students as well as encourage performance and self-esteem within a supportive classroom setting.

CREDITS: 1.00

### **HSC 1003 - INTRODUCTION TO HEALTHCARE SYSTEMS**

Explores global systems of healthcare delivery and the development of UAE healthcare from the 1972 joining of the World Health Organisation (WHO) until the present. An introduction to the concept of public health and the provision of healthcare delivery nationally, as opposed to individually is examined, while considering the economic and social factors impacting the provision of public healthcare. Healthcare policy and strategies for provision of primary healthcare are investigated, focusing on current and future challenges for the UAE in the 21st century.

CREDITS: 3.00

### **HSC 1803 - MEDICAL TERMINOLOGY FOR HEALTH SCIENCES**

Covers basic medical terminology beginning with prefixes, suffixes and word roots used in the medical and healthcare language. Students build on this knowledge by identifying, analysing, defining, spelling and pronouncing terms and learning abbreviations related to each of the body systems as well as basic introductory principles of drug administration routes and drug classifications.

CREDITS: 3.00

### **HSC 2503 - MICROBIOLOGY**

Provides students with a basic understanding of concepts pertaining to microbiology with reference to the care of individuals experiencing infectious diseases, related health challenges and the prevention and control of these diseases. Students will acquire an understanding of the various microbial agents and the underlying pathophysiology pertaining to common microbial diseases.

CREDITS: 3.00

### **HSD 1003 - ANATOMY AND PHYSIOLOGY I**

An introduction to basic anatomy and physiological principles from cellular level to the whole organism. The focus will be on establishing a basic understanding and appreciation of the interrelationship between function and properties of selected biological molecules; cellular structure and process;

mechanisms of inheritance and genetic variation and organisation and anatomical terms related to the human body

CREDITS: 3.00

### **HSD 1013 - INTRODUCTION TO HEALTHCARE SYSTEMS**

Explores global systems of healthcare delivery and the development of UAE healthcare. An introduction to the concept of public health and the provision of healthcare is examined. The course considers economic and social factors that impact the provision of healthcare. Health policy and governance concepts will be introduced to the student.

CREDITS: 3.00

### **HSD 1023 - MEDICAL TERMINOLOGY I (BILINGUAL)**

Medical Terminology I (Bilingual) covers basic medical terminology beginning with prefixes, suffixes and word roots used in the medical and healthcare language. Students build on this knowledge by identifying, analysing, defining, spelling and pronouncing terms related to the following body systems:

Digestive system, Genitourinary system, Reproductive system, Obstetrics, Nervous system and Cardiovascular system. The course will also address the relevant abbreviations used as well as basic introductory principles of drug administration and classifications.

CREDITS: 2.00

### **HSD 1032 - HEALTH INFORMATION SYSTEMS**

Encompasses comprehensive health information processing skills, including the activities and functions of a typical health information management department. Students will be introduced to the applications and functionality of health information systems. Data confidentiality and security will be addressed. Students will be taught ethical and legal aspects relating to the release of information.

CREDITS: 2.00

### **HSD 1043 - ANATOMY AND PHYSIOLOGY II**

Builds upon knowledge gained in Anatomy and Physiology I, providing students with an introduction to basic anatomy and physiological principles from cellular level to the whole organism. The focus will be on establishing a basic understanding and appreciation of the interrelationship between the following topics: Principle of homeostasis: Structure and function of the urinary, digestive and musculoskeletal systems:

Structure and function of the endocrine system and Structure and function of the nervous system

CREDITS: 3.00

### **HSD 1053 - HEALTH INFORMATION CODING I**

This course covers the basics in applying appropriate codes from the latest International Classification of Diseases (ICD) to classify events of morbidity, mortality, surgical procedures and other non-surgical interventions with an emphasis on accuracy, completeness, and sequencing. Students learn how to apply coding conventions. Each of the body systems is covered with realistic exercises as well as maternity, neoplasm, and external causes of morbidity and mortality. Factors influencing health status and contact with health services are also included.

CREDITS: 3.00

### **HSD 1063 - MEDICAL TERMINOLOGY II (BILINGUAL)**

Covers basic medical terminology beginning with prefixes, suffixes and word roots used in the medical and healthcare language. Students build on this knowledge by identifying, analysing, defining, spelling and pronouncing terms related to the following body systems: Respiratory system, Blood, lymphatic and immune systems, Musculoskeletal system, Integumentary systems, Otolaryngology, Endocrine system and Oncology. The course will also address the relevant abbreviations used as well as basic introductory principles of drug administration and classifications.

CREDITS: 3.00

### **HSDH N310 - DENTAL BIOMATERIALS**

Students will gain a basic understanding of the properties of the dental materials and their reactions within the oral environment. They will learn about different types of materials that are used in different aspects of dentistry.

CREDITS: 3.00

### **HSDH N311 - DENTAL HYGIENE PRACTICE II**

A clinical education course increasing the application of knowledge and skills in dental hygiene practice. Provides an opportunity under expert supervision to perform extra and intra oral examination, dental and periodontal charting. Real life acquisition of accurate assessment and development of dental hygiene diagnoses is provided.

CREDITS: 2.00

### **HSDH N313 - LAW AND ETHICS FOR DENTAL HYGIENE**

Provides the knowledge of the concepts and principles of ethics and law in healthcare. Additionally, the course gives a background in the foundation of UAE laws that govern the practice of dentistry, medicine and allied health (Medical Responsibility Law and Medical Practice Law).

CREDITS: 3.00

### **HSDH N315 - DENTAL HYGIENE THEORY II**

A continuation of Dental Hygiene Theory 1. In this course the students will focus on the comprehensive examination of the oral cavity (extra-orally and intra-orally). They will be able to recognise the normal variations and early signs of diseases within and around the oral cavity. They will also learn how to evaluate the therapeutic implementation of different instruments used in periodontal therapy.

CREDITS: 3.00

### **HSDH N316 - DENTAL RADIOLOGY THEORY AND PRACTICE**

This course in Dental Radiology covers the characteristics, production, and control of dental radiographs. Upon successful completion of this course students will have the skills and the knowledge to interpret extra and intra-oral radiographs identifying and recognising any significant and common discrepancies and technical errors.

CREDITS: 4.00

### **HSDH N317 - DENTAL HYGIENE THEORY I**

Dental Hygiene Theory 1 introduces the students to the basic concepts related to the periodontology. This includes the aetiology and pathophysiology of the periodontal diseases. They will also be introduced to the principles and methods used in comprehensive periodontal assessment of the patients.

CREDITS: 4.00

### **HSDH N319 - APPLIED NUTRITION IN DENTAL PRACTICE**

Applied Nutrition in Dental Practice gives students a fundamental understanding of the effect of nutrition on general and oral health. Upon successful completion of this course, students will be able to assess the nutritional status of the dental patients.

CREDITS: 4.00

### **HSDH N330 - DENTAL HYGIENE PRACTICE I**

Students will gain the knowledge and skills to apply infection control and ergonomic guidelines in the dental clinic. They will also gain the necessary skills to assess the patients medical, dental and social history.

CREDITS: 4.00

### **HSDH N340 - COMMUNITY DENTAL HEALTH I**

Introduces students to the concepts and methods used in promoting dental health and preventing oral and dental diseases. Topics include major concepts of dental health education and methods of delivering oral health to the community.

CREDITS: 3.00

### **HSDH N355 - ANXIETY AND PAIN CONTROL**

Gives the students the theoretical knowledge of the methods of controlling anxiety and pain in the dental clinic. The students will gain a basic understanding of ways of managing the anxiety, as well as local anaesthesia and sedation in the dental practice.

CREDITS: 2.00

### **HSDH N401 - PAEDIATRIC DENTISTRY**

Paediatric Dentistry explores every level of child management within a dental clinic. This includes taking medical history to management of pain. Causes of dental caries, use of fluoride in prevention of caries and finally aspects of dento alveolar trauma management in children are also studied.

CREDITS: 3.00

### **HSDH N403 - MANAGEMENT AND SUPERVISION OF DENTAL PRACTICE**

Management and Supervision of Dental Practices allows exploration of dental hygiene clinics as a working business. Clarification of all the various types of dental hygiene treatments with particular attention to dealing with patient accounts is studied. Patient medical records and application of patient appointment systems completes the course.

CREDITS: 4.00

### **HSDH N405 - EPIDEMIOLOGY AND PREVENTIVE DENTISTRY**

Epidemiology and Preventive Dentistry provides the basic understanding of the scope of epidemiology and discuss the methods used to assess the oral health status of the community. Etiology and prevention of common oral conditions like caries, gingivitis, and periodontitis

are outlined. Benefits of fluoride and fissure sealants are summarised. This course also prepare the students for planning oral health educating sessions.

CREDITS: 4.00

### **HSDH N406 - DENTAL HYGIENE THEORY III**

Dental hygiene theory III will assist the dental hygiene students in the understanding of dental stains, and the professional treatment options available to remove these stains. They will also be introduced to the principles and methods used in periodontal surgery including suture materials, design and techniques, as well as the treatment procedures that may need maintenance visits and the strategies used to improve patient compliance.

CREDITS: 3.00

### **HSDH N411 - RESEARCH METHODS IN DENTAL HYGIENE**

The aims of Research Methods in Dental hygiene are to develop a research proposal, report and literature review are. The process allows the student to explore the pathway for producing the end product: a research document. The latter includes: the scientific method of research, how a research topic is chosen, writing a proposal for research, types of research quantitative , qualitative, theory, hypothesis, research tools, testing, statistical analysis, and finally the ethical aspects of the research methods.

CREDITS: 4.00

### **HSDH N413 - DENTAL INFORMATICS**

Introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in health and dental care environments. The course reflects the challenges of healthcare information management in this dynamic environment. Upon successful completion of this course, students are expected to assess the appropriateness of computer hardware, software, and networking technologies in healthcare settings.

CREDITS: 4.00

### **HSDH N430 - DENTAL HYGIENE PRACTICE III**

Dental Hygiene Practice III will assist the dental hygiene students in integrating oral malodour management strategies throughout the preventive and therapeutic appointment. They will be able to differentiate the various kinds of dental stains, and will be able to professionally remove these stains. At the end of this course, the students should be able to assist healthcare

professionals in the selection, use and removal of periodontal sutures and dressings, and explain the use of these materials to patients

CREDITS: 5.00

### **HSDH N450 - DENTAL HYGIENE THEORY IV**

Dental Hygiene Theory IV will assist the dental hygiene students to play a vital role in the diverse and dynamic field of operative dentistry, orthodontics and prosthodontics. They will also be introduced to the principles and methods used in minimally invasive treatment including application of bases, liners and matrices. Upon successful completion of this course students will have the skills and the knowledge to teach patients about the care of dental hypersensitivity and dental appliances.

CREDITS: 4.00

### **HSDH N460 - SPECIAL NEEDS DENTISTRY**

Special Needs Dentistry provides students with the basic knowledge pertaining to the care of special needs population that are affected by intellectual or physical disability, or by psychiatric or complex medical issues . Patients with HIV, immune system dysfunctions, cancer and salivary dysfunctions will be investigated.

CREDITS: 3.00

### **HSDH N470 - DENTAL HYGIENE PRACTICE IV**

Upon successful completion of this course, students will have the skills and the knowledge to demonstrate tooth whitening techniques, taking care of hypersensitivity and the application of liners, bases, matrices and rubber dam throughout the therapeutic appointment. They should be able to differentiate the various kinds of impression materials and should be able to professionally take impressions. They should also be able to advise proper post-operative instructions for various interdisciplinary specialties.

CREDITS: 5.00

### **HSDH N480 - COMMUNITY DENTAL HEALTH II**

Community Dental Health II focuses on student's role as dental health promoters and programme planners. Needs analysis for community programmes will also be examined. Critical analysis of current literature and health promotion activities in dental health form part of the curriculum.

CREDITS: 4.00

### **HSW 1003 - INTRODUCTION TO SOCIAL WORK**

Students are introduced to values, ethics, history and

theory central to social work practice. Students develop an understanding of social work methods applicable to systems of all sizes within the framework of a person in environment perspective. Social work roles and career paths are also introduced and discussed.

CREDITS: 3.00

### **HSW 1013 - HUMAN DEVELOPMENT IN THE LIFE SPAN**

Examines human growth and development as a dynamic process throughout the span of life. Major theories of development, physical, social, cognitive and emotional development are discussed, with particular attention to their relevance in the social work context. The influence and significance of the family, gender, ethnicity and culture throughout the life span are closely inter-related within the course.

CREDITS: 3.00

### **HSW 1023 - BASIC COUNSELLING SKILLS**

The purpose of this course is to enable students to be effective social work communicators. Students are introduced to basic techniques required for effective communication and interviewing. Topics include active listening skills, questioning and interviewing skills, empathy, the influence of culture on communication and the importance of self-awareness. On successful completion of this course, students will be able to analyse communication events they observe or are involved in and implement behaviours for successful responses.

CREDITS: 3.00

### **HSW 1033 - SOCIAL DIVERSITY AND JUSTICE**

Focuses on issues of diversity and social justice. Students will learn to identify social justice issues and develop communication skills to successfully intervene with clients experiencing such issues. Students will also learn about the impact of diversity on client populations, identify strengths in these populations and examine their own values, beliefs and behaviours towards diversity.

CREDITS: 3.00

### **HSW 1103 - INTRODUCTION TO INTERPERSONAL COMMUNICATION**

The aim of this course is to enable students to become effective communicators as social work professionals. This is achieved in a blended online learning environment, covering the following communication topics: models of communication, effective listening skills, questioning skills, interviewing skills, leadership

styles, assertive behaviour and conflict resolution. On successful completion of this course, students will be able to analyse communication events that they observe or are involved in and implement appropriate behaviours for interacting and responding.

CREDITS: 3.00

### **HSW 1203 - SOCIAL WORK IN THE UAE**

Provides students with an opportunity to examine the roles and responsibilities of Social Workers in the UAE. Utilising a person in environment and systems perspective, students will analyse problems in living as well as intervention strategies with both Emirati and Expatriate populations.

CREDITS: 3.00

### **HSW 1213 - ABNORMAL AND CLINICAL PSYCHOLOGY - PSYCHOPATHOLOGY**

Introduces students to common types of behavioural disorders as well as theoretical approaches to diagnosis and treatment. Students will learn how to locate and use major classification systems for behaviour disorders. Students will also utilise a person in an environment perspective to identify mental dysfunction and its complex causes and manifestations.

CREDITS: 3.00

### **HSW 1243 - FOUNDATION IN CASE WORK**

The first of two micro skills courses, this course introduces students to knowledge and skills necessary for professional social work practice. Student learn and apply social work methods to small system case samples. Additionally, students learn and develop written goal setting strategies, interventions and evaluate potential outcomes. Specific emphasis is given to theoretical underpinnings of systems ecological framework and the problem solving process.

CREDITS: 3.00

### **HSW 1303 - BASIC COUNSELLING SKILLS IN SOCIAL WORK**

This course is geared towards those interested in counselling others. Students are introduced to the foundational skills required for effective counselling and interviewing. Topics include counselling as a developmental process; the importance of self awareness; the role of the counselling relationship in effecting change; facilitation of client self exploration; the importance of counsellor empathy; appreciation of ethics, diversity and personal and professional development.

CREDITS: 3.00

### **HSW 2023 - ADVANCED COUNSELLING IN SOCIAL WORK**

Designed to expand student knowledge and skills of effective communication and counselling intervention skills fundamental to social work practice. Communication strategies to establish and maintain therapeutic relationships and assessment techniques are demonstrated and practiced. Additionally, in tandem with systems theory, students learn to integrate other counselling approaches as part of a planned change process.

CREDITS: 3.00

### **HSW 2033 - LAWS AND ETHICS IN SOCIAL WORK IN THE UAE**

Students develop an increased understanding of the values and ethics that shape social work practice. They learn to recognise ethical issues, develop skills in applying an ethical legal framework to guide practice decisions and enhance use of critical thinking skills to address issues and dilemmas faced in practice. Particular attention is paid to the International Social Work Code of Ethics and its application to social work practice in the UAE. Course delivery includes some Arabic instruction to clarify specific UAE laws and components that relate to social policy and social work practice.

CREDITS: 3.00

### **HSW 2043 - POPULATIONS AT RISK 1: FAMILY AND CHILDREN**

Offers students the opportunity to extend and apply knowledge and skills gained in earlier social work courses to specific populations. Students increase their knowledge of dynamics and risk factors unique to families and children. Students learn to apply systems theory to specific case examples and utilise systems theory/family systems theory as a way to guide practice interventions.

CREDITS: 3.00

### **HSW 2103 - PERSONAL COUNSELLING SKILLS**

Provides students with an understanding of more advanced counselling skills. Students will develop strong counselling skills and learn to working with a contemporary framework of therapeutic practice. Students will learn the stages and tasks of Gerard Egan's helping model and apply this in counselling with clients.

CREDITS: 3.00

### **HSW 2203 - PSYCHOSOCIAL ISSUES IN THE UAE**

An introductory exploration of psychosocial theory. It aims initially to describe the foundations of both psychology (with a focus on personality theories, with development theories and learning theories covered in detail in other courses) and sociology, and then to show how an understanding of both disciplines can be combined to give a better appreciation of how individuals interact with their social environment.

CREDITS: 3.00

### **HSW 2223 - FOUNDATION IN COMMUNITY ORGANISATION**

Introduces students to social work mezzo and macro practice level methods for work with communities, organisations and larger systems. Assessment, advocacy, problem identification and problem solving strategies with larger systems will be explored. Specific attention will be given to models of community organising and application of systems theory and problem solving process with larger systems.

CREDITS: 3.00

### **HSW 2233 - FOUNDATION IN GROUP WORK**

This course introduces the student to social group work, or mezzo level practice. Students identify and learn skills needed to work with both task and treatment groups and differentiate the social worker's roles and responsibilities with each. Students gain knowledge of group development, stages, dynamics, processes and skills needed to advance the goals of individual members and group as whole within a systems ecological context.

CREDITS: 3.00

### **HSW 2243 - POPULATIONS AT RISK 2: AGING: SPECIAL NEEDS**

Offers students the opportunity to extend and apply knowledge and skills gained in earlier Social Work courses to specific populations. Students increase their knowledge of dynamics and risk factors unique to aging and persons with special needs. Students learn to apply systems theory to specific case examples and utilise systems theory/family systems theory as a way to guide practice interventions.

CREDITS: 3.00

### **HSW 2313 - THE LEGAL ENVIRONMENT IN THE UAE**

Assists the development of an in-depth knowledge of the application of social work theories and policies

and their interaction with the law. Comprehension of social welfare policies, services and laws at local, national, regional and international levels, and the roles of social work in social change processes are discussed. An understanding of the advocacy role with disadvantaged or marginalised individuals and engagement of individuals in these groups is discussed.  
CREDITS: 3.00

### **HSW 3033 - ADVANCED GROUP WORK**

Expands student knowledge of social group work or mezzo level practice. Building on knowledge of group development, dynamics and processes, students will apply knowledge and skills through in class group work and group facilitation. The impact of diversity on group dynamics and processes are discussed and explored.  
CREDITS: 3.00

### **HSW 3043 - ADVANCED CASE WORK**

The second of two micro skills courses, advanced case work builds on skills learned in Foundation of Case Work. Students expand their knowledge and skills of culturally competent interviewing techniques. Students also evaluate and practice the assessment process, goal setting and intervention implementation through role plays and group activities. On-going emphasis will be given to systems ecological framework and the problem solving process. Course delivery techniques will include use of Arabic to assist students in learning and using relevant interviewing skills with future UAE clients.  
CREDITS: 3.00

### **HSW 3213 - MEDIA AND SOCIAL WORK**

Focuses on the use of diverse forms of media as a tool for community organisation and increasing community awareness. Students gain knowledge of diverse media tool implementation to highlight and resolve community issues. Students apply skills through projects that highlight successful resolution of a social or community based problem or community development through use of diverse media.  
CREDITS: 3.00

### **HSW 3223 - SOCIAL WORK ACTION AND ADVOCACY**

Students continue to build micro, mezzo and macro practice skills needed to work with systems of all sizes. Students evaluate the impact of social policy on an individual, community, societal and global levels and learn ways to ethically advocate for options,

services, resources and resource development. Particular emphasis will be given to social work tools of advocacy, negotiation, brokering and mediation as ways to promote planned change with and on behalf of clients.  
CREDITS: 3.00

### **HSW 3513 - FAMILY SYSTEMS AND COUNSELLING**

Utilises family systems theory to explore family structure, dynamics and interactions. Structural, communication and behavioural approaches to family therapy and treatment as well as continued emphasis on the problem solving approach will be presented and applied as culturally relevant models. Course delivery techniques will include use of Arabic to assist students in learning and using relevant counselling techniques with future UAE clients and families.  
CREDITS: 3.00

### **HSW 3913 - SOCIAL WORK PRACTICUM I**

The first of four practicums, this course is an opportunity for students to integrate theory and practice learned in their coursework in social work practice placement. Students model professional social work skills, values, ethics and behaviours through placement in a college approved agency for 96 hours during the semester. Students utilise supervision and evaluate their own strengths, limitations and use of practice skills through written self-reflections completed in Arabic. Students complete a written agency assessment of the agency's mission, structure, client base and funding sources.  
CREDITS: 3.00

### **HSW 3963 - SOCIAL WORK PRACTICUM II**

The second of four practicums, this course is an opportunity for students to integrate theory and practice learned in their course work in actual social work practice placements. Students model professional social work skills, values, ethics and behaviours through placement in a college approved agency for 96 hours during the semester. Students utilise supervision and evaluate their own strengths, limitations and use of practice skills through written self-reflection. Written reflections will be completed in Arabic.  
CREDITS: 3.00

### **HSW 4013 - RESEARCH METHODOLOGIES FOR SOCIAL WORK**

Introduces students to the importance of reading, understanding and locating research to evaluate and inform social work practice. Students explore and gain

a basic understanding of scientific processes involved in research. Students also learn research related concepts, terms and theory and develop an awareness of the types and sources of social work literature.

CREDITS: 3.00

### **HSW 4023 - ADVANCED COMMUNITY ORGANISATIONS**

The second of two mezzo macro level practice courses, students extend their knowledge of community organisation and planning models and evaluate their impact on social functioning. Students analyse skills and strategies needed to successfully conduct community needs assessments, apply the problem solving process and techniques with larger system issues or problems.

CREDITS: 3.00

### **HSW 4213 - CAPSTONE RESEARCH PROJECT**

A co-requisite with Research Methodologies for Social Work and Practicum IV, the Research Project provides an opportunity for students to study a specific area of UAE social policy and its impact on client populations or client issues observed through practicum experiences. Students utilise knowledge learned in Research Methodologies and Practicum experiences to select an area of interest to investigate, choose appropriate methodology, collect and analyse data and present conclusions in a final capstone presentation.

CREDITS: 3.00

### **HSW 4223 - SOCIAL WORK ADMINISTRATION**

This course builds upon mezzo and macro level knowledge necessary for social workers to successfully work in and provide leadership to their agency/organisational settings. Students develop knowledge of social agency structures, roles and functions of administrators and analyse the impact of social welfare policy, funding, agency mission and structure on service delivery.

CREDITS: 3.00

### **HSW 4233 - INTERNATIONAL SOCIAL WORK- UNITED NATIONS AND OTHER INTERNATIONAL AGENCIES**

This macro practice course explores the historical development and current trends in the field of international social work. Students analyse the role of the United Nations and its impact on international social work. Students will also explore other international agencies and current and emerging roles for social

workers in these organisations. Throughout this course, the impact of social policy on international agencies is emphasised within a systems context.

CREDITS: 3.00

### **HSW 4916 - SOCIAL WORK PRACTICUM III**

The third of four practicums, this course is an opportunity for students to integrate theory and practice learned in their course work in actual social work practice settings. Students model professional social work skills, values, ethics and behaviours through placement in a college approved agency for 192 hours. Students utilise supervision and evaluate their own strengths, limitations and use of practice skills through written self-reflection completed in Arabic.

CREDITS: 6.00

### **HSW 4966 - SOCIAL WORK PRACTICUM IV**

The last of four practicums, this course is taken together with Research Methodologies for Social Work and Social Work Research Project. This course is an opportunity for students to integrate theory and practice learned in their coursework in actual social work practice settings, as well as select an area of interest to research and investigate. Students model professional social work skills, values, ethics and behaviours through placement in a college approved agency for 192 hours during the semester.

CREDITS: 6.00

### **IMAG N214 - MEDICAL IMAGING TECHNOLOGY II**

At the end of this course students will have a comprehensive understanding of how digital medical images are produced, manipulated and transmitted from a variety of medical imaging modalities. They will also have a basic understanding of Patient Archive and Communication Systems (PACS) and Radiology Information Systems (RIS), that manage and distribute the information and images produced in a modern medical imaging department.

CREDITS: 4.00

### **IMAG N215 - MEDICAL IMAGING POSITIONING AND PROCEDURES II**

Upon successful completion of this course students will understand the theory and practice of common medical imaging procedures of the abdomen, including contrast media studies; imaging of the skull, maxillary-facial structures and dentition; mobile and theatre imaging.

Students will use their understanding of medical imaging positioning terminology to describe imaging positioning technique, evaluate medical images and discuss the role of medical imaging in patient care.

CREDITS: 4.00

### **IMAG N216 - IMAGING ANATOMY AND PATHOLOGY II**

Students, upon successful completion of this course, will be able to recognise and describe normal anatomy and commonly encountered abnormal pathologies on medical images of the abdomen, skull, maxillary-facial structures and dentition; using appropriate diagnostic imaging terminology. Students will expand their understanding of disease processes and to specifically include abnormal pathologies of the abdomen and upper respiratory tract, cranium, maxillary facial structures and dentition.

CREDITS: 4.00

### **IMAG N218 - PATIENT CARE II**

Provides students with an understanding of the fundamentals of patient care and handling in acute medical imaging environments. This course prepares students for safe patient contact when undertaking medical images in ward, theatre, trauma and acute care situations. Specifically this course covers safe handling of patients being treated with selected therapeutic interventions. The course also covers care requirements of immobile and bed confined patients.

CREDITS: 2.00

### **IMAG N311 - MEDICAL IMAGING TECHNOLOGY III**

Provides the background to enable the evaluation of the use of equipment used to produce images in Nuclear Medicine (NM) examinations, including DEXA scanning equipment used in bone densitometry. Students study the design and use of dedicated mammography units and mammography accessories to justify the differences in design between mammographic equipment with that used for general radiography. Students will be able to discuss and evaluate the design and operation of fluoroscopy equipment used in angiography and interventional studies. Students will understand and be able to apply the dose reduction and radiation safety features used in fluoroscopic imaging

CREDITS: 4.00

### **IMAG N312 - MEDICAL IMAGING PHARMACOLOGY**

Upon successful completion of this course, students

will have the knowledge and understanding of the role of medication in medical imaging patient care, and of chemicals used in medical imaging departments. Specifically this course will address medical imaging contrast media, standard dosages, risks and adverse reactions, emergency medications, safe handling and storage, the need for informed consent and management of drug related activities. It will also cover the safe handling and occupational hazards of chemicals needed for operational activities.

CREDITS: 4.00

### **IMAG N313 - CROSS SECTIONAL ANATOMY**

Enables the recognition, identification and description of the appearances of normal cross-sectional anatomy and commonly encountered pathologies as diagnosed by Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and Ultrasound (US) cross sectional imaging modalities. This course compliments the learning goals of specialised imaging courses and prepares for authentic viewing of cross sectional images in advanced clinical education courses. Students on successful completion of this course have developed skills in evaluating cross sectional images and have gained an appreciation of the role of specialised cross sectional imaging in patient care and clinical management.

CREDITS: 4.00

### **IMAG N315 - MEDICAL IMAGING AND POSITIONING III**

Provides an understanding of the theory, practice and application of specialist medical imaging modalities to include paediatric imaging, mammography, diagnostic and interventional fluoroscopy, Nuclear Medicine and DEXA. This course is designed to prepare students for specialised imaging clinical education. Specifically the course covers patient preparation, care and handling during and after the specialist examinations and will address relevant common clinical pathologies.

CREDITS: 3.00

### **IMAG N319 - SPECIALISED IMAGING I**

Designed to allow students to develop their knowledge of more specialised imaging modalities. The student will be introduced to the design and function of specific equipment used in Computerised Tomography (CT), Medical Ultrasound (US) and Magnetic Resonance Imaging (MRI). Students will also develop an understanding of equipment that is used to examine patients in advanced trauma and acute imaging,

building an understanding of how the design features allow trauma and acute patients to be examined more quickly and safely.

CREDITS: 4.00

### **IMAG N410 - QUALITY MANAGEMENT IN MEDICAL IMAGING**

This course will help students examine what constitutes best practice care, gain an understanding of the measures for determining quality in medical imaging, and the management of quality care. It will further provide students with the necessary basic tools and processes used by healthcare organisations for quality improvement measures that are timely, effective and patient-centred. Also it will focus on the three major components of image quality as an integral part of the general total quality management programme.

CREDITS: 5.00

### **IMAG N411 - RADIATION SAFETY AND BIOLOGY**

Provides the knowledge to evaluate the risk and benefit of an imaging procedure and justify radiation safety and biology related to Medical Imaging. The course emphasises the theory and practice of radiation protection for both patients and healthcare professionals following the ALARA principle. Students review the theories of cell biology, the units of radiation dose and the biological effects that radiation can cause when it interacts with human tissues. Factors affecting biological response are studied, including acute and chronic effects of radiation exposure, dose limitation guidelines, dose reference levels and radiation protection regulations and codes of practice.

CREDITS: 2.00

### **IMAG N412 - QUALITY MANAGEMENT IN MEDICAL IMAGING**

This course will help students examine what constitutes best practice care, gain an understanding of the measures for determining quality in medical imaging, and the management of quality care. It will further provide students with the necessary basic tools and processes used by healthcare organisations for quality improvement measures that are timely, effective and patient-centred. Also it will focus on the three major components of image quality as an integral part of the general total quality management programme.

CREDITS: 4.00

### **IMAG N414 - RESEARCH PROJECT I**

Students will conduct research and write up the

research study in a publishable form for a recognised medical imaging journal. This will be accomplished in an individual guided study format intended to examine and analyse a current affair or issue of concern in the field of medical imaging in general or for a particular imaging modality.

CREDITS: 4.00

### **IMAG N417 - PROFESSIONAL PRACTICE**

Enables students to gain knowledge and understanding in two main areas of study. Students will investigate emerging medical imaging technologies and their ability to impact healthcare management. This will include the cost and management of the technology and the benefits to patient care. The other area that students will study is client communication. This will allow students to understand the problems of communicating complex medical information to patients and also communicating best practice in medical imaging to clinical colleagues.

CREDITS: 4.00

### **IMAG N418 - RESEARCH PROJECT II**

Follows on from and links with, Research Project 1 (IMAG N414). This course gives students the skills to carry out and present a small publishable research project, developed in Research Project 1. Students develop the overall research and presentation skills to present scholarly work to a group of peers, colleagues and professionals. Students develop the appropriate research materials to provide the breadth and depth aspect of the research topic, by exploration of technical and health related material.

CREDITS: 4.00

### **IMAG N421 - SPECIALISED IMAGING II**

Designed to prepare students for advanced clinical education and contribute towards elective practice. Specifically it will cover patient preparation care and handling during and after cross sectional imaging and will address common clinical pathologies. Successful students will have acquired knowledge and understanding of cross sectional imaging modalities so they will be able to evaluate their best use and discuss their role in patient care and management.

CREDITS: 4.00

### **IMAG N422 - SPECIALISED IMAGING ELECTIVE**

Provides opportunities for students to extend knowledge and understanding of specific elected specialist imaging modalities to include CT, MRI, US, or

advanced trauma. The specialist selection will be based on clinical availability, since this course links with clinical placement courses to simultaneously develop advanced clinical skills. This cohesive approach to education enables students to develop a deeper understanding of the overall design and sub-systems to provide a coherent understanding of the technical and clinical application of the elected modality.  
CREDITS: 4.00

### **IMAG N440 - RESEARCH PROJECT I**

Students will conduct research and write up the research study in a publishable form for a recognised medical imaging journal. This will be accomplished in an individual guided study format intended to examine and analyse a current affair or issue of concern in field of medical imaging in general or for a particular imaging modality.  
CREDITS: 10.00

### **IMAG N455 - EMERGING TECHNOLOGIES IN MEDICAL IMAGING**

Allows students to gain knowledge and understanding of the emerging, imaging technologies and to assess their ability to impact healthcare provision in the region.  
CREDITS: 5.00

### **IMAG N465 - CLIENT EDUCATION IN MEDICAL IMAGING**

This course has two main topics. The first topic allows the student to investigate, develop and explain the information that patients and other healthcare staff need to be given so that they can understand fully any given medical imaging examination. Students will also evaluate the methods available for conveying the required information to patients and ensuring that full information is provided by referring clinicians on request forms.  
CREDITS: 6.00

### **IMAG N490 - RESEARCH PROJECT II**

This is a concurrent course, in partnership with Research Project I (IMAG N440). This course gives students the skills to present their publishable research project, developed in Research Project I. Students develop the overall research and presentation skills to present scholarly work to a group of peers, colleagues, and professionals. Students also develop the appropriate concurrent research materials to provide the breadth

and depth aspect of the research topic, by exploration of technical and health related material.  
CREDITS: 13.00

### **ITDP N0102 - TEAM PROJECT**

The primary aim of this course is to allow students to work in teams in order to plan and implement projects using project management techniques. In this course students identify the components of the project life cycle, and demonstrate project planning and implementation techniques.  
CREDITS: 4.00

### **ITDP N0104 - SOFTWARE ESSENTIALS**

Enables a student who has basic office skills to develop more advanced skills in word processing, spreadsheet and presentation software. In addition, students will learn how to share and integrate the use of office applications.  
CREDITS: 4.00

### **ITDP N0106 - INFORMATION TECHNOLOGY ESSENTIALS**

Introduces students to the computing technology needed to run a modern small office/home office (SOHO). Students learn how to operate SOHO devices, customise settings and perform basic troubleshooting. Students then apply these skills in constructing and configuring an IT solution for a SOHO environment.  
CREDITS: 4.00

### **ITDP N0108 - WEB ESSENTIALS**

Aims to provide students with the required skills to use and configure web browsers, and email. Students use search engines to find and download information and applications from the Internet. This course also provides students with basic skills to design, develop, and publish simple websites using HTML and to develop this skill using web authoring software.  
CREDITS: 4.00

### **ITDP N0110 - DATABASE ESSENTIALS**

Students learn and develop the basic skills needed to create and use databases in the workplace. Students learn to design, create, relate, and use multiple table databases while enforcing referential integrity and data validation. Students also learn to design, create, and use complex queries, advanced forms, and customised reports.  
CREDITS: 4.00

**ITDP N0151 - INTEGRATED IT PROJECT**

Allows the delivery of all the course learning outcomes within the framework of an integrated project. In the context of a small networked office environment, students set up a scenario which includes the use of a multi-table database. Using web design skills, this database is uploaded via ftp so that users can launch queries or input orders via email.

CREDITS: 12.00

**ITDP N0213 - PC AND NETWORKING HARDWARE**

In this introductory course students learn the necessary skills to assemble, configure, and troubleshoot personal computers and peripheral hardware devices. Students learn how to install an operating system, device drivers, and basic application software. Students also learn the necessary skills to design, build, and test a basic local area network. Students study and follow correct safety practice procedures while developing these skills.

CREDITS: 4.00

**ITDP N0215 - NETWORK ADMINISTRATION I**

This course aims to train students on performing basic administrative tasks on a network using a common network operating system. Students will acquire general understanding of the Network Operating System in use and will be able to choose a networking model according to the business needs, perform account administration and share resources over the network following the best practices.

CREDITS: 4.00

**ITDP N0217 - DATABASE APPLICATIONS**

Students develop the skills needed to create basic database applications for use in a business environment. Students design and create a relational database application to demonstrate the skills learned. Students learn to import data from and share data with other applications. Working with multi-table relational databases, students learn to extract data by using menus, queries, forms, and reports.

CREDITS: 4.00

**ITDP N0219 - WEBSITE DESIGN I**

Allows students to design, develop and manage static websites. Students apply design principles in developing websites with advanced features. Students apply theoretical concepts and use client-side scripting language to enhance their websites and use advanced

features such as behaviours and templates.

CREDITS: 4.00

**ITDP N0221 - INTERNET PROTOCOLS**

Introduces TCP/IP and its associated protocols, and how they facilitate network communication. Students learn to describe and demonstrate the following concepts and skills: OSI and TCP/IP reference models, TCP/IP suite and tools, networking media for LANs and WANs, Ethernet fundamentals and technologies, configuring TCP/IP to establish simple network communication, IP addressing, sub-netting, and troubleshooting simple TCP/IP protocol communication problems.

CREDITS: 4.00

**ITDP N0223 - BASIC ROUTING**

Introduces students to basic network communication and routing theory. Students learn to describe and demonstrate the following concepts and skills: router technologies, router OS and setup, basic router configurations, simple routing protocols used in simple LANs and WANs, static and default routes, filtering traffic using Access Control Lists, and troubleshooting simple routing problems.

CREDITS: 4.00

**ITDP N0225 - BASIC SWITCHING**

An introduction to basic LAN switching concepts and VLANs. Students learn to describe and demonstrate the following concepts and skills: basic switching concepts, switch OS and basic switch configuration and VLANs configuration. In addition students learn how to plan for a network, select devices and implement a disaster recovery plan.

CREDITS: 4.00

**ITDP N0227 - NETWORKING LABS I**

This course introduces TCP/IP and its associated protocols and how they facilitate network communication through practical means.

CREDITS: 4.00

**ITDP N0229 - NETWORKING LABS II**

Introduces basic network communication and basic routing in a practical setting. This course is designed to be taught in conjunction with ITDP N223 Basic Routing to provide additional time for a student to study in the Cisco Networking Academy semester two or Network+.

CREDITS: 5.00

**ITDP N0235 - DESKTOP PUBLISHING**

A practical course that introduces presentation and desktop publishing software and the techniques required to produce promotional material to a professional standard. The principles of layout and design as they apply to print media are reinforced in the course. Proofreading, document composition and communication competencies are also included.

CREDITS: 4.00

**ITDP N0236 - OFFICE SIMULATION**

Consolidates the skills and competencies learned in previous courses. It further builds upon the skills required for individual and team work, basic office skills and accountability. The main focus is an on-the-job setting in a simulated office environment.

CREDITS: 4.00

**ITDP N0237 - OFFICE SOFTWARE APPLICATIONS**

Focuses on a review and consolidation of previous skills plus new concepts and skills in developing word processing, spread sheet and database software application programmes. Keyboarding technique, proofreading, speed and accuracy, and file management are reinforced throughout the course.

CREDITS: 4.00

**ITDP N0238 - ARABIC COMPUTER APPLICATIONS I**

This course focuses on keyboarding in Arabic using the correct keyboarding techniques. A minimum speed of 16 net words-per-minute is recommended at the completion of the course. Students use various software programmes in Arabic to produce Arabic/bilingual documents required in a business environment. Some translation may be required.

CREDITS: 4.00

**ITDP N0239 - ARABIC COMPUTER APPLICATIONS II**

Reviews and consolidates previously acquired computer skills using Arabic software. Arabic keyboarding skills and techniques are emphasised. Word processing, spreadsheet and presentation software in Arabic are used to produce a variety of business documents. Students create, design and present a slide show presentation in Arabic. Arabic applications in designing a website are included. This course is project-based to allow for more realistic applications.

CREDITS: 4.00

**ITDP N0241 - PC CONFIGURATION AND SUPPORT I**

Designed to provide the student with the skills needed to assemble, set up, and configure a PC for optimum performance and give low level technician support to users. This course takes the students through the typical hardware and operating system problems encountered by technicians, and provide appropriate troubleshooting techniques to decipher/diagnose any problem and the skills needed to solve them.

CREDITS: 4.00

**ITDP N0243 - NETWORK ADMINISTRATION II**

Aims to give students the knowledge and the vocational skills required to control user access to the enterprise network, ensure data safety and integrity on network servers, and ensure the quality of service via monitoring and troubleshooting server resources and maintaining network connectivity.

CREDITS: 4.00

**ITDP N0251 - NETWORK OPERATING SYSTEMS**

Introduces the student to at least two different operating systems (e.g. Windows and Linux). Students learn to implement, design and install server software on separate systems. Students learn to use a broad range of operating system operations, including system maintenance, user groups, and security.

CREDITS: 4.00

**ITDP N0252 - INTERNETWORKING TECHNOLOGIES**

Students learn fundamental techniques that have proven critical for client/server projects.

CREDITS: 5.00

**ITDP N0257 - APPLICATION PROGRAMMING**

In this course students learn a current/contemporary web development technology, with a focus on designing and building dynamic, database-driven web sites.

CREDITS: 5.00

**ITDP N0258 - WEB DESIGN AND ANIMATION**

Introduces students to a systematic and professional approach to designing graphics for the web and building their own animated and interactive web components using industry standard software.

CREDITS: 4.00

**ITDP N0261 - WEB DATABASE**

Allows students to create single table operations as well as the complexities of accessing multiple tables using joins or sub-queries. The course introduces the student to basic SQL operations required to code and generate query output; manipulate table data by inserting, updating, and deleting records in a table; create simple tables, create tables with constraints, modify the table structure, and delete tables. The course also allows the students to create views, manipulate data through views, modify the view structure, and drop views. In this course students learn securing databases for web use.

CREDITS: 4.00

**ITDP N0265 - E-COMMERCE**

Students learn how to plan, design and build an E-Commerce website. This is a project based course which allows the students to develop and present a comprehensive final project. Students will be able to draw knowledge from graphic design, application development and multimedia. Students will be able to analyse the benefits and weaknesses of an e-commerce website.

CREDITS: 4.00

**ITDP N0281 - IT PROJECT**

Students learn how to write a proposal for an IT project and be involved in the planning and implementation of the project. Components of the System Development Life Cycle are identified. IT project planning and implementation techniques are demonstrated.

CREDITS: 3.00

**ITEC N100 - COMPUTING FUNDAMENTALS**

Provides students with basic knowledge about the application of information technology (IT) within organisations with an emphasis on the use of application software such as spread sheets and databases.

CREDITS: 4.00

**ITEC N177 - WEBSITE DESIGN**

Gives the students basic knowledge about planning a Web site and introduces the main guidelines for designing Web sites. The students gain expertise in an industry standard Web site authoring tool and use it to build and publish Web sites.

CREDITS: 4.00

**ITEC N201 - E-BUSINESS STRATEGY**

Provides the fundamentals of technologies, strategies,

and impact of e-business. Students gain theoretical knowledge and practical skills in application of information technology tools to support all the activities within the business organisation and between different businesses.

CREDITS: 4.00

**ITEC N204 - NETWORKING MODELS**

Focuses on study of OSI and TCP/IP models and basics of router configuration, role of routers in LAN and WAN networks, major router components and their functions and inter-network operating system management. Students get practical hands-on learning experience in carrying out basic router configurations and IOS software management.

CREDITS: 4.00

**ITEC N208 - DATABASE PROGRAMMING**

Aims at building the skills for designing, developing and testing procedural language modules such as procedures, functions and triggers to manipulate and retrieve data from a relational database.

CREDITS: 4.00

**ITEC N213 - BUSINESS PRESENTATIONS**

The main aim of this course is to provide students with the theory and practice of developing and delivering a message. Considering the audience, the objectives and the purpose, students work individually and in groups to research, develop, organise and deliver business presentations to an invited audience. Students develop skills in producing visual aids, and gain confidence in public speaking while obtaining the technical skills required to produce effective presentations using the advanced features of a software package.

CREDITS: 4.00

**ITEC N216 - ROUTING FUNDAMENTALS**

Focuses on basics of router configuration, role of routers in LAN and WAN networks, major router components and their functions, inter-network operating system managements, routing protocol configurations, access control by applying and configuring access control filters. Students get practical hands-on learning experience to carry out router configurations and IOS software management.

CREDITS: 6.00

**ITEC N217 - DESKTOP PUBLISHING**

Students learn the most important topics of multimedia design for both print and the web. The course focuses

upon designing professional promotional material using a combination of software programmes including photo-editing, document creation and presentation software. The principles of design layout, text, graphics, animation, multimedia elements and sound are examined.

CREDITS: 4.00

### **ITEC N218 - ARABIC COMPUTER APPLICATIONS**

This practical course focuses on keyboarding in Arabic using correct keyboarding techniques. In this course students produce Arabic/bilingual business documents to a standard accepted by the workplace. Students also develop skills in translating from one language to the other.

CREDITS: 4.00

### **ITEC N222 - INTRODUCTION TO MULTIMEDIA**

Introduces students to the creation and editing of various multimedia components such as 2D graphics, 3D graphics, audio and video.

CREDITS: 4.00

### **ITEC N225 - STRUCTURED QUERY LANGUAGE**

Introduces the basic Structured Query Language (SQL) commands used to interact with a Relational Database Management System (RDBMS) in a business environment. Students get practical learning experiences in the use of Data Definition Language (DDL) commands, Data Manipulation Language (DML) commands and Data Control Language (DCL) commands with an emphasis on the SELECT command.

CREDITS: 4.00

### **ITEC N226 - COMPUTER PLATFORMS**

Teaches students the workings of the hardware components of personal computers (PC). Students are taught how to practice safety procedures, the proper use of tools and how to assemble a desktop computer. Once the PC is assembled, students are required to partition, format and install Windows operating system.

CREDITS: 4.00

### **ITEC N227 - PROGRAMMING CONCEPTS**

This course aims at giving students fundamental programming concepts with focus on problem solving and critical programming skills. Topics include sequence, selection, iteration, functions, and procedures.

CREDITS: 4.00

### **ITEC N228 - DATABASE DESIGN CONCEPTS**

Students gain the basic knowledge of the characteristics of a relational database and the data modelling techniques used in designing databases. Students build simple database applications for use in a business environment.

CREDITS: 4.00

### **ITEC N229 - PRINCIPLES OF INFORMATION SECURITY**

Provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features.

CREDITS: 4.00

### **ITEC N231 - E-BUSINESS I**

Students gain knowledge in how business organisations operate and explore the issues involved in the development of e-Business. The course looks at the scope and barriers to e-Business, examines and identifies the technical requirements needed and explores the future development of e-Business.

CREDITS: 4.00

### **ITEC N232 - WEB DEVELOPMENT**

Students gain the necessary skills for building web sites using client-side technologies using JavaScript and cascaded style sheets. Students also develop the proper use of client-side scripts and cascaded style sheets for creating rich user interfaces such as drop-down menus, date pickers, and other client-side related issues.

CREDITS: 4.00

### **ITEC N234 - PROGRAMMING FOR THE WEB**

Gives students fundamental programming principles that are needed in many areas of the web development stream. The course covers both structured and object oriented programming skills.

CREDITS: 4.00

### **ITEC N237 - OBJECT ORIENTED PROGRAMMING I**

The development of software by components using object-oriented concepts and techniques helps to make complex applications more easily understood by all stakeholders and allows such applications to be

more easily tested, scaled-up and coupled with other applications.

CREDITS: 4.00

### **ITEC N239 - DATA ANALYSIS AND DESIGN**

Data modelling and database design are essential skills in software engineering. Students learn to identify essential and related data elements in business problems and how to derive a suitable set of data types, tagged flat files (text and binary), serialised collections and/or relational database tables for the efficient storage and retrieval of data values as required by standalone, client-server, and web-based applications.

CREDITS: 4.00

### **ITEC N241 - WEB APPLICATIONS I**

Teaches students skills required for building web applications regardless of the technology used. Students learn to write server side code to generate content, maintain state using different methodologies, authenticate users, and connect to databases.

CREDITS: 4.00

### **ITEC N250 - MULTIMEDIA AUTHORING**

In this course students learn, demonstrate and use the principles, best practices and techniques of creating successful multimedia applications.

CREDITS: 4.00

### **ITEC N253 - DATABASE SYSTEM DESIGN AND IMPLEMENTATION**

Covers data modelling concepts, focusing on the entity-relationship data model and normalisation technique. Students learn how to translate business requirements into conceptual entity-relationship data models and enhance such models by the normalisation technique. The course also covers more advanced aspects of database design, namely, distributed database design, data warehouse design, and XML and internet database.

CREDITS: 4.00

### **ITEC N259 - OBJECT ORIENTED ANALYSIS**

One of the major success criteria of any software engineering project is a clear and concise user and system requirements specification. Adoption of object-oriented approach to software development greatly simplifies the analysis and design of solutions to complex industry problems. This course covers the analysis phase of the Software Development Life Cycle (SDLC). Students are introduced to object oriented concepts.

CREDITS: 4.00

### **ITEC N261 - IT TRAINING I**

Enables students to develop the skills needed to become IT trainers. The students are introduced to teaching and learning theories and strategies. They study the role of assessment in the instructional process.

CREDITS: 4.00

### **ITEC N265 - COMPUTER-BASED TRAINING**

Introduces the students to the skills needed to develop computer and web-based training courseware. Students are introduced to computer and web based instructional teaching and learning theories and strategies. The students discuss the basic elements of computer and web-based system courseware and develop skills in designing and delivering computer based training. Students are introduced to a range of technologies used to analyse, plan, design, create and evaluate computer and web based training materials.

CREDITS: 4.00

### **ITEC N266 - WIRELESS NETWORKING**

This course gives students the skills required to run routine administrative tasks on wireless networks. Students acquire a general understanding of wireless LANs. They perform basic design, installation, and configuration of wireless networks and learn about the different standards of wireless networks and how to troubleshoot and secure them.

CREDITS: 4.00

### **ITEC N278 - ENTERPRISE TECHNOLOGIES I**

Designed to enable the learners to obtain the necessary knowledge and skills to perform installation, configuration and administration of an enterprise network based on Windows as an operating system. In addition, it provides the learners with the skills needed to install and configure network protocols, network services and other server functions.

CREDITS: 4.00

### **ITEC N290 - HUMAN COMPUTER INTERACTION**

Explores theoretical and practical issues in the design, implementation and evaluation of user interfaces and human-computer interaction (HCI). The course covers user interface concerns that are fundamental to the success of any computer-based information system, like task analysis, dialogue design, user support, and evaluation.

CREDITS: 4.00

**ITEC N291 - OPERATING SYSTEMS**

Introduces students to the Linux operating system. The course focuses on workstation skills, common command line commands and graphical tools. Students also learn best practices for managing file and disk access, user and group accounts, printing and local processes in a networked environment.

CREDITS: 4.00

**ITEC N296 - NETWORKING CONCEPTS**

Focuses on network terminology, network topologies, network protocols, OSI model, network math, types of networking media, cabling LANs and WANs, and IP addressing scheme. Students are introduced to the networking standards and how OSI reference model supports these standards.

CREDITS: 4.00

**ITEC N298 - SYSTEM ANALYSIS**

Provides students with an understanding of the structured systems analysis processes by explaining important modelling and management concepts, cost considerations and interrelationships of business issues. Emphasis is on explaining various development methodologies and the strategies and techniques of systems analysis for producing logical models (independent of technology) for dealing with complexity in the development of information systems.

CREDITS: 4.00

**ITEC N301 - SOFTWARE TESTING**

Products that people and organisations use or depend upon typically have been designed and built to be reliable. Reliability is achieved by testing a product for structural and functional defects, then re-designing and re-testing the product (or parts thereof) to an acceptable level of reliability. Software applications, like any product, must be reliable.

CREDITS: 4.00

**ITEC N303 - BUSINESS APPLICATIONS DEVELOPMENT**

Students learn the practical aspects of developing menu-driven database business applications. They create a variety of forms, reports and menus for multi-user applications. Students apply different validation rules and check to ensure the correctness of data stored on a database.

CREDITS: 4.00

**ITEC N305 - BASIC SWITCHING AND INTERMEDIATE ROUTING**

Develops the student's comprehension and knowledge of how switches are interconnected and configured to provide network access to LAN users. It enables the student to be able to select the appropriate devices for efficient and loop-free operation. The course discusses the advantages of hierarchical network design and how to apply such a design in a switched LAN environment for a small and medium-sized organisation.

CREDITS: 6.00

**ITEC N307 - BASIC WEB AUTHORING**

This course is designed to equip students with specialist skills in the use and design of digital multimedia including graphics, sound and digital movies for web-based presentation on the Internet.

CREDITS: 4.00

**ITEC N308 - MULTIMEDIA SCRIPTING**

This course introduces the basic concepts of programming for multimedia.

CREDITS: 4.00

**ITEC N309 - SYSTEM DEVELOPMENT TOOLS**

Covers the concepts of developing and implementing computer based solutions using different methodologies such as System Development Life Cycle (SDLC), object oriented analysis and prototyping. In this course students apply project management principles and techniques during practical sessions. Students analyse business processes and develop optimal solutions for the existing business processes. Project work is carried out throughout the entire course to develop practical skills.

CREDITS: 4.00

**ITEC N310 - WAN TECHNOLOGIES**

Students are introduced to concepts related to Network Address Translation (NAT), types of WAN technologies (PPP, ISDN, Frame Relay, DDR), optical routing and network management. Students gain hands on experience in configuring and managing PPP, frame relay, ISDN and DDR based networks.

CREDITS: 6.00

**ITEC N311 - OPERATING SYSTEMS SECURITY**

This course will give students with an understanding of the key concepts in methods used in cybercrime

using high technology devices. The course provides knowledge about the investigating digital crime, legal issues and response to emerging technology assisted crimes in the world of cybercriminology.

CREDITS: 4.00

### **ITEC N312 - DATABASE ADMINISTRATION**

Students develop the ability to manage Oracle database files, manage table spaces, segments, extents, and blocks while using Globalisation Support features. This course covers initiating and terminating an Oracle instance and database, as well as creating and managing users, privileges, and resources with an operational database.

CREDITS: 4.00

### **ITEC N313 - MOBILE APPLICATION DEVELOPMENT**

Focuses on mobile application development. Students will develop and deploy mobile applications using any of the current mobile development technologies. The course covers intermediate topics that allow students to develop stand-alone applications that can be deployed to their mobiles.

CREDITS: 4.00

### **ITEC N315 - ADVANCED SOFTWARE APPLICATIONS**

Students examine three new software programmes currently being used in the corporate world. Students are both taught and expected to work independently to learn these software programmes, through research, training materials and online browsing. Students also have to demonstrate an advanced knowledge of the software programmes through a teaching demonstration.

CREDITS: 4.00

### **ITEC N318 - SECURITY POLICIES AND PROCEDURES**

Introduces the knowledge of policies and procedures which supports the efficient running of an organisation. The course details knowledge of methods of an asset classification policy, employment practices, record management, information handling, internet security, and business continuity and information security. The students will learn the key elements in designing and implementing security policies and procedures in order to support the business process of an organisation. The students will also learn how to integrate information security policies, standards and procedures into all

aspects of business, yet keeping the objective and mission requirements intact.

CREDITS: 4.00

### **ITEC N319 - BUSINESS DEVELOPMENT AND TRAINING**

Business Development and Training is a course that allows students to setup and run a real life business and training company in a business setup called the Centre. Training is offered for selected members of the community using a variety of technical skills and competencies. The main aim of the course is to provide professional development to both the trainers and the trainees.

CREDITS: 12.00

### **ITEC N320 - OBJECT ORIENTED PROGRAMMING II**

This course continues from Object Oriented Programming I to further enhance the student's ability to apply object oriented concepts in the analysis and solution of problems faced by software engineers. Students will demonstrate an ability to appropriately apply the concepts of abstract classes, inheritance, polymorphism, interfaces, method overloading, and loose coupling. Students develop more challenging applications that include a database backend component.

CREDITS: 4.00

### **ITEC N322 - INTRUSION DETECTION AND HACKERS TECHNIQUES**

Gives students the skills to recognise and utilise intrusion detection techniques, for the purpose of defending and securing organisational information infrastructures.

CREDITS: 4.00

### **ITEC N324 - SMALL OFFICE NETWORKS**

Introduces the networking and security technologies required to build and maintain a small-office network. Students gain an understanding of the improvements in office productivity that can result from the implementation of computer networks.

CREDITS: 4.00

### **ITEC N325 - WIRELESS NETWORKING**

This course gives students the skills required to run routine administrative tasks on wireless networks.

CREDITS: 4.00

### **ITEC N326 - NETWORKING PROJECT MANAGEMENT**

The aim of this course is to help students integrate the skills and knowledge they have acquired in their programme of study to produce a computer network solution to a realistic problem.

CREDITS: 4.00

### **ITEC N327 - WEB APPLICATION II**

This course teaches students best practices for building web applications.

CREDITS: 4.00

### **ITEC N331 - E-BUSINESS II**

Considers how e-Business organisations operate. It explores issues involved in the development of e-Business by either an established or new business. It also requires students to identify an e-Business opportunity and develop, implement, monitor and evaluate a project based on that opportunity.

CREDITS: 4.00

### **ITEC N334 - ENTERPRISE TECHNOLOGIES II**

Introduces the roles of basic servers used in a small business environment. Students experience administering email accounts, ftp folders, web based folders, SharePoint, SQL and ISA servers.

CREDITS: 4.00

### **ITEC N335 - NETWORK MANAGEMENT AND MONITORING**

This course introduces students to network management techniques, current industry-standard approaches, and products that exist in corporate networks. Students learn fundamental concepts and principles of network management. Students gain necessary skills needed to successfully apply those concepts to a particular situation.

CREDITS: 4.00

### **ITEC N338 - COMPUTER FORENSICS AND INVESTIGATION**

Looks at the methods of analysis of computer systems that have already been compromised. The course teaches students how to conduct a systematic investigation, recover critical data, and aid authorities in tracking those who caused the security breach. Students use software and hardware tools to preserve digital evidence for presentation in a court of law. Forensic tools and techniques are used to reconstruct the events that led to the system corruption, specifically

in exploring file structures, e-mail and networks.

CREDITS: 4.00

### **ITEC N339 - CUSTOMER RELATIONS MANAGEMENT**

Covers the fundamental concepts and the usefulness of Customer Relation Management (CRM) and its methods from a management perspective. In this course students develop appropriate strategies to manage customer portfolios. Students study the customer-to-business relationships and the use of information technology to increase efficiency in these relationships. Students also get the opportunity to develop their skills on a range of techniques that allow them to understand the complexity of CRM.

CREDITS: 4.00

### **ITEC N341 - XML AND WEB SERVICES DEVELOPMENT**

Enables the students to gain a full appreciation of mainstream industry XML and web service formats as well as tools and techniques for developing applications based on these formats.

CREDITS: 4.00

### **ITEC N349 - XML PROGRAMMING**

This course provides the student with the principles, benefits and components of XML as well as both advanced principles of XML development, and the details behind emerging standards like XSLT. The course also covers programming support, browser support and the major contributions of key players like IBM, Microsoft and Sun Microsystems. The course also covers the components of XML Application Programming Interfaces like DOM.

CREDITS: 4.00

### **ITEC N350 - MODELLING OF DISCRETE EVENT SYSTEMS**

Students learn the fundamentals of discrete event systems and computer simulation modelling. At the end of the course students are able to describe a systematic approach to study a current or desired system and to develop a computer simulation programme that can be used to predict system behaviour when some parameters are changed over period of time. The students learn how to design experiments, analyse the data, and write a management report that may help the respective manager to make better decisions.

CREDITS: 4.00

**ITEC N351 - PROBABILITY AND STATISTICS**

Introduces the students to the fundamental of Probability and Statistics and their applications that are related to information technology such as mathematical finance, quantitative management, telecommunications, signal processing, bioinformatics, as well as traditional ones such as insurance, social science and engineering.

CREDITS: 4.00

**ITEC N352 - ETHICS**

An introduction to the area of applied ethics. Students are introduced to a number of ethical theories and then given a chance to apply these to the business and working world, especially to that of the UAE. The purpose of this course is not to show what is right and what is wrong, but rather to develop in students an understanding of current ethical issues. In addition, students develop their critical thinking skills so that they can form their own opinions about the issues involved.

CREDITS: 4.00

**ITEC N353 - ORGANISATIONAL BEHAVIOUR**

Introduces the reasons behind, and issues relating to, people's behaviour within an organisation and the processes of organisational change. The course defines organisational behaviour and its importance. It then proceeds to explore motivation, leadership, group behaviour, cultural issues, organisational change and conflict and power in organisations. These issues are looked at within the context of organisations generally, and those within the UAE specifically. Applications of organisational improvement will synthesise the principles.

CREDITS: 4.00

**ITEC N354 - INTERNATIONAL STUDIES**

An introduction to the reasons behind and issues relating to the current major international political, cultural, economic and business factors which are affecting governments and peoples around the world. In addition to discussing events around the world, the course will also focus on how these events and international factors are affecting the UAE.

CREDITS: 4.00

**ITEC N356 - QUALITY MANAGEMENT PRINCIPLES**

Includes an analysis of critical quality planning practices and how to implement evaluations and audits as part of a quality assurance programme. It provides

an overview of techniques to plan, organise, monitor and control the improvement of quality.

CREDITS: 4.00

**ITEC N359 - OBJECT ORIENTED DESIGN**

After completing the Object-Oriented Analysis course, students continue into the design phase using the object-oriented approach. Adoption of an object-oriented approach to software development greatly simplifies the analysis and design of solutions to complex industry problems. Students learn about tasks and techniques involved in the design phase.

CREDITS: 4.00

**ITEC N362 - WEB GRAPHICS AND MULTIMEDIA**

Students identify the importance of web graphics, multimedia and its applications. Students gain expertise in one of the multimedia development tools; and learn how to create and edit graphic images, animations, audio and video components suitable for web design. Students also gain expertise in customising the graphics and multimedia components, publish on the web and add some actions to the multimedia components using simple scripts.

CREDITS: 4.00

**ITEC N367 - MANAGING WEB PROJECTS**

Students learn how to take a Web project from the initial concept to its final product, how to market the Website and evaluate the project's success. Students use the tools and the framework necessary to build a cohesive Web workflow plan and optimise usage of all required resources.

CREDITS: 4.00

**ITEC N368 - WEB APPLICATION SECURITY**

This course aims at giving students broad knowledge of security issues related to the web. The course explores the reasons behind attacking web applications and how these attacks are performed. It also identifies weak spots (or vulnerabilities) within web applications and the tools used for attacks. In this course students, as developers of web applications, learn how to embrace best practices for securing web applications.

CREDITS: 4.00

**ITEC N374 - IT PROJECT I**

Students develop and apply integrated planning, designing and project management skills in a Business Information Technology (IT) environment. Students use project management software to document all project

activities. Planning and analysis for an appropriate Business/IT project is undertaken and a feasibility report is prepared which is then used to design and present the Business/IT solution.

CREDITS: 4.00

### **ITEC N375 - IT PROJECT II**

Provides the students with guidelines in designing business oriented systems. Students know that the analysis phase of a given system has already been done earlier either by themselves or by their supervisors. Students use different tools, techniques and modelling to enhance their practical skills as well as producing workable systems that can be implemented later on.

CREDITS: 4.00

### **ITEC N376 - IT PROJECT III**

Provides the students with guidelines in developing and implementing business oriented systems. Students assume that the analysis and design phases of a given system have already been done earlier either by themselves or by their supervisors. Students then use different tools, devices, techniques, programming languages and databases to enhance their practical skills as well as produce error free, executable and implemental systems.

CREDITS: 4.00

### **ITEC N384 - NETWORK SECURITY**

Introduces students to the needs, trends and goals of network security. It focuses on using different techniques for securing routers and switches as well as using firewalls.

CREDITS: 4.00

### **ITEC N397 - BUSINESS INTELLIGENCE TOOLS**

Outlines the business intelligent tools that help Management of an enterprise to store, access and analyse the data which help in making decisions that enhance the performance, increase the profit and reduce the operating costs of the enterprise by using specific analytic and mining tools.

CREDITS: 4.00

### **ITEC N399 - IT PROJECT MANAGEMENT**

This course introduces students to the fundamental methods used in managing projects. This course uses theory and practice to provide an in-depth coverage of the many skills, tools and techniques involved in the management of all types of projects including Information Technology projects.

CREDITS: 4.00

### **ITEC N401 - ADVANCED MULTIMEDIA SCRIPTING**

This course covers the advanced concepts of scripting for multimedia. Students will learn to design and develop sophisticated multimedia products for education, entertainment and business through the use of advanced scripting and development tools. The course project will contribute to a rich portfolio of work that will showcase students' technical, artistic and team-working abilities, all of which are highly sought after by the industry.

CREDITS: 4.00

### **ITEC N402 - MULTIMEDIA AUDIO AND VIDEO**

Covers the techniques and technology used to create high quality digital audio visual effects, giving the students the skills required to work in post-production areas of the film and television industry. The early stages of the course give a working knowledge of the entire production process, before moving on to key production and post-production skills such as digital film-making, compositing, editing, motion graphics, effects and CGI. The final project will contribute to a rich portfolio of work that will showcase students technical, artistic and team-working abilities, all of which are highly sought after by the industry.

CREDITS: 4.00

### **ITEC N404 - MULTIMEDIA FOR MOBILE DEVICES**

Teaches students to develop and deploy mobile applications using a current mobile development technology. Students compare current mobile devices and their application development tools. They also learn how to develop a variety of stand-alone applications, using high level user interfaces and actions such as labels, numeric and text fields, buttons, commands, menus, lists, and images. These applications are then be deployed to the mobile devices. Students also learn how to store and read data on a mobile storage device.

CREDITS: 4.00

### **ITEC N405 - VIRTUAL REALITY AND SIMULATION**

Introduces the concepts of virtual reality and equips the students to understand and evaluate virtual reality systems and their applications with an emphasis on its impact on educational technology. The course also covers the topic of simulation. The delivery of this course will include a lab component featuring virtual walkthroughs.

CREDITS: 4.00

### **ITEC N410 - CURRENT TECHNOLOGIES**

Provides students with the skills required to develop

dynamic web applications. Students are introduced to modern web development technologies as well as the mechanisms to create diverse web applications, including E-business systems. Students also apply analytical techniques and models to understand the web development cycle and the behaviour of E-business systems.

CREDITS: 4.00

### **ITEC N411 - MANAGEMENT OF INFORMATION SYSTEMS**

Focuses on a broad view of the role of computer-based information (IT) systems in organisations from a management perspective. The strategic nature of an information system is emphasised in relation to other organisational systems.

CREDITS: 4.00

### **ITEC N412 - WEB-BASED DESIGN AND DEVELOPMENT**

Students gain an understanding of and are able to compare the different architectures of web-based solutions. The course helps the students in developing the required skill sets to design and build web-based solutions using the latest state of the art client-side and server-side technologies. The students are able to demonstrate the acquired knowledge and skills from this course in a fully functional dynamic web-based application using best practices in software project management.

CREDITS: 4.00

### **ITEC N413 - ADVANCED APPLICATIONS DEVELOPMENT**

Provides students with a comprehensive insight to the concepts behind object-oriented software development, including the terminologies, methodologies, and notations used in object oriented programming language. The students develop skills in advanced object oriented concepts such as multithreading and animations.

CREDITS: 4.00

### **ITEC N414 - BIT PROJECT I**

This course involves the students using the skills they have gained through their other course up to this point to undertake an explicit work-based IT project.

CREDITS: 4.00

### **ITEC N415 - APPLIED RESEARCH SKILLS**

This course provides an overview of information

sources, and the research process. Students gain practical and generic information retrieval skills and conduct secondary research. The results are applied to produce written report(s) as part of a business case.

CREDITS: 4.00

### **ITEC N418 - IT PROJECT P15**

This course provides students with the opportunity to use the skills they have gained through their other courses to undertake an explicit enterprise level work-based IT project. The project will involve conducting a detailed investigation, conceptualising, design, implementation, testing, and managing an enterprise level information technology project. The project should help to promote the sense of responsibility, independent and teamwork research spirit.

CREDITS: 12.00

### **ITEC N451 - CONTEMPORARY ISSUES IN INFORMATION SYSTEMS**

Deals with identifying issues concerned with the building of information systems that meet the demand for communications and data storage and retrieval that are created by the Internet. The course develops an understanding of systems development using human computer interaction methodologies and web development guidelines. The students learn to evaluate the scope for the introduction of new technologies including EDI and XML.

CREDITS: 4.00

### **ITEC N452 - ADVANCED OBJECT ORIENTED ANALYSIS AND DESIGN**

Builds upon previous courses in Object Oriented Analysis and Design (OOAD) to further develop the student's ability to: a) sufficiently analyse and specify the requirements of a software application or system using OOAD methods, UML diagrams, and standardised text documents; and b) from the analysis documents, design a complete, unambiguous solution using relevant UML diagrams and supporting documents.

CREDITS: 4.00

### **ITEC N453 - INFORMATION TECHNOLOGY PRACTICES**

This course provides students with a broad survey of the individual, organisational, and cultural impact of current and emerging technologies. The course focuses on understanding relevant managerial issues related to managing information technologies development and implementation including examination of the

dual challenges of effectively controlling the use of well-established information technologies while experimenting with emerging technologies to enable new business models.

CREDITS: 4.00

### **ITEC N454 - INTERNET MULTIMEDIA AND INTERACTIVITY**

Covers the concept of multimedia and how to develop multimedia components using different multimedia elements such as text, audio, video and animation. The course also teaches the student how to customise the multimedia elements for an effective way of communicating the information through the web. Students develop a multimedia enhanced application as a part of the course.

CREDITS: 4.00

### **ITEC N455 - INFORMATION MANAGEMENT SYSTEMS**

This course provides an overview of the concepts of decision support systems (DSS), enterprise resource planning (ERP), customer relation management (CRM), and workflow management.

CREDITS: 4.00

### **ITEC N457 - ADVANCED DATABASE ARCHITECTURE**

Provides an overview of advanced topics related to relational databases architecture and administration. In addition to providing information on data processing, database advantages and features, review of the relational database model, referential integrity and constraints, database design, creation, tuning, and administration this course also utilises Oracle Database Administration as a practical application.

CREDITS: 4.00

### **ITEC N458 - ENTERPRISE JAVA APPLICATION DEVELOPMENT**

This course provides in depth experience in developing enterprise applications using J2EE. Session management and session tracking are the starting point in this course. Development of distributed computing is achieved through the enterprise architecture designed by Sun Microsystems. Extensive use of EJBs are employed in the construction of n-tier architecture using the MVC pattern.

CREDITS: 4.00

### **ITEC N459 - PROJECT MANAGEMENT**

Covers the major issues of Project Management as

applied to projects in general including Information Technology Projects. Students apply various techniques of Project Management through case studies. Real-time work and time management are encouraged by the course. Simulated scenarios are provided by the course for students to experiment with alternative and corrective measures. The students are exposed to software tools for project management.

CREDITS: 4.00

### **ITEC N460 - OPERATING SYSTEMS I**

Focuses on using Red Hat Linux as an operating system for the Intel family of computers. Students learn installation and system start-up procedures. Students learn how to manage file systems, users and groups, and printing. Students attach a workstation to a network. The primary user interface used in this course is the bash shell.

CREDITS: 4.00

### **ITEC N461 - OPERATING SYSTEMS II**

The focus of this course is on setting up a Linux network server. Network services covered include DNS, DHCP, NFS, FTP, Samba, Email, HTTP and SSH. Students learn enterprise system and network security issues in detail, including user authentication services and system monitoring services for a business.

CREDITS: 4.00

### **ITEC N462 - MARKETING AND INFORMATION MANAGEMENT**

Introduces basic marketing concepts and functions, as well as the importance of marketing. The course focuses on defining the role of marketing, market opportunities, function of marketing research, examining product/service strategies, understanding the elements of the marketing mix, examining the role of the Internet in marketing and factors to consider when creating a marketing plan.

CREDITS: 4.00

### **ITEC N463 - APPLICATIONS DEVELOPMENT**

This module addresses the processes and tools used in the development of software applications with an emphasis on database-oriented applications. Students learn structured design methodologies. Topics include relational database design and management as well as application development using application, user interface and report generators.

CREDITS: 4.00

**ITEC N466 - INFORMATION MANAGEMENT PROJECT**

This course provides students with the opportunity to apply the knowledge, and practise the skills, acquired in the prerequisite courses within the context of a substantial information systems development project.

CREDITS: 4.00

**ITEC N467 - SOFTWARE APPLICATIONS SECURITY**

Provides students with the opportunity to apply the knowledge, and practice the skills, acquired in the prerequisite courses within the context of a Secured Software Application Development Process.

CREDITS: 4.00

**ITEC N488 - INFORMATION TECHNOLOGY SERVICE MANAGEMENT**

Gives students a basic understanding of Service Management as applied to Information Technology systems, including frameworks such as COBIT, ISO 20000 and ITIL v3. The course focuses on the lifecycle phases in ITIL v3 Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement. Current and emerging technologies are used as examples to illustrate how the lifecycle phases link together.

CREDITS: 4.00

**ITEC N490 - ADVANCED ROUTING**

This unit outlines the principles and theory of advanced routing in local and wide area networks. It covers advanced theory of routing, detailed study and implementation of both interior and exterior gateway routing protocols, route optimisation techniques, IP Multicasting and IPv6 to support enterprise-class IP routing networks.

CREDITS: 12.00

**ITEC N492 - ADVANCED SWITCHING**

Students learn principles, theory and application of advanced switching. Students are taught how to build campus networks using multi-layer switching technologies over Ethernet. Design and implementation of VLANs, Spanning Tree Protocol and Inter VLAN routing is also explained. In addition Implementing Secure switched networks with High availability, that support Voice and Wireless LANs is also covered.

CREDITS: 8.00

**ITEC N493 - TROUBLESHOOTING**

This course covers the principles and application of Internetwork troubleshooting. Students learn how to troubleshoot different Internetwork problems. Major topics include troubleshooting routing protocols, major WAN technologies and the switching environment.

CREDITS: 8.00

**ITEC N494 - NETWORK SECURITY (CCSP)**

Students identify and implement technologies using AAA servers. Students learn and practice intrusion detection and prevention techniques, planning and configuring IDS/IPS devices, encryption and hashing techniques, the role of digital certificates, types of VPN connections, its implementation and administration.

CREDITS: 8.00

**LSC 1003 - APPLIED GERMAN COMMUNICATIONS**

This is an introductory German language course for students. It promotes German language basics by developing the students' listening, reading, spelling, vocabulary, grammar, and speaking skills in the German language at A1.1 level of the CEFR. Students practise their use of German by reading, discussing day-to-day activities, and writing sentences and short paragraphs all in the target language. They further develop their skills by participating in oral interviews.

CREDITS: 3.00

**LSC 1103 - ACADEMIC READING AND WRITING 1**

This course is recommended for BAS students in their first semester and focuses on developing the skills needed for understanding academic texts and for writing academic English, to approximately CEFR mid-B2 level.

CREDITS: 3.00

**LSC 1203 - CREATIVE WRITING**

Encourages students to respond creatively in writing to a range of stimuli, whether visual, musical, dramatic or textual. In the early sessions of the course, the instructor will guide students through a series of activities designed to give them the confidence and resources to produce a written response in whatever form they choose.

CREDITS: 3.00

**LSC 1303 - INTRODUCTION TO LITERATURE**

Familiarises students with basic genres of literary

writing in English, such as poetry, drama and fiction. Students will be introduced to terms for discussing these genres and how stylistic effects are achieved in them.

CREDITS: 3.00

### **LSC 1503 - ACADEMIC SPOKEN COMMUNICATION**

This course is for BAS students in their second semester and focuses on the use of spoken English in academic and professional contexts to approximately CEFR mid-B2 level.

CREDITS: 3.00

### **LSC 2103 - ACADEMIC READING AND WRITING 2**

This course is recommended for BAS students in their fourth semester and focuses on refining the skills needed for understanding longer academic texts and developing competency in writing academic English on a researched topic, to a professional standard, following APA guidelines.

CREDITS: 3.00

### **LSC 2113 - ENGLISH FOR CLASSROOM MANAGEMENT**

This course is for BAS students in their third semester and focuses on the English needed by classroom teachers as they manage the learning process.

CREDITS: 3.00

### **LSC 2123 - ENGLISH FOR ENGINEERING TECHNOLOGY**

This course is for BAS students in their third semester and focuses on the use of English in technology and engineering contexts.

CREDITS: 3.00

### **LSC 2133 - ENGLISH FOR HEALTH SCIENCES**

This course is for BAS students in their third semester and focuses on the use of English in healthcare contexts.

CREDITS: 3.00

### **LSC 2143 - ENGLISH FOR COMPUTER USERS**

This course is for BAS IT students in their third semester and focuses on the use of English for computer use.

CREDITS: 3.00

### **LSC 2153 - ENGLISH FOR THE MEDIA**

This course is for BAS students in their third semester and focuses on the use of English in the media.

CREDITS: 3.00

### **LSC 2163 - ENGLISH FOR BUSINESS STUDIES**

This course is for BAS business students in their third semester and focuses on the use of English for Business Studies.

CREDITS: 3.00

### **LSC 2173 - ENGLISH FOR AVIATION**

All Aviation Engineering students at the Higher Colleges of Technology face a large amount of complex terminology related to Aviation Maintenance Technology in their courses. In addition the General Civil Aviation Authority (GCAA) necessitates that the student produce a high standard of essay writing related to Module 7 - Human Factors, Module 9 - Aviation Legislation and Module 10 - Maintenance Practices, in order to successfully graduate from the programme. This course focuses on supporting the rigorous lexical demands of the academic studies related to Aviation Maintenance Technology.

CREDITS: 3.00

### **LSC 3003 - PROFESSIONAL ARABIC**

This is an Arabic communication course for the workplace, focusing on the needs of management professionals in a cross-cultural environment. which prepares students to communicate effectively in both oral and written media as applied in work related situations..

CREDITS: 3.00

### **LSC 3013 - PROFESSIONAL COMMUNICATIONS**

Helps students with career preparation through development of students' critical writing, speaking and listening skills, presentation and negotiation strategies, and cross-cultural communication.

CREDITS: 3.00

### **LSEC N100 - ACADEMIC COMPOSITION**

This is one of two courses which focus on enabling learners to develop academic language skills and some basic research in preparation for the demands of their academic programme. On this course, students learn to write essays and reports using an appropriate style and register, and also to locate and use written resources appropriately.

CREDITS: 4.00

### **LSEC N101 - ACADEMIC COMMUNICATION**

Focuses on the development of communication skills needed in academic programmes. Students learn

to take part in academic discussions and to make presentations in a comprehensible and concise manner, appropriate to academic settings. Course delivery can include both individual and group projects, as well as leadership and teamwork skills. Liaison with concurrent programme courses is recommended where feasible.  
CREDITS: 4.00

### **LSEC N307 - PROFESSIONAL COMMUNICATIONS**

This course helps students with career preparation through development of students' critical writing, speaking and listening skills, presentation and negotiation strategies, and cross-cultural communication.  
CREDITS: 4.00

### **LSF 2083 - INTRODUCTION TO JOURNALISM**

Introduces students to the practice of journalism and helps them to understand the role journalists play in reporting, processing and production of news. The course familiarises students with the multi - platform news environment to increase their knowledge about the application of journalism to print (Newspaper), broadcast (Radio and TV) and web (online based) media.  
CREDITS: 3.00

### **LSF 2203 - ART APPRECIATION**

This course is designed to enable the student to understand and employ a basic vocabulary of art appreciation and criticism.  
CREDITS: 3.00

### **LSF 2543 - HISTORY AND PRACTICE OF PHOTOGRAPHY**

Students will learn not only about the history of photography and about various photographic techniques, but also develop technical and compositional skills how to take photographs.  
CREDITS: 3.00

### **LSFA N208 - INTRODUCTION TO JOURNALISM**

Introduces students to the practice of journalism and helps them to understand the role journalists play in reporting, processing and production of news. Designed to familiarise students with the multi-platform news environment to increase their knowledge about the application of journalism to print (Newspaper), broadcast (Radio and TV) and web (online based) media.  
CREDITS: 4.00

### **LSFA N220 - ART APPRECIATION**

This course is designed to enable the student to understand and employ a basic vocabulary of art appreciation and criticism.  
CREDITS: 4.00

### **LSFA N254 - HISTORY AND PRACTICE OF PHOTOGRAPHY**

Students will learn not only about the history of photography and about various photographic techniques, but also develop technical and compositional skills on how to take photographs.  
CREDITS: 4.00

### **LSFA N308 - PROFESSIONAL ARABIC**

An Arabic communication course for the workplace, focusing on the needs of management professionals in a cross-cultural environment.  
CREDITS: 4.00

### **LSG 1003 - ISLAM AND GLOBALISATION**

This course is divided into two parts; the introductory part, and the main course. The introductory part provides students with the background knowledge about the main themes of the course. This course prepares students to be critical evaluators and insightful thinkers as they base their arguments on factual data that is provided by the course. In the second part of the course, students will understand globalisation as a theme and as a practice on the ground.  
CREDITS: 3.00

### **LSG 2013 - GLOBALISATION, MASS MEDIA AND SOCIETY**

In their varied forms, mass media have come to play a prominent role in both individual and societal life in the UAE, shaping the way we think about ourselves as well as the world around us. This course will equip students with the necessary resources to critically engage the media in order to better use it to become responsible Emirati and global citizens.  
CREDITS: 3.00

### **LSG 2023 - GLOBALISATION AND THE ARAB GULF**

This course will endeavour to first grasp the cultural, economic, political dimensions of globalisation, after which it will then move to explore its varied impact on the Arab Gulf. The Arab Gulf is at the forefront of

globalisation. In order to successfully overcome the challenges and take advantage of the opportunities posed by this multifaceted phenomenon, it must first properly be understood.

CREDITS: 3.00

### **LSG 2033 - FAITH, JUSTICE AND GLOBALISATION**

This course takes as its fundamental thesis the importance of understanding the role of religion in the set of contemporary issues which have emerged from the phenomena of globalisation. The world's religions contribute both to the formation of a wide array of moral visions of the global order and also to concrete policy issues from human rights to the waging of war to economic and environmental justice.

CREDITS: 3.00

### **LSG 2043 - AN EXPLORATION OF THE PETROLEUM INDUSTRY**

Introducing the major phases in petroleum and natural gas production, the global nature of industry and its impact, the role of Gulf producers, and issues associated with the industry's response to climate change and other environmental concerns. The course methodology focuses on data and information accessed online and through library and other sources and introduces students to assessing reliability of such sources.

CREDITS: 3.00

### **LSG 2453 - GLOBAL MEDIA TRENDS**

In this course students explore the position of the Emirati and Arab media within its global and regional context.

CREDITS: 3.00

### **LSH 2103 - FOUNDATIONS FOR REASONING**

Examines the foundations of critical thinking where a student will be able to discuss various types of arguments and evaluate the degree to which they are made responsibly or irresponsibly.

CREDITS: 3.00

### **LSH 2113 - FOUNDATIONS OF LEADERSHIP**

Provides students with an understanding of the principles of leadership as well as how they might be applied in real world situations.

CREDITS: 3.00

### **LSH 2123 - INTRODUCTION TO HISPANIC CULTURE, HISTORY AND LANGUAGE**

Hispanic culture and language is rich and varied in historical, geographical and cultural scope, with many shared roots, influences and values with the Arabic speaking world. Whilst we may have some passing notion about the historical context of the Arab Al Andaluz or the influence of the Levantine Arabs in countries like Argentina, Chile and Colombia, many of our learners do not have an overview of the broader context of what Hispanic really means, which is what this course aims to address

CREDITS: 3.00

### **LSH 2133 - INTRODUCTION TO JAPANESE LANGUAGE AND SOCIETY**

Introduces students to the Japanese language and aspects of the society and Japanese culture. Students should be aware of different levels of language, for example, formal and informal. The course will focus on oral communicative competence, writing (hiragana, katakana and the first 100 Chinese characters) and listening skills. Students will study aspects of the Japanese culture, with a focus on traditional arts (calligraphy, tea ceremony and flower arrangement), society (anime, family structure and the home).

CREDITS: 3.00

### **LSH 2203 - CRITICAL THINKING**

Covers the basic principles of critical thinking and reasoning and their application. Students are introduced to a number of cognitive and affective strategies characteristic of the critical thinker, as well as a range of barriers that impede critical thinking, and are encouraged to examine their own habits of mind in the light of these. They will meet generic concepts that pertain to the development and evaluation of sound arguments, coming to understand and apply such terms as 'premise, conclusion, inference, deduction, induction and fallacy'. In constructing their own arguments, they will learn how the soundness of an argument will vary depending on the context in which it is used. They will examine inductive reasoning and the scientific method in historical and everyday contexts. In the final phase of the course, students will apply the knowledge and skills they have gained to a case study.

CREDITS: 3.00

### **LSH 2343 - ETHICAL ISSUES**

This course is an introduction to various forms of moral

reasoning, ethical principles and ethical theories.

CREDITS: 3.00

### **LSH 2803 - HISTORICAL PERSPECTIVES OF THE ARAB WORLD**

This seminar-type course presents a framework for understanding the peoples and cultures of the Arab world.

CREDITS: 3.00

### **LSH 2813 - MODERN HISTORY OF THE GULF**

Examines the key political, economic, and social issues of the region in the modern period (19th century to present) in order to develop an understanding of the origins and development of the Arab Gulf states.

CREDITS: 3.00

### **LSH 2823 - MODERN HISTORY OF THE MIDDLE EAST**

Surveys the major political, socio-economic, and cultural changes in the Middle East in the modern period through the investigation of the demise of the Ottoman and Qajar dynasties, the rise of new nations and nationalist identities, and the development of modern states and societies.

CREDITS: 3.00

### **LSH 2903 - COMMUNITY SERVICE LEARNING**

Students explore theories and concepts relating to human rights and civic responsibility, identify a community need and engage in service in partnership with an existing organisation.

CREDITS: 3.00

### **LSH 2913 - DRAMA APPRECIATION**

Designed to provide students with theoretical and experiential opportunities to gain a fundamental insight into drama history and practice, and also to enhance their communication skills across a range of contexts.

CREDITS: 3.00

### **LSHM N243 - ETHICAL STUDIES**

An introduction to various forms of moral reasoning, ethical principles and ethical theories. Students will identify ethical issues arising locally and globally. They will assess situations which are ethically ambiguous, learn to see ethical dilemmas from different perspectives and support their own views logically and coherently.

CREDITS: 4.00

### **LSM 1003 - APPLIED MATHEMATICS**

This course provides the basis for using mathematics to

carry out basic mathematical calculations.

CREDITS: 3.00

### **LSM 1053 - COLLEGE ALGEBRA**

Extends the concepts developed in Mathematics Foundation 1 and 2 and is designed for those students requiring a higher level of mathematics for entry to Bachelor programmes.

CREDITS: 3.00

### **LSM 1103 - TECHNICAL MATHEMATICS**

This course in pre-calculus mathematics develops mathematical concepts and techniques in solving a variety of typical scientific and technical problems.

CREDITS: 3.00

### **LSM 1113 - STATISTICAL MATHEMATICS**

This is an introductory course in statistics with applications in a variety of areas.

CREDITS: 3.00

### **LSM 1123 - QUANTITATIVE REASONING**

Introduces students to the concepts designed to foster an appreciation of mathematics as a language of communication. The course includes topics on reasoning techniques, numeration systems, and geometry with an emphasis how these areas of mathematics are applicable to media, music, design, photography and the arts.

CREDITS: 3.00

### **LSMA N100 - APPLIED MATHEMATICS**

Provides the basis for using mathematics to carry out basic mathematical calculations.

CREDITS: 4.00

### **LSMA N110 - TECHNICAL MATHEMATICS**

This course in pre-calculus mathematics develops mathematical concepts and techniques in solving a variety of typical scientific and technical problems.

CREDITS: 4.00

### **LSMA N111 - STATISTICAL MATHEMATICS**

This is an introductory course in statistics with applications in a variety of areas.

CREDITS: 4.00

### **LSMA N112 - QUANTITATIVE REASONING**

Introduces students to the concepts designed to foster an appreciation of mathematics as a language of

communication. The course includes topics on reasoning techniques, numeration systems, and geometry with an emphasis how these areas of mathematics are applicable to media, music, design, photography and the arts.

CREDITS: 4.00

### **LSN 1003 - HUMAN SCIENCES I**

This course introduces the basic concepts of Human Anatomy and Physiology, together with the associated terminology. This course includes, basic chemistry, cell and tissue studies, with an overview of the body systems. This course offers students an understanding of how the various parts of the human body function. Three systems - blood, cardiovascular (heart), respiratory (lungs) are highlighted in this course. This course provides a foundation for further studies in non-clinical health majors and those with an interest in understanding the human body.

CREDITS: 3.00

### **LSN 1013 - HUMAN SCIENCES II**

Provides students with further understanding of the structure and function of the healthy human body. Covers body systems associated with digestion, excretion, control, movement, temperature regulation, maintenance and continuity.

CREDITS: 3.00

### **LSN 1023 - HUMAN BIOLOGY**

This course will provide students with an understanding of human anatomy and physiology as well as cellular biology.

CREDITS: 3.00

### **LSN 1043 - INTRODUCTION TO GEOLOGY**

This course introduces the basic concepts of Geology, together with associated terminology. This course includes, plate tectonics and earthquakes and the effects on the built environment, composition of the Earth, geologic time, volcanism and environmental effects, weathering and sedimentation, metamorphic rocks and rock deformation, the hydrosphere, the atmosphere, the effects of climate change, mineral resources with particular emphasis on hydrocarbons, the major geologic regions of the earth, and the geology of the UAE.

CREDITS: 3.00

### **LSN 1103 - ANATOMY AND PHYSIOLOGY I**

This provides an introduction to basic anatomy and

physiological principles from cellular level to the whole organism.

CREDITS: 3.00

### **LSN 1113 - INTRODUCTION TO SUSTAINABILITY**

Introduces the concept of sustainability as the efficient and environmentally responsible use of natural, human, and economic resources for the enhancement of quality of life on earth. Sustainability is the efficient and environmentally responsible use of natural, human, and economic resources for the enhancement of quality of life on earth. This course will provide students with knowledge about the basic concepts related to sustainability and sustainable development.

CREDITS: 3.00

### **LSN 1123 - SCIENCE, TECHNOLOGY AND CIVILISATION**

This course aims for students to explore: how changes in scientific thinking and method come about; how technological development can lead to scientific revolutions and also be a direct consequence of them; and how the emergence of techno-science has changed, and continues to change, life on our planet. In the initial phase of the course, students will be asked to compare scientific and non-scientific explanations for natural phenomena and explore some of the crucial developments that made civilisation and scientific thinking possible.

CREDITS: 3.00

### **LSN 1203 - ANATOMY AND PHYSIOLOGY II**

The second course in a two-semester sequence designed to build upon certain concepts covered in the Anatomy and Physiology I course. The aim is to extend the students' understanding of the workings of the body systems and the communication processes required to coordinate their activities.

CREDITS: 3.00

### **LSN 1213 - PERSONAL HEALTH AND PHYSICAL EDUCATION**

This course aims to increase students understanding of current health and physical education issues.

CREDITS: 3.00

### **LSN 1223 - CHEMISTRY**

An introduction to general concepts of chemistry.

CREDITS: 3.00

**LSN 1263 - PHYSICS**

An introductory level physics course. It covers many of the fundamental principles of physics such as units of measurement, energy, mechanics, fluids, heat, sound, and light. Laboratory work is required to reinforce and stress the importance of these principles using the experimental method for investigating and reporting results.

CREDITS: 3.00

**LSN 1303 - HEALTH AND WELLNESS**

In this course students will gain an awareness of what constitutes health and wellbeing in their various aspects (including the physical, psychological, mental and social) and learn about skills and techniques for their maintenance and development. They will come to understand the basics of human anatomy and physiology, and learn about fitness, nutrition, and varying physical requirements at different life stages.

CREDITS: 3.00

**LSN 2003 - ARCHAEOLOGY: PRESERVING CULTURES**

Designed to help students explain, value and experience archaeological heritage in the UAE and abroad in order to better appreciate its relevance to their present and future. This will be achieved through evidence-based knowledge related to basic archaeological theories and practices, whilst maintaining a strong focus on learning by doing.

CREDITS: 3.00

**LSN 2313 - SCIENTIFIC PRINCIPLES**

This is a survey course intended for students without a significant science background who intend to enrol in Science based programmes, or wish to extend their scientific knowledge.

CREDITS: 3.00

**LSN 2433 - ECOLOGY**

Students, upon satisfactory completion of this course, will be able to understand and discuss basic ecological concepts including the concepts of species, communities and ecosystems.

CREDITS: 3.00

**LSN 2503 - INTRODUCTION TO NUTRITION**

Nutrition is the study of the food substances necessary for health, and how the body uses these substances for cell growth and maintenance.

CREDITS: 3.00

**LSS 1233 - HUMAN GROWTH AND DEVELOPMENT**

This course examines human growth and development across the life span.

CREDITS: 3.00

**LSS 1243 - INTRODUCTION TO SOCIAL SCIENCES**

Gives students an introduction to the Social Sciences, in particular as they relate to the interaction between the individual and society, and how individuals are shaped by and react to societal forces. It will examine the methods that are used in coming to conclusions in the discipline as well as looking at a selection of theories in a number of social sciences, and raising questions about the potential for disruption and advancement posed by social change. Students will undertake their own research on a topic of contemporary interest in the area of the Social Sciences.

CREDITS: 3.00

**LSS 2003 - CREATING YOUR FUTURE**

Equips students with advanced workplace transferrable skills to prepare them for the competitive labour market. It is cross disciplinary and applicable to all students.

CREDITS: 3.00

**LSS 2013 - THE WORLD OF WORK**

Students will learn to acclimatise to, and thrive in, 'The World of Work'. It will do this by introducing them to the fundamental concepts of organisations as workplaces so that they may survive and thrive by gaining better understanding of their own personalities, attitudes, motivation, communication and leadership styles, then learn how to match them with the organisational environment, behaviour, culture and ethics.

CREDITS: 3.00

**LSS 2053 - CULTURAL DIVERSITY**

This course is designed to provide students with a positive perception of cultural diversity.

CREDITS: 3.00

**LSS 2063 - CULTURE, CLIMATE, AND VALUES**

Focuses on the crucial importance of understanding culture and climate in a globalised, diverse and repeatedly restructured working environment. The course explores cultural issues at the national and organisational levels and the differences between culture, climate and values. The course also explores how a manager can interact effectively in different

cultural settings and influence the development of a desired organisational culture.

CREDITS: 3.00

### **LSS 2093 - INTERCULTURAL INTELLIGENCE**

Equips students with knowledge of the role of worldviews and cultural mapping in today's globalised and diverse working environment. In particular, the course will allow students to explore and analyse sources of intercultural conflict as well as different cultural and individual approaches to resolve conflict in local, regional and global contexts. It will also provide students with perspectives on intra and inter cultural dynamics including self reflection and research of Emirati culture. It is cross disciplinary and applicable to all students.

CREDITS: 3.00

### **LSS 2103 - PERSONAL FINANCE**

Provides students with basic skills to understand their income and spending as an individual and as member of a family. They will learn to efficiently manage income, plan to spend sensibly, evaluate alternatives when purchasing, saving efficiently and proper planning techniques for retirement. As financially aware and educated citizens they would be able to contribute to their community and society and to the overall economy of the UAE.

CREDITS: 3.00

### **LSS 2203 - PSYCHOLOGY**

Introduces students to Psychology, providing an overview of the field.

CREDITS: 3.00

### **LSS 2313 - ECONOMICS**

This course presents essential microeconomic concepts in English and is intended for students who have never taken a course in economics before.

CREDITS: 3.00

### **LSS 2323 - ECONOMICS OF THE UAE**

Builds upon prior knowledge of basic micro and macroeconomic concepts, and students' experience of working within the UAE economy to develop an analytical approach to current issues arising from the historical development of the oil - based UAE economy.

CREDITS: 3.00

### **LSS 2333 - SOCIOLOGY**

Designed to provide an overview of the study of human society, groups, social processes, and sociological thinking.

CREDITS: 3.00

### **LSS 2533 - RESEARCH METHODS**

This course is designed to introduce learners to the techniques and methods of research.

CREDITS: 3.00

### **LSS 3003 - SPORTS, LEISURE, AND SOCIETY**

Provides students with an understanding of the power and influence of sport in modern society.

CREDITS: 3.00

### **LSSC N121 - PERSONAL HEALTH AND PHYSICAL EDUCATION**

This course aims to increase students understanding of current health and physical education issues.

CREDITS: 4.00

### **LSSC N122 - CHEMISTRY**

An introduction to general concepts of chemistry.

CREDITS: 4.00

### **LSSC N123 - HUMAN GROWTH AND DEVELOPMENT**

Examines human growth and development across the life span. Human growth and development is emphasised as a dynamic process throughout the lifetime. Major theories of development, physical, social, cognitive and emotional development are discussed. Lifespan and the family are closely inter-related within the course, as well as the influences of gender, ethnicity and culture as significant forces.

CREDITS: 4.00

### **LSSC N126 - PHYSICS**

An introductory level physics course that is essential for all Engineering programmes. It covers many of the fundamental principles of physics such as units of measurement, energy, mechanics, fluids, heat, sound, and light. Laboratory work is required to reinforce and stress the importance of these principles using the experimental method for investigating and reporting results.

CREDITS: 4.00

**LSSC N231 - SCIENTIFIC PRINCIPLES**

This is a survey course intended for students without a significant science background who intend to enrol in Science based programmes, or wish to extend their scientific knowledge.

CREDITS: 4.00

**LSSC N243 - ECOLOGY**

Students, upon satisfactory completion of this course, will be able to understand and discuss basic ecological concepts including the concepts of species, communities and ecosystems. Students will have an understanding of the concept of natural selection and the necessity of adaptation to the environment. Students will also be able to describe the interaction between species and their biological and physical environment, and explain basic energy and material cycles within an ecosystem

CREDITS: 4.00

**LSSC N250 - INTRODUCTION TO NUTRITION**

Nutrition is the study of the food substances necessary for health, and how the body uses these substances for cell growth and maintenance.

CREDITS: 4.00

**LSSC N205 - CULTURAL DIVERSITY**

This course is designed to provide students with a positive perception of cultural diversity.

CREDITS: 4.00

**LSSC N206 - CULTURE, CLIMATE AND VALUES**

Focuses on the crucial importance of understanding culture and climate in a globalised, diverse and repeatedly restructured working environment.

CREDITS: 4.00

**LSSC N230 - PSYCHOLOGY**

This course aims to introduce students to Psychology, providing an overview of the field.

CREDITS: 4.00

**LSSC N231 - ECONOMICS**

Presents essential microeconomic concepts in lay English and is intended for students who have never taken a course in economics before. This course applies economic reasoning to some of the most pressing issues of our times, including scarcity of resources, productivity, economic growth, amongst others.

CREDITS: 4.00

**LSSS N232 - ECONOMICS OF THE UAE**

Builds upon prior knowledge of basic micro and macro economic concepts, and students' experience of working within the UAE economy to develop an analytical approach to current issues arising from the historical development of the oil-based UAE economy. The development and principle features of an oil economy are researched, patterns of economic development from an oil-based economy to development of the non-oil sector are analysed, strategies for economic change and development and their implications are explored, and the developing role of the UAE within an increasingly globalised economy are evaluated.

CREDITS: 4.00

**LSSS N233 - SOCIOLOGY**

The course is designed to provide an overview of the study of human society, groups, social processes, and sociological thinking.

CREDITS: 4.00

**LSSS N240 - ORGANISATIONAL BEHAVIOUR**

Introduces the reasons behind and issues relating to people's behaviour within an organisation and the processes of organisational change. The course defines organisational behaviour and its importance. It then proceeds to explore motivation, leadership, group behaviour, cultural issues, organisational change and conflict and power in organisations. These issues are looked at within the context of organisations generally and those within the UAE specifically. Applications of organisational improvement will synthesise the principles

CREDITS: 4.00

**LSSS N245 - GLOBAL MEDIA TRENDS**

Students identify and analyse contemporary trends and debates arising from the information revolution and emerging world communication processes and systems. The students explore the position of the Emirati and Arab media within its global and regional context. They research and analyse topics such as the cultural and social significance of new media technologies, and they apply their knowledge in the creation of virtual communities and the exploration of cyber-activism.

CREDITS: 4.00

**LSSS N252 - INTERCULTURAL COMMUNICATION**

Focuses on developing the knowledge and understanding as well as skills and competencies needed for effective

and appropriate intercultural communications. Various aspects of culture are also considered and related firstly, to the student's own 'home' community and sense of cultural identity.

CREDITS: 4.00

### **LSSS N253 - RESEARCH METHODS**

This course is designed to introduce learners to the techniques and methods of research. The unit addresses a variety of research methodologies, including the opportunity to carry out interventionist or action research. Learners are required to produce a project report, based on independent research, into an area of professional business practice that interests them and which adds to their professional development.

CREDITS: 4.00

### **LSSS N300 - SPORTS, LEISURE AND SOCIETY**

Provides students with an understanding that sport and leisure is a socially driven phenomenon. By examining the range of social issues that affect participation, students gain an appreciation of the factors that have shaped the sports and leisure industry both locally and globally. The course examines the evolution of sport at various key phases throughout history and how sport and leisure has changed from its role in an industrialised era to its place in post modern society.

CREDITS: 4.00

### **MATH N105 - COLLEGE ALGEBRA**

Extends the concepts developed in Mathematics Foundation 1 and 2 and is designed for those students requiring a higher level of mathematics for entry to Bachelor programmes. The course uses analytical approaches and application to provide an understanding of the real number system; variables, expressions and general algebraic techniques; equations and formulas; solution of linear and quadratic equations; right angle trigonometry; simple relations and t graphs.

CREDITS: 4.00

### **MATH N2131 - MATHEMATICS I: CONSTRUCTION**

Introduces students in the Construction Technology or Highway Technology programmes to application-based mathematics skills needed to succeed in these programmes. Topics addressed include: algebraic operations, solving equations with one unknown, plotting the equation of straight lines, trigonometric functions, basic geometry, radian measure and volume calculations. In each area of study, emphasis is

placed on practical problems related to the relevant technology programme to reinforce the mathematical concepts studied.

CREDITS: 5.00

### **MATH N2134 - TECHNICAL MATHEMATICS**

This course is designed to meet the mathematical needs of engineering technology. The course introduces algebraic operations, solving equations with one and two unknowns, quadratic equations and relevant applications. In each area of study, emphasis is placed on practical applied problems related to engineering technology to reinforce mathematical concepts studied.

CREDITS: 3.00

### **MATH N2135 - COMPUTING AND MATHEMATICS**

Covers the fundamental basic algebra and computing concepts necessary for further study in electronics, mechatronics and civil. It includes the following topics; engineering units, basic algebraic operations, signed numbers, equations, graphs of linear equations, exponents, trigonometric functions, basic geometrical shapes, basic Boolean operations that include truth tables and logic gates, vectors and basic functions of word processing and spread sheet software using industry standard applications packages. Emphasis is also placed on practical applied electronics problems to reinforce mathematical concepts studied.

CREDITS: 4.00

### **MATH N2236 - MATHEMATICS II: CONSTRUCTION**

This course is the final mathematics specific course in the Construction Technology programme. The course introduces classification of data, methods of determining central locations, solving oblique triangles using sine and cosine rules, radicals, linear equations with two unknowns, quadratic equations, and spread sheets. In each area of study, emphasis is placed on practical applied problems related to construction technology to reinforce mathematical concepts studied.

CREDITS: 3.00

### **MATH N235 - APPLIED FINANCIAL MATHEMATICS**

Mathematics of Finance sharpens the mathematical skills of students preparing to enter business employment by providing an introduction to finance and other related topics. It provides a mathematical basis for the study of financial decision making.

CREDITS: 4.00

### **MATH N265 - BUSINESS DECISION MAKING: INTRODUCTION TO STATISTICS**

Statistics is a subject which can be applied to every aspect of our daily lives. This course is designed to introduce the use of statistical techniques in solving business problems. The course emphasises how descriptive and inferential statistics can be applied to business environments.

CREDITS: 4.00

### **MATH N3240 - MATH IV**

This is the final Mathematics course for students in the Highway Technology programme. Topics included are quadratics, radicals, complex numbers, exponential and logarithmic functions, trigonometric equations and plane analytic geometry. Software applications such as Excel or Derive are used as tools for solving engineering problems.

CREDITS: 4.00

### **MATH N416 - ANALYTICAL GEOMETRY AND ADVANCED CALCULUS**

This course continues from Higher Diploma Calculus to cover topics in plane and solid analytic geometry, differential and integral calculus which includes partial differentiation of various functions of  $x$  and multiple integrals to solve problems in engineering. The course also covers infinite series, differential equations, Fourier series and partial differential equations in addition to numerical techniques. These topics have been selected to fulfil the needs of the first year of engineering students in the BAS programme.

CREDITS: 4.00

### **MECH N314 - ROTATING EQUIPMENT**

A broad introduction to the construction and operation of the most common types of prime movers, driven machines and transmission systems found in the manufacturing and process industries, with special emphasis on equipment in the UAE. The course draws on the students' knowledge of engineering principles gained from earlier technical studies. Knowledge of material properties, applied mechanics, thermal systems, and electrical systems, are all key factors to the understanding of rotating equipment construction and operation. An ability to read engineering drawings gained from drafting studies, is also a critical factor.

CREDITS: 4.00

### **MECH N316 - PROCESS CONTROL: MECHANICAL**

Presents the basic application concepts of automatic

process control theory, and the usage of these concepts in modern industrial applications. The course looks at two basic concepts of process control (feedback control, and feed forward control), and variations and extensions of these, to more special purpose concepts and applications found in common practice. The course includes a section on the basic construction and operation of some common types of process control measuring systems, and control valves. From this course the student can develop an appreciation of the tools which are available for creating solutions to process control problems.

CREDITS: 4.00

### **MECH N322 - ADVANCED DYNAMICS AND KINEMATICS OF MACHINES**

A continuation of the study of mechanics, applying the principles to the kinematics and dynamics of machinery. The principles of motion are applied to link mechanisms and gear trains. This is followed by a study of kinetics applied to rotating and reciprocating balance, friction drives, gyroscopes, inertia forces in mechanisms and flywheel design. The course outlines also include the concepts of a ridged body in three-dimensional space to kinematics and dynamics. The course combines an analytical treatment throughout, with a hands-on application to machinery both in the laboratory and local industry.

CREDITS: 4.00

### **MECH N324 - HEAT TRANSFER AND FLUID MECHANICS**

Introduces the principle of fluid mechanics: flow regimes, flow and energy losses in pipe systems, flow measurement systems. Principles of conduction, convection and radiation heat transfer mechanism, steady-state heat conduction in one dimensional systems, and principles of free, forced convections are also covered. The course also focuses on the importance of heat exchangers, their type, applications and more importantly how to size and design them. The course enables the students to build their analysis skills by analysing practical problems related to industry.

CREDITS: 4.00

### **MECH N331 - REFRIGERATION AND AIR CONDITIONING SYSTEMS**

Covers the classification of refrigeration and air-conditioning systems and their applications. Refrigeration cycles and components are analysed.

CREDITS: 4.00

### **MECH N420 - VIBRATIONS IN MECHANICAL SYSTEMS**

A thorough introduction to mechanical vibrations of single, two and multiple degree-of-freedom systems, including design analysis experience and development of writing skills. The main objective is to equip students with the concepts of intermediate structural dynamics and leads them to apply this knowledge in the solution of problems related to the vibrations of engineering structures. It also provides the knowledge of vibration measurement systems and their characteristics.

CREDITS: 4.00

### **MECH N425 - APPLIED THERMODYNAMICS**

Covers in depth the fundamentals of thermodynamics principles. The application of thermodynamic through the First and Second Laws of Thermodynamics, enthalpy, entropy, and reversible and irreversible processes, and to solve a wide range of mechanical engineering problems. The learning outcomes of this course are to present comprehensive treatment of classical thermodynamics within the framework of an engineering technology curriculum. Essential thermodynamics components of refrigeration, IC engines, and power cycles are explained.

CREDITS: 4.00

### **MECH N430 - HEALTH, SAFETY AND ENVIRONMENT**

This course includes the most important and comprehensive information and practices for health, safety and environment.

CREDITS: 4.00

### **MECH N435 - HEAT TRANSFER**

Discussion of the basic physical laws of heat transfer including steady-state and transient heat flow, one, dimensional heat conduction in solids, free or forced convection in fluids, radiation, and phase change and analysis of heat exchangers. The overall goal is to teach the students to recognise appropriate modes of heat transfer and apply these engineering principles to physical phenomena in the design of components, and integrate these concepts into a valid engineering design.

CREDITS: 4.00

### **MECH N440 - REFRIGERATION AND AIR CONDITIONING SYSTEMS**

Covers the classification of refrigeration and air-

conditioning systems and their applications, psychrometrics to determine moist air properties and to analyse air conditioning processes. It introduces cooling loads calculations using ASHRAE standards, air distribution systems and duct design. Vapour compression refrigeration cycles and components, vapour compression system analysis and energy estimation methods are also covered. It includes lab experiments and demonstrations.

CREDITS: 4.00

### **MECH N445 - POWER AND DESALINATION**

Forms part of the general optional stream available within the Mechanical Engineering Bachelor of Applied Science programme. It serves to cover power and desalination principles and technology.

CREDITS: 4.00

### **MECH N449 - INDEPENDENT WORK-BASED PROJECT**

Independent work-based projects are advanced, student-driven learning experiences involving substantial student independence in project design and project execution. The core of the course is the application of technologies within the learning process. Students will be engaged in researching, synthesising, investigating, problem solving, or other activities the project called for.

CREDITS: 4.00

### **MECH N450 - MECHANICAL ENGINEERING DESIGN**

Builds upon knowledge gained from various engineering topics, to develop professional design skills through systematic design methodology. Emphasis will be on achieving design solutions through logical and efficient design process in order to achieve the most successful outcome. The main objective is to assist students to develop ability to work in teams, address open-ended mechanical engineering design problems along with written communication through reporting and presentation of the results.

CREDITS: 4.00

### **MEIM N3205 - FABRICATION AND WELDING PROCESSES**

Basic metal welding and fabrication methods are important to maintenance technicians. The student will be able to describe the principles and characteristics of four primary welding methods. Students will practice

the basics in each technique. Students will be taught basic welding using mild steel plate only. The hazards and related safety practices of welding and metal fabrication shall be taught first.

CREDITS: 4.00

### **MFSM 1113 - MANAGING FOOD SAFETY**

This course is concerned with the identification of HACCP (hazard analysis critical control points) as the international standard for food safety management systems. This aim of the course is to develop competence in the application of food safety management systems using the HACCP international standard and to provide the skills and knowledge necessary to develop HACCP plans in a range of industrial settings.

CREDITS: 3.00

### **MFSM 1123 - HACCP PRINCIPLES**

Develops competence in the application of HACCP in a variety of industrial settings including milk products, confectionery, meat production, frozen vegetables, fresh fruit, canned goods, dairy farms, hospitals and airline catering. The course reviews the 12 steps of HACCP and the development of HACCP plans with specific reference to requirements for documentation and record keeping.

CREDITS: 3.00

### **MFSM 1133 - HACCP FOR FOOD SERVICE**

This course is concerned with revising the traditional method of applying HACCP principles to meet the needs of small and/or less developed businesses (SLDBs) with special reference to the food service and catering industry. It aims to provide students with the skills and knowledge necessary to effectively develop, install and run new applications of HACCP based food safety management systems in commercial kitchens of all sizes.

CREDITS: 3.00

### **MFSM 1143 - FOOD SAFETY RISKS**

Introduces the major causes of food borne disease and develop skills to apply this knowledge in a variety of food industry setting. The aim of the course is to explore food borne disease within the context of the management of food safety within industry. It is specifically designed to enable students to identify, analyse and operationalise information related to significant food safety hazards.

CREDITS: 3.00

### **MFSM 1213 - RESEARCH METHODS**

Reviews and applies food safety management related literature and research to the food industry. The course aim is to enable students to review and apply research designs and methods and develop a balanced and critical approach to reviewing food safety management literature.

CREDITS: 3.00

### **MFSM 1223 - PROJECT MANAGEMENT FOR FOOD SAFETY**

Concentrates on how to run successful food safety management projects, particularly focusing on programme and project management in the development and implementation of training, consultancy, systems and inspection initiatives. Students will be able to apply theory and practice to develop effective and efficient intervention strategies that help food companies and governments solve food safety problems.

CREDITS: 3.00

### **MFSM 1233 - INTERNATIONAL FOOD SAFETY POLICY AND REGULATION**

Studies national and international aspects of law enforcement in relation to food safety management. This course aims to enable students to locate relevant national and international food law, access and interpret relevant issues, and utilise legal expertise within the context of HACCP and food industry systems.

CREDITS: 3.00

### **MFSM 1243 - HACCP AUDITING AND INSPECTION**

Enables students to identify and develop the skills necessary to evaluate (i.e. validate and verify) HACCP systems effectively. Students will evaluate technical validity of controls and limits within the HACCP Plan including the flow diagram, hazard analysis, critical controls, monitoring and corrective actions.

CREDITS: 3.00

### **MFSM 1312 - DISSERTATION**

Students to select food safety management problems for the purpose of research. The aim is to allow students to take responsibility, with suitable guidance, for their research and gain insights into various approaches for obtaining valid data. Students will also be expected to disseminate findings.

CREDITS: 12.00

**MLAB N201 - HAEMATOLOGY I**

Provides an introduction to the work carried out in a haematology laboratory and emphasises the importance of correct and complete sample collection on the quality of results. Students will learn about normal haemopoietic cell production, the use of blood cell counters and data interpretation. Students will be able to recognise normal and abnormal red cells and describe the causes and effects of various types of anaemia.

CREDITS: 3.00

**MLAB N212 - WORK PLACEMENT**

This is a student preceptorship course in the medical laboratory field setting. Students under the supervision of professional medical laboratory technologists perform routine and specialised medical laboratory procedures and analysis of laboratory data. Competence levels in medical laboratory procedures are set at the appropriate standard for third year students and teaching, assessment and evaluation are reflective of the indicated standard.

CREDITS: 4.00

**MLAB N251 - HAEMATOLOGY II**

Instruction on the detection, diagnosis and laboratory investigation of the haemoglobinopathies. The importance of conditions such as sickle cell disorders and thalassaemia will be discussed with particular reference to their prevalence and importance in the UAE. This will be followed by a study of normal and abnormal white blood cell formation.

CREDITS: 4.00

**MLAB N252 - CELLULAR PATHOLOGY I**

Introduces the principles and practices of cellular pathology used in the investigation of disease and disease processes. Instruction will also concentrate on safe working and good laboratory practices. The module will introduce cell injury, tissue preservation, tissue processing, microtomy, tissue recognition and preparation of tissue samples for diagnosis. Through laboratory practical instruction, the role of the technologist in the cellular pathology laboratory will be understood.

CREDITS: 2.00

**MLAB N254 - CELLULAR PATHOLOGY II**

Builds upon the basic principles introduced in MLAB

252, Cellular Pathology I. The unit will introduce population screening, collection of cytology samples, preparation of cytology samples, staining cells for diagnosis and cell recognition (gynaecological samples only). Through laboratory practical instruction, the role of the technologist in the cytology laboratory will be understood.

CREDITS: 4.00

**MLAB N255 - HAEMATOLOGY III**

Explains normal haemostasis. The roles and interactions of the blood vessels, platelets, and coagulation and fibrinolytic systems are discussed. The inherited and acquired disorders of haemostasis will be studied and students will carry out the practical tasks needed to differentiate and diagnose these disorders. The causes and clinical effects of thrombosis will be discussed and students will have the opportunity to carry out the appropriate laboratory tests involved in the diagnosis and treatment of these disorders.

CREDITS: 3.00

**MLAB N260 - MICROBIOLOGY II**

Follows up on further identification and clinical correlations of bacteria encountered in clinical specimens. This involves procedures and interpretation of microscopic, cultural, biochemical and serological techniques used in the isolation and identification of bacteria commonly encountered in the medical microbiology laboratory. There is a continued instruction in the dangers of handling bio hazardous clinical specimens and how to perform all tasks safely following accepted aseptic procedures. Performance and interpretation of antimicrobial susceptibility tests is also covered.

CREDITS: 4.00

**MLAB N270 - CLINICAL CHEMISTRY II**

Upon completion of this course, students are able to perform a range of manual techniques for analysis in Clinical Chemistry and are introduced to automated chemistry analysers. Students understand and are able to apply the principles of enzymology along with measurement techniques. Students comprehend normal physiology and pathology related to each of the analyses including liver function tests and cardiac enzymes. Students complete laboratory exercises which reinforce application of principles in manual and automated analysis.

CREDITS: 4.00

**MLAB N280 - TRANSFUSION SCIENCE I**

A discussion of the nature of antigen-antibody reactions and the inheritance and structure of blood group antigens. Laboratory exercises reinforce the students' understanding by providing the opportunity to perform a variety of blood grouping techniques. Blood donation, screening and processing of blood and blood products, and the testing of donors and recipients to ensure safe transfusion practice will be discussed. The importance of effective quality control and quality assurance in blood transfusion centres and laboratories will be presented.

CREDITS: 3.00

**MLAB N282 - TRANSFUSION SCIENCE II**

Teaches students about the laboratory testing procedures necessary to ensure the safe provision of blood products. Students will learn in both theory and practical sessions how to carry out the required grouping and matching procedures, and how to detect and identify clinically significant antibodies. Instruction will be given about the possible adverse effects of transfusion procedures and students will learn how to investigate an alleged blood transfusion reaction.

CREDITS: 2.00

**MLAB N310 - MICROBIOLOGY III**

Follows up on further identification and clinical correlations of bacteria encountered in clinical specimens, mainly blood and body fluids. In addition, the course includes the study of parasitic, viral and fungal infections. The student learns about and performs, as appropriate the specimen collection and processing, microscopic, cultural and immunological techniques used in the isolation and identification of fungi and parasites.

CREDITS: 5.00

**MLAB N312 - WORK PLACEMENT II**

This is a student preceptorship course in the medical laboratory field setting. Students under the supervision of professional medical laboratory technologists perform routine and specialised medical laboratory procedures, and analysis of laboratory data. Competence levels in medical laboratory procedures are set at the appropriate standard for third year students and teaching, assessment, and evaluation are reflective of the indicated standard.

CREDITS: 18.00

**MLAB N315 - CELLULAR PATHOLOGY III**

Builds upon the basic principles introduced in MLAB 252 and 254, Cellular Pathology I and II. Instruction in the classroom and laboratory will enable the student to understand the role of histochemistry in differentiating cellular diseases in the cellular pathology department. Emphasis will be placed on trouble-shooting histochemical methods and advanced techniques used in tissue diagnosis. The course will also introduce immunohistochemistry and quality assurance systems.

CREDITS: 2.00

**MLAB N320 - CLINICAL CHEMISTRY III**

Upon completion of this course, students understand advanced topics in Clinical Chemistry including: lipid metabolism and its relationship to cardiovascular disease; prostate diseases; mineral metabolism (calcium, inorganic phosphate, and magnesium); human Chronic Gonadotropin; thyroid function; introduction to therapeutic drug monitoring; and immunoassay methods, acid base balance and Ion Selective Electrodes.

CREDITS: 5.00

**MLAB N350 - CLINICAL CORRELATIONS**

Brings together the various streams of knowledge taught in Microbiology, Haematology, Clinical Chemistry and Blood Banking in the context of the clinical case of patients. Students study a selection of diseases and disorders. The emphasis is on the correlation of the laboratory data with pathophysiology, diagnosis and treatment and biomedical ethics of major disease categories and body systems to include, renal, cardiovascular, hepatic, endocrine, respiratory, CNS, skeletal and areas of neoplasia, trauma, inheritance and pregnancy.

CREDITS: 8.00

**MLAB N410 - APPLIED STATISTICS AND RESEARCH METHODOLOGIES**

Introduces students to data management, study design, and statistical analysis in the medical laboratory environment. Students learn how to use statistical methods to plan, analyse, and present research projects for research committee approval.

CREDITS: 2.00

**MLAB N420 - BIOLOGY DISEASE**

An introduction to the biological principles of human disease and the transition from health to disease. The

course will synthesise the biological (physiological and biochemical) process underlying the clinical manifestations of disease and thereby bring together material from a variety of sources. The clinical relevance, and the laboratory investigation thereof, is stressed by the inclusion of relevant case studies, particularly those prevalent within the region.

CREDITS: 4.00

#### **MLAB N430 - LABORATORY METHODOLOGIES**

Introduces students to the principles and applications of contemporary methodologies used in the analysis of biological materials. The course builds on previous knowledge and experience of routine laboratory methods. Laboratory exercises emphasise instrumentation as aids in diagnosis. Students will apply knowledge of instrumentation through performance of practical demonstrations and routine maintenance including near patient testing.

CREDITS: 8.00

#### **MLAB N432 - LABORATORY METHODOLOGIES I**

An introduction to the principles and applications of contemporary methodologies used in the analysis of biological materials. The course builds on previous knowledge and experience of routine laboratory methods in molecular biology, clinical chemistry and microbiology. Laboratory exercises emphasise instrumentation as aids in diagnosis. Students will apply knowledge of instrumentation through performance of practical demonstrations and routine maintenance including near patient testing.

CREDITS: 4.00

#### **MLAB N433 - LABORATORY METHODOLOGIES II**

An introduction to the principles and applications of contemporary methodologies used in the analysis of biological materials. The course builds on previous knowledge and experience of routine laboratory methods in haematology, parasitology and quality control and assurance. Laboratory exercises emphasise instrumentation as aids in diagnosis. Students will apply knowledge of instrumentation through performance of practical demonstrations and routine maintenance including near patient testing.

CREDITS: 5.00

#### **MLAB N440 - HISTOLOGY**

A theoretical and practical course and principle-based course in which students are taught the basic tissues of

the body and how they are put together and interact. The emphasis remains on human tissue with animal tissue being used only where suitably fixed specimens of normal tissue are not available.

CREDITS: 3.00

#### **MLAB N450 - INTRODUCTION TO CELLULAR PATHOLOGY**

Introduces the role of cellular pathology in the investigation of disease and the process of diseases. It will provide the student with theoretical knowledge and practical skills to work safely and ethically in a cellular pathology laboratory.

CREDITS: 5.00

#### **MLAB N460 - LABORATORY MANAGEMENT**

Introduction to the concepts of management in the hospital laboratory. The course will develop skills essential to quality management: individual performance; collective performance within unit of responsibility; and external stakeholders. The course will enable the student to recognise the requirements for good management, organisational excellence and monitoring to benchmark standards. The course will depend on students participating in group work (management teams) and will involve problem-solving and role-playing.

CREDITS: 5.00

#### **MLAB N465 - TECHNIQUES IN MOLECULAR BIOLOGY**

Provides a comprehensive overview of the molecular techniques used in the clinical diagnostics. Topics to be covered include extraction, purification, quantitation, and analysis of nucleic acids and proteins, restriction enzyme assay and gel documentation procedure, molecular cloning, DNA probe labelling, nucleic acids hybridisation and Northern and Southern blot analyses, microarray analysis, and bioinformatics. Graduated students will be able to perform molecular techniques in a clinical laboratory, and evaluation of controls to validate results.

CREDITS: 4.00

#### **MLAB N480 - CAPSTONE RESEARCH PROJECT**

This capstone project integrates the principles, theories, and concepts of the student's career concentration with challenges existing in the health field. Emphasis is on practical application of the student's career concentration area. After completing the course the

students will be able to work effectively in a project environment, including identification of facilitative and disruptive factors to project progress. Students will be able to use biomedical methods and equipment, including handling technical problems and assess the quality of technical work performed by self and others.  
CREDITS: 4.00

### **MLAB N490 - MEDICAL LABORATORY TECHNOLOGY PRACTICUM**

This course involves the student in practical work in a hospital cellular pathology laboratory. Students will assist in the routine work of the laboratory and assist in the more complex tasks and analysis of results. All procedures will be under supervision from working technologists. The student will be expected to reach the level of competence as stated in the practice log books. Time will be allocated equally between histopathology and cytopathology. This outline should be used in conjunction with the issued student's log book.  
CREDITS: 4.00

### **MTH 1103 - PRE CALCULUS**

A first year mathematics course for students in Engineering Technology programmes. It provides the student with background mathematical skills essential for progression to the study of calculus and further engineering mathematics. Topics include polynomials, linear algebra, vectors, complex numbers, exponential and logarithmic functions, variation and inequalities. Software applications such as MATLAB are used as tools to solve problems.  
CREDITS: 3.00

### **MTH 1203 - CALCULUS I**

Students are introduced to Calculus Mathematics and associated applications. The course includes Limits and Continuity, Differentiation of Algebraic Functions, Trigonometric Functions, Logarithmic, Exponential Functions, Applications of the Derivative, Optimisation and Newton's Method.  
CREDITS: 3.00

### **MTH 2103 - CALCULUS II**

Students are introduced to Integral Calculus and associated applications. The course includes Sums, Indefinite and Definite integrals, integration techniques, Parametric equations and Polar coordinates, application of integration, and an introduction to numerical integration techniques.  
CREDITS: 3.00

### **MTH 2503 - LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS**

Introduction to systems of linear equations, matrices, and first order differential equations; existence and uniqueness; second order differential equations; Laplace transform and its use in solving differential equations; and simple partial differential equations. This course introduces systems of linear equations and matrices, Gaussian elimination, matrix operation, inverse, linear transformation, Eigen values and Eigen vectors.  
CREDITS: 3.00

### **MTH 3013 - CALCULUS III**

Covers topics on Hyperbolic functions and their inverse. Topics included are Taylor, Maclaurin and Fourier series, operations with vectors dot and cross products, lines and planes. Functions of several variables, partial derivatives, double and triple integrals, moments, centre of mass, volumes, double integrals in polar forms, triple integrals in cylindrical and spherical coordinates, line integrals and Green's theorem are also covered.  
CREDITS: 3.00

### **MTRX N2110 - SENSORS AND ACTUATORS**

This course enables the mechatronics students to understand how to measure different physical variables with the suitable sensors. The students will be able to evaluate measured results by error analysis and sensors characteristics. They will install, adjust different sensors modules and network over bus structure. This course will also provide students with the knowledge to evaluate the characteristics of actuators used in mechatronics systems.  
CREDITS: 4.00

### **MTRX N2210 - MAINTENANCE OF MECHATRONIC SYSTEM**

An introduction to the basic principles of maintenance engineering. Safety hazards are discussed together with the relevant safe working procedures. Simple planning and monitoring of maintenance projects are also covered. Some of the more common practical activities that are carried out by a maintenance technician are included.  
CREDITS: 4.00

### **MTRX N222 - FLUID POWER**

A basic understanding of hydraulic and pneumatic systems and their safe operation is important for mechanical plant maintenance and process control as

well as for the systems and machine designer. In this course the principles of fluid power and components will be studied together with circuit design. Emphasis will be placed on the practical hands-on laboratory work. Topics to be included are pumps and compressors, fluid conditioning, air supply, fluids, actuators, motors, hydrostatic transmission, control valves, pneumatic circuit design with emphasis on automation, introduction to electro pneumatics devices, industrial hydraulic circuits and troubleshooting.

CREDITS: 4.00

### **MTRX N2220 - ENGINEERING MATERIALS**

This is an introductory course for material identification and selection, which covers the basic information about the main materials properties, and also the selection of suitable materials for given applications. The basic laboratory methods of materials testing, which are used in engineering, are also covered.

CREDITS: 4.00

### **MTRX N261 - PROGRAMMABLE LOGIC CONTROLLERS**

Covers the general function of control system components, the characteristics of analogue and digital signal types and signal conditioning functions. The classification, description and operation of Programmable logic controller (PLC) software, preparation and operation of a programme for a PLC and the solving of industrial related problems form the basis of this course.

CREDITS: 4.00

### **MTRX N309 - COMPUTER AIDED MANUFACTURE**

Covers the description of numerically controlled systems, numerically controlled axes and programme coding systems. Planning and verification of the manufacture of component on a numerically controlled machine using manual part programming systems together with data transfer using computer aided drafting or computer aided manufacturing (CAD/CAM) systems. Current automated handling devices are included.

CREDITS: 4.00

### **MTRX N3105 - APPLIED ELECTRONICS AND CIRCUIT ELEMENTS**

Introduces the knowledge required for an understanding of the three basic elements in an electric circuit-

resistance, inductance, capacitance-and applies electrical and electronic engineering principles to the construction of simple analogue and digital electronic systems.

CREDITS: 4.00

### **MTRX N311 - INDUSTRIAL PLANT SERVICES I: STEAM/GAS TURBINES, REFRIGERATION AND PUMPS**

Provides a broad introduction to the construction and operation of the most common rotating equipment's and plant services with special emphasis on equipment in the UAE. The course draws on the knowledge of engineering principles gained from earlier technical studies. Knowledge of material properties, applied mechanics, thermal systems, and electrical systems, are all key factors to the understanding of rotating equipment construction and operation.

CREDITS: 4.00

### **MTRX N312 - INSTRUMENTATION AND CONTROL II**

Emphasis is placed on the study of closed loop automatic process control systems and some of their related problems. Basic concepts and terminology typically used in feedback control; control concepts and algorithms with special emphasis on on/off, proportional, PI, PD and PID modes of control; analysis of control system performance and controller tuning.

CREDITS: 4.00

### **MTRX N3205 - CONTROL SYSTEMS**

Introduces the graphic representation of control systems, control systems applications, operation of open-loop/feedback control systems, control modes, transducer evaluation, performance evaluation of mechatronic/electrical systems, computer and Programmable logic controllers (PLC), control, interfacing, interfacing devices, PLC software development, PLC control of output devices, data acquisition applications, elements of data acquisition systems and software applications.

CREDITS: 4.00

### **MTRX N322 - ENGINEERING DESIGN**

This course is central to developing students' ability to analyse, design and select engineering components and elements and therefore involves economic, societal, safety and manufacturing aspects.

CREDITS: 4.00

**MTRX N3240 - PROJECT II**

Combines the skills and knowledge acquired in previous courses and puts them into practice. The project undertaken will contain elements of electrical, electronics, process control, pneumatics and/or hydraulics, Programmable logic controllers together with the basics skills of mathematics, drafting and fabrication.

CREDITS: 3.00

**MTRX N326 - MEASUREMENT SYSTEMS**

Enables Mechatronics Engineers to understand measurement techniques of the common industrial variables (plant parameters), naming pressure, flow, temperature.etc, and evaluate different sensors / transducers for a proper control action. This is the first of three courses in which the student gains proficiency in the application of industrial instrumentation to industrial processes and embedded control systems.

CREDITS: 4.00

**MTRX N405 - ADVANCED CONTROL SYSTEMS**

The objective of this course is to provide a more advanced knowledge of modern control theory and its application in the engineering context. Control systems modelling, analysis and evaluation are a key component of this course. Different control system design techniques are investigated and applied. The ability to design control systems to meet given requirements will be developed systematically with a final design exercise involving all the components of the course. Digital control is introduced with emphasis on industrial applications.

CREDITS: 4.00

**MTRX N410 - EMBEDDED MICROCONTROL AND MICROPROCESSOR**

This course will furnish a Mechatronics Engineer with the fundamental and basic design methods of digital circuits including TTL and CMOS, and the capability to assess their application in the field of mechatronics engineering. The course covers features of microcontroller (microprocessor) architecture, interfacing peripheral components and programming capability. Assembly language and debugging testing tools will be introduced to allow the setup of a mechatronics user system.

CREDITS: 4.00

**MTRX N415 - INTERFACING**

Covers the main aspects required for a Mechatronics

Engineer to interface transducers/sensors to a computer or a Microcontroller, in order to measure, monitor or control mechanical variables. It covers different signal types and devices required for interfacing to common control systems. Available data acquisition and control software are evaluated and used for interfacing.

CREDITS: 4.00

**MTRX N449 - INDEPENDENT WORK-BASED PROJECT**

Uses an independent work based project to integrate and apply the management, organisational, communication and interpersonal skills learned in the Engineering Management programme. The development of managerial planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

**PHAR N211 - PHARMACOLOGY**

Topics include: Basic principles of pharmacokinetics and pharmacodynamics, Consideration of alterations in drug therapy in special at risk patients, Neurotransmission, chemical mediators and drug targets through the pharmacology of the autonomic nervous system.

CREDITS: 4.00

**PHAR N212 - PHARMACEUTICAL MICROBIOLOGY**

Upon successful completion of this course, students will be able to apply basic principles of pharmaceutical microbiology comprised of the control of microbial contamination; preservation of pharmaceuticals; use of selected sterilisation techniques in interdisciplinary laboratory areas; aseptic processing of pharmaceuticals and the requirements for the correct operation of clean rooms.

CREDITS: 4.00

**PHAR N213 - PHARMACEUTICS I**

Upon successful completion of this course, students will be able to apply knowledge of fundamental calculations and problem solving skills in a variety of pharmacy practice settings.

CREDITS: 4.00

**PHAR N214 - BIOLOGICAL ORGANIC CHEMISTRY**

Upon successful completion of this course, students will be able to (i) relate between bonding, structural features, physical-chemical properties and reactivity of organic molecules, which include alkanes, alkenes,

alkynes, cyclo and aromatic hydrocarbons, alcohols, phenols, thiols, ethers, aldehydes, carboxylic acids, esters, amines and amides; (2) interpret molecular properties, reactivity and biological roles of carbohydrates, amino acids-proteins-enzymes; nucleic acids, lipids; (3) assess the effects of molecular properties on the transformation of matter and energy production (metabolism) in biological systems.

CREDITS: 4.00

### **PHAR N215 - PATHOPHYSIOLOGY AND THERAPEUTICS I**

Provides knowledge to make judgments in regards to the effects, therapeutic rationale and selection of drugs for specific disorders. These include disorders of the central nervous system, respiratory system and drugs with important actions on smooth muscle, joints and those agents used in the management of pain. Topics include the pathophysiology and therapeutic management of central nervous system, respiratory and rheumatologic disorders and pain.

CREDITS: 4.00

### **PHAR N216 - PHARMACEUTICS II**

Examines the key physico-chemical and mathematical principles, which are essential to product design, development and presentation of liquid and semi liquid pharmaceutical dosage forms. The laboratory components of the pre-formulation and formulation studies include a variety of methods of the preparation of solutions, syrup, emulsion, suspension, ophthalmic, optic and inhaled pharmaceutical preparations.

CREDITS: 4.00

### **PHAR N217 - MEDICINAL CHEMISTRY I**

Syllabus: Concepts of molecular properties of drugs such as acid-base characteristics, polarity, solubility and partition between phases, stereo-specificity and selectivity; bio-pharmaceutical features: absorption, transport, distribution, intermolecular interactions and receptor binding, bio-transformation and elimination; the dynamics and kinetics of quantitative degradation; drug classification according to sources, therapeutic use and structural features.

CREDITS: 4.00

### **PHAR N218 - PHARMACEUTICAL CARE PRACTICE**

Topics in this course include the concepts, principles and functions of pharmaceutical care, the general framework and systematic approach to prevent and identify medication therapy problems and specify

treatment goals. It also examines assessment, design and monitoring of pharmaceutical care plans and pharmacotherapeutic regimens.

CREDITS: 4.00

### **PHAR N219 - IMMUNOLOGY**

This course will provide opportunities to explore the science of immunology. Relevant topics will include innate and acquired immunity, humoral and cellular immune responses, hypersensitivity, breakdown of self-tolerance, graft versus host reactions, passive and active immunisation and the principles of immunotherapy.

CREDITS: 4.00

### **PHAR N321 - PATHOPHYSIOLOGY AND THERAPEUTICS II**

Topics include the pathophysiology and therapeutic management of cardiovascular, blood and respiratory disorders.

CREDITS: 4.00

### **PHAR N322 - PHARMACEUTICS III**

Examines the key physical-chemical and mathematical principles, which are essential to product design, development and presentation of liquid, semi-solid and solid pharmaceutical dosage forms. The laboratory components of the pre-formulation and formulation studies include a variety of methods of the preparation of sterile products, external preparations, suppositories and pessaries, formulation of powders, ophthalmic products, inhaled drugs, parenteral products and concepts of formulating and manufacturing procedures for capsules, tablets and controlled-release dosage forms.

CREDITS: 4.00

### **PHAR N323 - MEDICINAL CHEMISTRY II**

Syllabus - Phases, technologies and methods of discovery, design and development of drugs, Natural products, Molecular factors affecting the modes of formulation, delivery and interactions with biochemical systems, transporters, receptors and metabolism, Drug stability and kinetic behaviour.

CREDITS: 4.00

### **PHAR N324 - PHARMACY PRACTICE MANAGEMENT**

Pharmaceutical care and health promotion; Patients need assessments, Social and pathological priority

groups, Pharmaceutical care as management movement, Organisational structure and behaviour, Managing risk in Pharmacy practice

CREDITS: 4.00

### **PHAR N325 - NON-PRESCRIPTION MEDICATION AND DEVICES**

Topics include disease symptoms, rational diagnosis and recommendation for treatment or referral of common ailments. It covers the safe, appropriate, and effective selection, use, and monitoring of non-prescription medication therapy and devices including self-care instruction and health risk prevention for patients.

CREDITS: 4.00

### **PHAR N326 - PATHOPHYSIOLOGY AND THERAPEUTICS III**

Syllabus: principles of antimicrobial chemotherapy and antineoplastic and immunomodulating drugs; therapeutic management of liver and gastrointestinal tract diseases.

CREDITS: 4.00

### **PHAR N327 - PHARMACY PRACTICE EXPERIENCE I**

Syllabus: leadership and practice management, drug distribution and control systems: formulary system, the Pharmacy and Therapeutics Committee; procurement, records and receipt of drugs; storage and inventory control; in-house manufacturing, packaging and labelling; unit dose drug distribution system; disposal of hazardous substances, identification, correct handling, storage and distribution of pharmaceutical products according to international practice standards and guidelines.

CREDITS: 4.00

### **PHAR N328 - PHARMACY PRACTICE EXPERIENCE II**

Provides opportunities for students to gain experience in current professional practice in private community/retail pharmacies. Students further develop in the role of the community pharmacist. The course utilises students theoretical and lab knowledge in the evaluation of over the counter (OTC) products for the treatment of common ailments (i.e. colds, headaches etc.). Students also develop practice knowledge of dermatological conditions; ophthalmic and optic preparations; herbal and complementary medicines; vitamin and nutritional supplements.

CREDITS: 4.00

### **PHAR N329 - PHARMACY PRACTICE**

#### **EXPERIENCE III**

Students carry out professional practice with prescription dispensing, skills for counselling of patients and communication with healthcare professionals. The course examines optimising medication therapy and patient care, documentation, pharmaceutical care, medication use evaluations, drug information and education. It also provides practice in the formulation, quality control, and quality assurance procedures related to sterile products and aseptic technique.

CREDITS: 4.00

### **PHAR N405 - PATHOPHYSIOLOGY AND THERAPEUTICS I**

The study of drug actions, with a study of the etiology of disease processes and the use of drugs in the treatment of these conditions. The course enables students to develop knowledge of the general framework to assess the pathological nature and clinical features of diseases; the rationale of the therapeutic decision making and the factors which govern the selection of a drug regimen and also to evaluate case scenarios related to pathological disorders of the cardiovascular, renal and gastrointestinal systems and diseases associated with the liver.

CREDITS: 5.00

### **PHAR N410 - QUALITY MANAGEMENT IN PHARMACY**

Examines the concepts and practical computerised procedures of Quality Control and Total Quality System of Pharmacy practice and what constitutes 'best practice' in quality management of the relevant manufacturing, service, and governmental sectors. The course also provides opportunities to develop knowledge and skill of the measures for determining, managing and improving quality in the pharmaceutical and general healthcare. It further provides students with an overview of pharmacy administration, pharmacy and drug laws and pharmacoeconomics.

CREDITS: 6.00

### **PHAR N415 - IMMUNOLOGY**

Provides opportunities to explore the science of immunology. Topics include the role and process of non-specific and specific immunity; principles of passive and active immunisation, their benefits and risks, fundamental immunological principles towards understanding disorders of excessive or abnormal

immune responses, examples of common allergens for each type of hypersensitivity, treatments of hypersensitivity, self tolerance and autoantibody, process and control of graft versus host reactions.

CREDITS: 3.00

#### **PHAR N416 - BIOTECHNOLOGY**

Syllabus: concepts of major techniques - rDNA; Hybridoma Technology (Monoclonal Antibodies), Antisense Technology, PCR, Genomics, Proteomics, Gene Therapy, Transgenics, Glycobiology, Cloning, Peptidomimetics; Specific Preformulation procedures - general physical-chemical characteristics, solubility, instability; lyophilisation, reconstitution; parenteral, oral and specialised delivery of biotech products; the impact of biotechnology on pharmaceutical care

CREDITS: 4.00

#### **PHAR N417 - DRUG INFO AND LITERATURE EVAL**

Topics include information literacy, drug information resources, provision of medicine information, evidence based medicine and literature evaluation.

CREDITS: 4.00

#### **PHAR N418 - BIostat/PHARMACOEPIDEMIOLOGY**

Incorporates assessment of probabilities of medications effects, meta-analysis, bias and confounding, and study designs, along with, employing epidemiological models in the study of medications, efficacy and safety outcomes in large populations. This course aims to facilitate the comprehension of principal biostatistical and pharmacoepidemiological concepts and method and to enable the imminent application of such concepts and methods in patient care.

CREDITS: 4.00

#### **PHAR N419 - PHARMACY PRAC RESEARCH**

Topics include: basic research principles, research methodologies and ethics, formulating research questions, protocol development, data collection and presentation of research findings.

CREDITS: 4.00

#### **PHAR N420 - PHARMACEUTICAL ANALYSIS**

Syllabus: theory and practice of wet chemical-, chromatographic-, and spectroscopic methods of chemical analysis; the control of quality during drug analysis (instrumentation, reagents, limit test, standard solutions, sampling, calculations of results and errors, general operations); statistical treatment and

interpretation of experimental data; performing assays based on general, special, physical and chemical concepts of analytical procedures.

CREDITS: 4.00

#### **PHAR N421 - PHARMACOECONOMICS**

Demonstrates concepts and methods for ascertaining, measuring, and comparing the costs and consequences of drug therapy to healthcare systems and societies. It integrates the evaluation of published studies and the employment of economic models, for the purposes of medication formulary management, direct patient care, and medication policy formation.

CREDITS: 4.00

#### **PHAR N422 - CLINICAL TOXICOLOGY**

This course will introduce pharmacy students to the field of clinical toxicology. The symptoms and mechanisms of toxicity, the use and mechanisms of available antidotes, and the outcomes of exposure to toxic levels of therapeutic agents and drugs of abuse and to common toxins and toxicants will be examined. The availability and use of clinical resources for identifying unknown toxicants and treating such exposures will be explored.

CREDITS: 4.00

#### **PHAR N423 - CLINICAL BIOCHEMISTRY**

Syllabus: analysis of results of clinical laboratory investigations of body fluids; correlation between the pathophysiology, causes, signs and symptoms of fluid disturbances; explanation of the biochemical changes of specific metabolic disorders

CREDITS: 4.00

#### **PHAR N424 - PHARMACY PRACTICE EXPERIENCE I**

Offers further experience in providing patient-centred pharmaceutical care in institutional outpatient settings. Students will develop competencies of medication management and use and fundamental skills in medication therapy management. Technical communication with prescribing physicians and third party payers, to manage medication related problems, will be enhanced.

CREDITS: 4.00

#### **PHAR N425 - PHARMACY PRACTICE EXPERIENCE II**

Enables further acquisition of knowledge in providing patient-centred pharmaceutical care in acute care inpatient settings. Students will augment their basic

practice skills in patient assessment and drug therapy assessment, monitoring, and management. Confidence in therapeutics knowledge and decision-making skills will be improved.

CREDITS: 4.00

### **PHAR N426 - PHARMACY PRACTICE EXPERIENCE III**

This course provides opportunities for consolidating competencies at patient-centred pharmaceutical care in outpatient and inpatient settings. Students will expand fundamental practice skills in providing pharmaceutical care to patients with specific disorders. A foundation for acquiring post graduate therapeutics? knowledge and effective clinical decision making skills, through continuous education and practice, will be established.

CREDITS: 4.00

### **PHAR N455 - PATHOPHYSIOLOGY AND THERAPEUTICS II**

Upon successful completion of this course, students will be able to make decisions about patient/client signs and symptoms, to differentiate between side effects of pharmacological therapy, and modifications required to solve or minimise problems due to drug therapy. A case study approach is utilised and diseases are examined which relate to the therapeutic management of drugs, with a focus on the central nervous system (pain), musculoskeletal, connective tissue, endocrine, neoplastic, skin, and infectious diseases.

CREDITS: 7.00

### **PHAR N460 - EMERGING TECHNOLOGIES IN PHARMACY**

Syllabus: application of information systems and information technology to pharmacy; current ethical, legal and professional practices surrounding the use of information technology and the extent and limitations of applying emerging technologies to drug distribution, community and clinical pharmacy practice.

CREDITS: 5.00

### **PHAR N465 - PHARMACEUTICAL ANALYSIS**

Focuses on pharmaceutical analysis relevant to statistics, interpretation of experimental data and various methodologies of analytical techniques. The focus is on drug analysis for quality control and quality assurance purposes, using online technologies along with classroom delivery methods. Topics include the control of quality during drug analysis and the theory

and practice of volumetric analytical procedures, analytical spectroscopy and chromatography. Students receive hands on experiences by performing assay procedures based on selected analytical procedures.

CREDITS: 5.00

### **PHAR N470 - DRUG EDUCATION**

Provides opportunities to acquire and reinforce the necessary systematic and coherent body of knowledge of drug education relevant to the underlying principles and concepts associated with drug chemistry, formulation, drug delivery and therapeutic considerations. Topics include the evaluation of physical - chemical factors associated with the composition of given dosage forms, biopharmaceutical processes drugs undergo in the human body in particular and therapeutic considerations behind drug delivery from well defined dosage forms.

CREDITS: 3.00

### **PHAR N490 - PHARMACY RESEARCH PROJECT**

This course focuses on preparing, conducting, analysing and presenting a research project relevant to pharmacy.

CREDITS: 3.00

### **PHY 1103 - PHYSICS I**

An introductory level physics course that is essential for all Engineering programmes. It covers many of the fundamental principles of physics such as units of measurement, linear motion, circular motion and angular motion, forces and Newton's laws of motion, work and energy, collisions and conservation laws, momentum and mechanical waves and oscillations. Laboratory work is required to reinforce and stress the importance of these principles using the experimental method for investigating and reporting results.

CREDITS: 3.00

### **PHY 1203 - PHYSICS II**

A continuation of the introductory level physics course that is essential for all Engineering programmes. It covers many of the fundamental principles of physics such as electric charge and electrostatics fields, Coulomb's law and electric potential, electric current and magnetic fields, Ampere's law and Faraday's law of induction, optics, and sound. Laboratory work, utilising experimental methodology and written reports, is used to reinforce these principles.

CREDITS: 3.00

**PMED N240 - CLINICAL PRACTICE I - INTEGRAL**

Provides students with the opportunity for clinical practice in the classroom, laboratory and clinical setting related to the required skills of the Emergency Medical Technician-Basic (PMED 210 and PMED 215). Local hospital emergency departments, intensive care units, and ambulances services are the primary site for this clinical practice.

CREDITS: 4.00

**PMED N260 - PARAMEDICAL SCIENCES V**

Provides students with the knowledge and skills required for an EMT-Basic to progress to competency as an entry-level paramedic. Students will examine the roles and responsibilities of a paramedic within the EMS system. The management of emergency medical patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.

CREDITS: 4.00

**PMED N265 - PARAMEDICAL SCIENCES VI**

Provides students with the knowledge and skills required for an EMT-Basic to progress to competency as an entry-level paramedic. Students will understand the roles and responsibilities of a paramedic within the EMS system. The management of emergency trauma patients along with pathophysiology, professional communication, and advanced airway management in the pre-hospital setting will be addressed.

CREDITS: 4.00

**PMED N268 - ADVANCED PARAMEDICAL STUDIES**

This course provides students with the knowledge and skills required for the EMT-Basic to progress to competency as an entry-level EMT-Advanced (Intermediate). Students will understand the roles and responsibilities of a EMT-Advanced within the EMS system. The management of emergency medical and trauma patients along with pathophysiology, pharmacology, proper medication administration, treatment, and communication in the prehospital setting will be addressed.

CREDITS: 12.00

**PMED N290 - CLINICAL PRACTICE II - INTEGRAL**

Provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under

the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician- Advanced (Intermediate).

CREDITS: 6.00

**PMED N291 - CLINICAL PRACTICE III (6 FULL WEEKS)**

Provides students with the opportunity for clinical practice and skill development in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician-Paramedic.

CREDITS: 6.00

**PMED N315 - PARAMEDICAL SCIENCES VII**

Provides students with the knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. Students will examine the roles and responsibilities of a paramedic during complicated situations involving cardiovascular, pulmonary, and neurological emergencies. Pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.

CREDITS: 10.00

**PMED N340 - CLINICAL PRACTICE IV - INTEGRAL**

Provides students with the opportunity for clinical practice in the advanced life support setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician-Paramedic (PMED 260, 265 and 315).

CREDITS: 6.00

**PMED N364 - PARAMEDICAL COMMUNICATIONS**

This course provides students with the knowledge and skills required for the EMT-Paramedic to progress to competency in Advanced Life Support emergency medical care. Students will explore the use of communication within the EMS System, the roles and responsibilities during a rescue situation, and during a major disaster. This course may include preparation for an optional international trip.

CREDITS: 2.00

**PMED N365 - PARAMEDICAL SCIENCES VIII**

Provides students with the knowledge and skills required for the EMT-Paramedic during complicated situations

involving paediatric, adult medical, and traumatic emergencies. The management of emergency medical and trauma patients along with pathophysiology, pharmacology, proper medication administration and communication in the pre-hospital setting will be addressed.

CREDITS: 10.00

### **PMED N390 - CLINICAL PRACTICE V - INTEGRAL**

Provides students with the opportunity for clinical practice in the advanced life support pre-hospital and hospital setting. Clinical practice will be under the supervision of pre-hospital and hospital staff and related to the required skills of the Emergency Medical Technician-Paramedic (PMED 260, 265, 315, 364 and 365). PMED 365 and 390 are equivalent to EMS 233 ALS II and 234 from Harrisburg Area Community College On-line Paramedic Programme. The learning outcomes for this course are adapted from the U.S. DOT EMT-Paramedic National Standard Curriculum.

CREDITS: 6.00

### **PMED N391 - CLINICAL PRACTICE III: INTERNATIONAL TRIP**

This course provides the student with the opportunity for Advanced Life Support (ALS) clinical practice in the prehospital and hospital setting. This clinical practice will be under the supervision of qualified local prehospital or hospital staff. An optional international EMS work experience is available if the student is academically eligible and able to obtain a visa.

CREDITS: 10.00

### **PMED N401 - EMS INSTRUCTOR**

Prepares the EMS responder to become a competent EMS Instructor. Topics include the principles of adult education, teaching methods, developing goals, objectives, lesson plans, and evaluations, and administrative duties and responsibilities. Students receive traditional instruction by lectures and practical workshops. The majority of the course is taught through student teaching educational sessions.

CREDITS: 4.00

### **PMED N403 - ADVANCED PHARMACOLOGY**

This course provides high level training for BAS paramedic students to provide patient care using advanced pharmacological intervention. This course prepares students to administer pharmacological interventions in advanced emergency care safely and accurately.

CREDITS: 4.00

### **PMED N405 - EMS MANAGEMENT**

Aims to prepare the learner to critically consider the environmental constraints and resource limitations that exist in the United Arab Emirates and similar healthcare systems throughout the developing world. Students are required to develop consistency in basic management, leadership and administrative skills with a clear understanding of the concepts. Students become critically aware of different theories of management and management styles. They will be able to analyse and apply concepts about organisational behaviour, human resource systems, performance management, ethics, communication, risk management, quality improvement and managing change. These skills will improve operational scene management and enhance skills for working with patients, bystanders, family members, other service providers and organisations.

CREDITS: 4.00

### **PMED N407 - EVIDENCED-BASED MEDICINE AND RESEARCH ANALYSIS**

Covers reading and analysis of peer-reviewed scholarly research papers to prepare EMS responders to make practice recommendations and decisions about all aspects of EMS. The topics covered include levels of evidence, detection of bias, research study designs and statistical analysis.

CREDITS: 4.00

### **PMED N409 - ADVANCED CLINICAL PRACTICE**

Provides the opportunity for paramedics to review and learn advanced level patient care in all environments.

CREDITS: 4.00

### **PMED N411 - SPECIALISED WORK PLACEMENT/ INTERNATIONAL WORK EXPERIENCE**

This course provides the student with the opportunity for specialised training and clinical practice in the prehospital and emergency response setting. This clinical practice and specialised training will be under the supervision of qualified local prehospital or emergency response staff.

CREDITS: 8.00

### **PMED N415 - AEROMEDICAL FLIGHT PARAMEDIC**

Prepares the student for Aeromedical Flight EMS or HEMS. Students will learn about flight physiology, flight safety, and transport and care of the critical patients to a hospital from the scene of an emergency as well as inter facility transport. This course will be taught in conjunction with an international partner with an

option of an international study tour for training and certification.

CREDITS: 12.00

### **PMED N417 - EMS EDUCATION**

Students will develop instructional abilities to teach basic and advanced prehospital emergency skills to others. Students will participate in additional training necessary to teach CPR, First Aid, and other courses related to Emergency Medical Services to other healthcare professionals and the general public.

CREDITS: 12.00

### **PMED N421 - DISASTER MANAGEMENT AND ADVANCED RESCUE**

Students will develop skills in the area of disaster management and advanced rescue. Students will learn about the uniqueness of a rescue situation, rescue safety, rescue techniques, disaster preparedness, and disaster management. This course will be taught in conjunction with an international partner with an option of an international study tour for training and certification.

CREDITS: 12.00

### **PMED N423 - SPECIAL OPERATIONS PARAMEDIC**

The Special Operations Paramedic (SOP) elective offers a high level of training for paramedics who deal with patient care in dangerous environments. This course prepares paramedics to provide medical support to law enforcement tactical teams and deliver advanced life support during law enforcement special operations missions such as hostage rescue, barricaded subjects, VIP protection details, high risk arrest, civil disorder and active shooting situations.

CREDITS: 12.00

### **PPDV N0155 - PERSONAL AND PROFESSIONAL DEVELOPMENT**

The aims of this course are to develop students' work and study skills, and to assist students in their transition to a new educational environment and to develop the skills and attributes needed by students to achieve the HCT graduate outcomes. It is intended that these themes are developed across the entire curriculum. As well as embedding learning opportunities in an integrated manner within English, Numeracy and Computing courses, colleges have the flexibility to schedule discrete stand-alone input modules. This is an

experiential course which places responsibility for PPD training on all faculty teaching Diploma Foundation Year courses.

CREDITS: 5.00

### **PPDV N1155 - PERSONAL AND PROFESSIONAL DEVELOPMENT I**

This course is the first in a series of four PPDV courses at Diploma level which lead towards the achievement of work and study skills specified in the HCT graduate outcomes.

CREDITS: 1.00

### **PPDV N1255 - PERSONAL AND PROFESSIONAL DEVELOPMENT II**

This course is the second in a series of four PPDV courses at Diploma level which lead towards the achievement of work and study skills specified in the HCT graduate outcomes.

CREDITS: 1.00

### **PPDV N2155 - PERSONAL AND PROFESSIONAL DEVELOPMENT III**

This course is the third in a series of four Personal and Professional Development courses at Diploma level which lead towards the achievement of graduate outcomes.

CREDITS: 1.00

### **PPDV N2255 - PERSONAL AND PROFESSIONAL DEVELOPMENT IV**

This course is the fourth in a series of four Personal and Professional Development courses at Diploma level which lead towards the achievement of graduate outcomes.

CREDITS: 1.00

### **PRAC N1100 - APPRENTICESHIP 1: INTRODUCTION TO OBSERVATION**

Provides an introduction to assessment and observation of children in schools. Students will be given a general overview of the role and responsibilities of the education system in general and of teachers in particular. This overview will be closely linked to how assessment and observation of children takes place in schools.

CREDITS: 6.00

### **PRAC N1200 - APPRENTICESHIP 2:ROLE OF CLASSROOM ASSISTANT**

Examines the different areas in which teaching assistants

will work within the school environment. Students will learn about the roles and responsibilities of the professionals who work outside the classroom: the librarian, the doctor or nurse, the guidance counsellor, the special education specialist, the principal, the vice principal, the course coordinators as well as the support staff such as the bus drivers, the cleaning staff, the audio-visual technician, the various administrative assistants and others.

CREDITS: 7.00

### **PRAC N2110 - APPRENTICESHIP 3:WHOLE SCHOOL AND CLASSROOM CLIMATE**

This course will look at how the classroom assistant can participate in providing the students under their supervision with a healthy and secure environment both in and out of school.

CREDITS: 8.00

### **PRAC N2210 - APPRENTICESHIP 4:PROFESSIONALISM**

As professional members of staff within a school, students will be expected to undergo regular staff training and courses to keep them up to date with developments in education. Students will learn about the contact they may have with parents of children. It is important to see the relationship between parents and the school as a partnership.

CREDITS: 9.00

### **PRAC N225 - CLINICAL PRACTICE I**

Provides students with the opportunity to apply theory and practice competently in the clinical education setting in relation to selected imaging modalities combined with safe patient care. As a first clinical education course, students apply and transfer specific theoretical knowledge, professional attitudes, and psychomotor skills in an authentic clinical practice setting. Students are provided with a supervised clinical environment under the guidance of experienced faculty and professionals.

CREDITS: 4.00

### **PRAC N300 - CLINICAL PRACTICE II**

Upon successful completion of this course, students will be able to demonstrate clinical experience of selected imaging modalities, the theory of which has been taught prior to clinical practice. This first clinical practice course provides opportunities for students to translate specific theoretical knowledge into

authentic clinical practice in a safe, supervised clinical environment. Students will demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals.

CREDITS: 4.00

### **PRAC N301 - CLINICAL PRACTICE III**

Upon successful completion of this course, students will be able to demonstrate clinical experience of selected imaging modalities, the theory of which has been taught prior to clinical practice. This first clinical practice course provides opportunities for students to translate specific theoretical knowledge into authentic clinical practice in a safe, supervised clinical environment. Students will demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals. Successful students at the conclusion of this course will have demonstrated that they took part in designated imaging modalities within a patient centric healthcare environment.

CREDITS: 4.00

### **PRAC N400 - CLINICAL PRACTICE IV**

Upon successful completion of this course, students will be able to demonstrate clinical experience of selected imaging modalities, the theory of which has been taught prior to clinical practice. This clinical practice course provides opportunities for students to translate specific theoretical knowledge into authentic clinical practice in a safe, supervised clinical environment. Students will demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals. Successful students at the conclusion of this course will have demonstrated that they took part in designated imaging modalities within a patient centric healthcare environment.

CREDITS: 4.00

### **PREC N300 - CLINICAL PRECEPTORSHIP II**

This second clinical preceptor course provides students with authentic clinical experiential learning opportunities in specific imaging modalities, the theory of which has been taught prior to clinical practice. Students will be able to translate specific theoretical

knowledge into authentic clinical practice. The course is delivered in block placement allowing students to demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals. Successful students at the conclusion of this course will have demonstrated that they engaged in a range of imaging modalities within a patient centric healthcare environment.

CREDITS: 4.00

### **PREC N400 - CLINICAL PRECEPTORSHIP III**

Upon successful completion of this course, students will be able to demonstrate clinical experience of selected imaging modalities, the theory of which has been taught prior to clinical practice. This clinical preceptor course provides extended opportunities for students to translate specific theoretical knowledge into authentic clinical practice. It is delivered in block placement allowing students to demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals. Successful students at the conclusion of this course will have demonstrated that they took part in designated imaging modalities within a patient centric healthcare environment.

CREDITS: 8.00

### **PREC N401 - CLINICAL PRECEPTORSHIP IV**

Upon successful completion of this course, students will be able to demonstrate clinical experience of selected imaging modalities, the theory of which has been taught prior to clinical practice. This clinical preceptor course provides extended opportunities for students to translate specific theoretical knowledge into authentic clinical practice. It is delivered in block placement allowing students to demonstrate understanding of specific imaging procedures, their clinical application, associated diagnostic images and information. Students will also practice safe patient care and interact with healthcare professionals. Successful students at the conclusion of this course will have demonstrated that they took part in designated imaging modalities within a patient centric healthcare environment.

CREDITS: 12.00

### **TOUR N302 - FUNDAMENTALS OF TOURISM**

Tourism, travel, hospitality, and events are often

viewed as almost separate fields of study.

CREDITS: 4.00

### **TOUR N452 - EVENT PLANNING**

The MICE or business event industry, as it is commonly called, has long been recognised as a major market sector in the tourism and hospitality industry, and the MICE industry is perhaps the fastest growing sector in the tourism industry. Its complex and diverse nature is represented in the diversity of operational aspects it covers: e.g. accommodation management; food and beverage management; event marketing; financial management, engineering and technological services; risk management and project management.

CREDITS: 4.00

### **VOCE N400 - INTRODUCTION TO EDUCATIONAL THEORIES AND PRACTICES**

Examines the nature of learning in formal and informal settings. It aims to give students a critical understanding of the different domains of human development (cognitive, linguistic, physical, emotional, social and artistic); the different theories of how people learn (behaviourism, cognitive constructivism, social constructionism, multiple intelligences); and the different theories of why people learn (motivation). It also evaluates which practices would be most appropriate to each model of learning to ensure maximum opportunity for growth in each of the domains.

CREDITS: 3.00

### **VOCE N415 - EDUCATION AND SOCIETY IN THE UAE**

Examines the history and nature of social structures in the UAE. Included in this examination will be the economy and financial institutions, government, religion, family, healthcare systems, social development systems and organisations, culture, ethnicity, marriage and women's issues.

CREDITS: 2.00

### **WORK DH008 - WORK EXPERIENCE (8 WEEKS)**

Provides students with work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 12.00

**WORK N1110 - WORK EXPERIENCE (8 WEEKS)**

This course will allow access to a real working environment and will provide the opportunity to develop good work ethics, habits and practices observed in real work situations. Transfer of skills learned at college to the workplace is a major feature of this course.

CREDITS: 8.00

**WORK N2200 - WORK EXPERIENCE (4 WEEKS)**

This course will allow access to a real working environment and will provide the opportunity to develop good work ethics, habits and practices observed in real work situations.

CREDITS: 4.00

**WORK N2245 - WORK EXPERIENCE(6 WEEKS)**

Provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 6.00

**WORK N2250 - WORK EXPERIENCE I (4 WEEKS)**

Provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 4.00

**WORK N2251 - WORK EXPERIENCE II (4 WEEKS)**

Provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 4.00

**WORK N2260 - WORK EXPERIENCE (6 WEEKS)**

This course provides workplace experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations.

CREDITS: 6.00

**WORK N2470 - IT DP WORK EXPERIENCE (4 WEEKS)**

This course provides workplace experience in a real working environment. It will provide the student the

opportunity to develop good work ethics, habits and practices observed in real work situations.

CREDITS: 4.00

**WORK N2471 - IT DP WORK EXPERIENCE (7 WEEKS)**

This course provides workplace experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations.

CREDITS: 8.00

**WORK N265 - WORK EXPERIENCE (4 WEEKS)**

Access to a real working environment and will provide the opportunity to develop good work ethics, habits and practices observed in real work situations. Transfer of skills learned at college to the workplace is a major feature of this course

CREDITS: 4.00

**WORK N275 - INTEGRATED WORK EXPERIENCE I**

This course provides workplace experience in a real working environment. It will provide students the opportunity to develop good work ethics, habits and practices as observed in real work situations. The transfer of vocational skills learned at the college to the workplace is a major feature of this course.

CREDITS: 4.00

**WORK N300 - WORK EXPERIENCE - HOTEL (4 WEEKS)**

This course provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 4.00

**WORK N3200 - WORK EXPERIENCE (4 WEEKS)**

Access to a real working environment and will provide the opportunity to develop good work ethics, habits and practices observed in real work situations. Transfer of vocational skills learned at college to the workplace is a major feature of this course.

CREDITS: 4.00

**WORK N349 - COOPERATIVE WORK EXPERIENCE I (9 WEEKS)**

Cooperative Work Experience is an optional course

available within the construction stream of the Civil Engineering Technology Higher Diploma programme. Construction courses will be offered according to demand. Details of course content can be obtained from colleges offering the programme. The duration of the work experience session varies from nine to ten weeks depending on the programme, college and employer situation.

CREDITS: 9.00

#### **WORK N350 - WORK EXPERIENCE - AIRLINES (4 WEEKS)**

Provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 4.00

#### **WORK N352 - WORK EXPERIENCE (8 WEEKS)**

This course provides work experience in a real working environment. It will provide the student the opportunity to develop good work ethics, habits and practices observed in real work situations and will enable the student to transfer vocational skills learned at the college to the workplace.

CREDITS: 8.00

#### **WORK N365 - WORK EXPERIENCE (4 WEEKS)**

This course will allow access to a real working environment and will provide the opportunity to develop good work ethics, habits and practices observed in real work situations. Transfer of skills learned at college to the workplace is a major feature of this course.

CREDITS: 4.00

#### **WORK N368 - WORKPLACE ROTATION**

This practicum course is designed to allow Health Information Management students to work on specific projects related to the programme goals. The supervisor for the student at the work placement site coordinates these projects. Projects will be selected from any of the major health information management functions and also in relation to the requests and the needs of the host site. During this practicum, students are expected to work independently and apply work ethics and professionalism. Students submit a final project report to the host site supervisor and the college instructor

CREDITS: 4.00

#### **WORK N375 - INTEGRATED WORK EXPERIENCE II**

Students gain workplace skills according to an individualised work plan with students experiencing a real working environment. It will provide students the opportunity to develop good work ethics, habits and practices as observed in real work situations. The transfer of skills acquired in the college setting is a major learning outcome in this course.

CREDITS: 4.00

#### **WORK N395 - IT HD WORK EXPERIENCE (8 WEEKS)**

This course provides workplace experience in a real working environment. It provides the student the opportunity to develop good work ethics, habits and practices observed in real work situations.

CREDITS: 12.00

#### **WORK N399 - COOPERATIVE WORK EXPERIENCE II (9 WEEKS)**

This is an elective course in the HD Civil Engineering Technology and the HD Mechatronics Engineering Technology programmes. The extended work experience is intended to give students an opportunity to get more involved in the engineering activities of the host organisation. The nine to ten weeks of work experience, allows the employer to get a closer look at the skills, personality and potential suitability of the student for potential employment.

CREDITS: 9.00

#### **WRAR N1100 - ARABIC COMMUNICATIONS**

The aim of this course is to provide students with the Arabic language skills and workplace knowledge to perform within specified industry sectors. This course forms part of an integrated approach, complementing all other Work Readiness courses.

CREDITS: 2.00

#### **WRCE N1100 - CIVIC EDUCATION**

This curriculum document outlines the framework for the required student learning outcomes. The teaching document is a working document, which allows for flexibility so that it can be adapted and extended according to student needs and specific context.

CREDITS: 2.00

#### **WRCO N1100 - COMPUTER SKILLS**

This course forms part of an integrated approach, complementing all other Work Readiness courses.

The course is designed to develop the following Computer Skills required in the workplace with the ability to perform within specific industry sectors: word-processing, spread sheets, database entry skills, presentations, file-management, email, internet and dtp. The course includes fundamentals of touch-typing in both Arabic and English.

CREDITS: 5.00

### **WREN N1100 - ENGLISH COMMUNICATION SKILLS**

The aim of this course is to provide students with the English language skills and workplace knowledge to perform within specified industry sectors. This course forms part of an integrated approach, complementing all other Work Readiness courses.

CREDITS: 6.00

### **WRIS N1100 - ISLAMIC EDUCATION**

This curriculum document outlines the framework for the required student learning outcomes. The teaching document is a working document, which allows for flexibility so that it can be adapted and extended according to student needs and specific contexts.

CREDITS: 2.00

### **WRJS N1100 - JOB SPECIFIC SKILLS**

The aim of this course is to provide students with the work skills and workplace knowledge to perform within specified industry sectors. This course forms part of an integrated approach, complementing all other Work Readiness courses.

CREDITS: 2.00

### **WRMA N1100 - MATHEMATIC SKILLS**

This is a two year vocationally oriented course. It forms part of an integrated approach, complementing all other Work Readiness Programme courses. The purpose of this course is to develop a range of basic mathematical skills applicable to a variety of work related situations in specific industry sectors. Emphasis will be on developing problem solving, critical thinking, team building and independent learning real life skills required at the workplace. Bilingual course delivery ensure effective learning for students with diverse language skill.

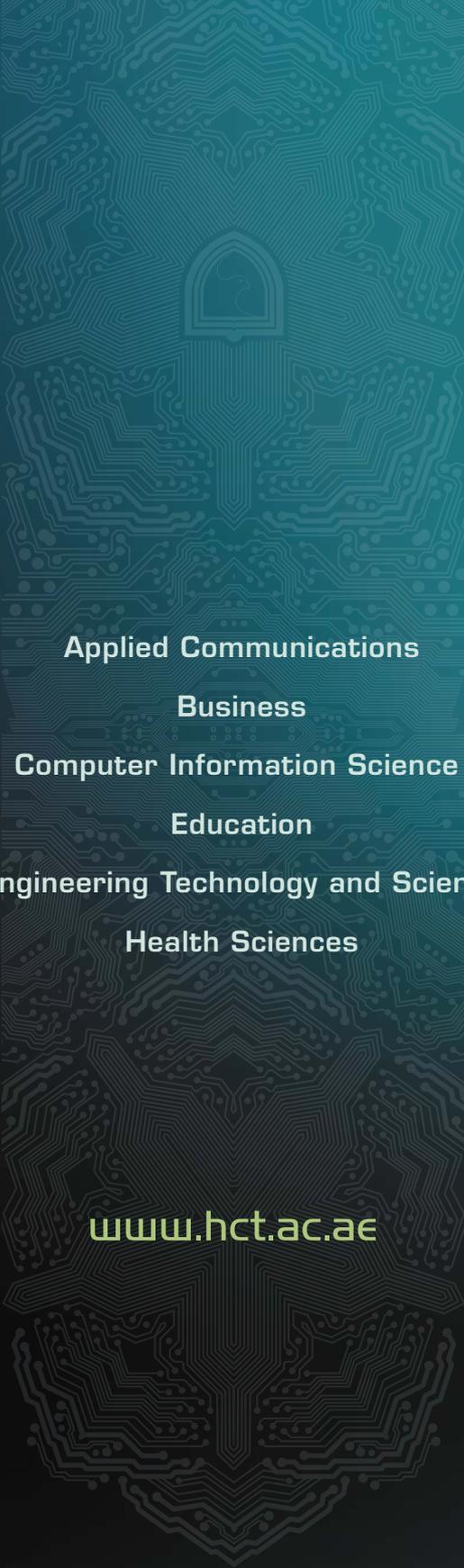
CREDITS: 2.00

### **WRWK N1100 - WORK SKILLS**

This course is designed to develop the basic work skills required at the work place in the six major skill areas detailed below. These areas may involve extension and consolidation according to the job specific requirements. This course forms part of an integrated approach, complementing all other Work Readiness courses.

CREDITS: 3.00





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