



كليات التقنية العليا  
HIGHER COLLEGES OF TECHNOLOGY



**CATALOG**  
2012-2013



Compiled by Central Academic and Student Services  
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## OUR MISSION

The Higher Colleges of Technology is dedicated to the delivery of technical and professional programs 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**  
**2012 - 2013 Catalog**



## MESSAGE FROM THE CHANCELLOR



As it celebrates its Twenty-Fifth Anniversary this year, the Higher Colleges of Technology maintains its dedication to providing the highest quality education to its more than 20,000 students in seventeen colleges across the United Arab Emirates. This catalog gives details on the extensive number of programs offered in the HCT's seven academic divisions—Applied Communications, Business, Computer and Information Sciences, Education, Engineering Technology, Health Sciences, and General Education.

The HCT has developed its programs in conjunction with a wide range of employers so that graduates can join the workforce with current, industry-relevant skills and contribute to the development of our nation. Every eligible program meets the accreditation requirements set by the appropriate international organization, and all HCT programs continue to be reviewed and benchmarked against the highest international standards. The programs thrive in an educational environment marked by collegiality, mutual respect, integrity, teamwork, and open communication.

The HCT is committed to furnishing opportunities for students to fulfill their potential and to ensuring that HCT graduates, as future leaders of the UAE, have the keen critical-thinking skills, the technical know-how, the confidence, and the innovative spirit required to succeed in today's globalized world. The HCT enriches its courses of study by linking them to employers, industry, and the community through internships, community service, and work-study programs. The focus of the HCT is always on the well-being of the nation.

The Higher Colleges of Technology is fortunate to have the strong support of our nation's President, His Highness Sheikh Khalifa bin Zayed Al Nahayan. We greatly appreciate his guidance and leadership that

have helped the HCT to become the largest institution of higher education in the UAE and a model of educational effectiveness and achievement, renowned for graduating well-educated and well-prepared citizens.

We are also grateful to His Highness, the UAE Vice President, Prime Minister, and Ruler of Dubai, Sheikh Mohammed bin Rashid Al-Maktoum and to their Highnesses the Rulers of the Emirates for their ongoing support of our colleges. We appreciate as well the leadership and encouragement of His Highness Sheikh Mohammed bin Zayed Al Nahayan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the Armed Forces.

Our nation's leaders have great expectations for the Higher Colleges of Technology as a premier institution of applied learning in the United Arab Emirates. At our twenty-five-year mark we renew our determination to meet those expectations, strengthened as we are by our leaders' advocacy for our colleges and generous support of our students.

I heartily encourage all students to explore this catalog with an eye to their future and discover the many possibilities available to them at the Higher Colleges of Technology.

My very best wishes to the entire HCT community—students, faculty, and staff—as another wonderful year of learning begins.

**NAHAYAN MUBARAK AL NAHAYAN**  
CHANCELLOR  
HIGHER COLLEGES OF TECHNOLOGY



## MESSAGE FROM THE VICE CHANCELLOR



Welcome to the Higher Colleges of Technology catalog for the 2012-2013 academic year - a very special year as it marks the HCT's 25th year of operation.

The catalog fully details the programs being offered by HCT's 17 Colleges, as well as providing its students with important dates and valuable information on the HCT's operational structures, its learning model and the services and resources it provides.

You will note from the quality and diversity of programs offered in this catalog 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 programs so as to meet the specific needs of employers.

As it enters its 25th year the HCT is enthusiastically maintaining its focus on broadening educational access for all its students - offering them a rich college experience; providing them with all possible opportunities to graduate; helping them find productive employment; and providing them with pathways to higher awards or degrees. On a day-to-day basis the HCT maintains flexibility, creativity and a commitment to student growth and achievement, ensuring that programs are properly structured, courses effectively taught, and students properly assessed. As part of this process, we are continuing to utilize cutting-edge technologies throughout our campuses to ensure the students' learning experiences are beneficial to their future careers and endeavours.

In formulating its curricula, the HCT collaborates closely with business, industry and community stakeholders, and as a result each year new programs are introduced, while existing programs are reviewed, revised and improved. The HCT continues to challenge students by setting high standards for academic levels, student experiences and learning outcomes; thus ensuring students in every college have the opportunity to earn industry-relevant and internationally accredited bachelor degrees.

HCT's strong commitment to teaching and learning will see it maintain its status and reputation as a true centre of excellence in the United Arab Emirates – a dynamic college system that is dedicated to serving its students and our nation.

Throughout the coming year, this catalog will be a vitally important resource for HCT students, and their families. We are therefore pleased to provide details of the many varied and exciting opportunities available at our colleges, for new and existing students throughout the UAE.

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

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

## PREFACE

This catalog 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, organization, 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 catalog contains any addenda for updated policies.

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

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# HCT Academic Calendar

## ACADEMIC YEAR 2012-2013

SUN 9 SEP 2012 TO THU 22 AUG 2013

2012-13 Academic Year	Sun 9 Sep 2012 to Thu 27 Jun 2013 (Summer Session not included)
Deans and Program Chair report (last day)	Sun 26 Aug 2012
Faculty report (last day)	Sun 26 Aug 2012
System meetings and Academic Division Retreats	Mon 27 & Tue 28 Aug 2012
New and returning Student Orientation	Sun 2 to Mon 3 Sep 2012
First Semester 201210	Sun 9 Sep 2012 - Thu 31 Jan 2013
Semester starts	Sun 9 Sep 2012
Last day for supplemental assessments (AY 2011 -12) and challenges	Thu 20 Sep 2012
Last day to add/drop courses	Thu 27 Sep 2012
Last day to withdraw from a semester length course without penalty	Thu 18 Oct 2012
Mid-year recess for staff and students	Sun 16 Dec 2012 - Thu 3 Jan 2013
Classes resume	Sun 6 Jan 2012
Last day to complete Work Experience	Thu 17 Jan 2013
Final Assessment period	Sun 20 Jan - Thu 24 Jan 2013
Supplementary Assessment period	Sun 27 Jan - Thu 31 Jan 2012
Student Progression Advisory	Sun 3 Feb - Thu 7 Feb 2012
Second Semester 201220	Sun 10 Feb - Thu 27 Jun 2013
Semester starts	Sun 10 Feb 2013
Last day for Supplemental Assessment (201210)	Thu 21 Feb 2013
Last day to add/drop courses	Thu 28 Feb 2013
Last day to withdraw from a semester length course without penalty	Thu 21 Mar 2013
Spring Recess for Students	Sun 31 Mar - Thu 11 Apr 2013
Spring Recess for Staff	Sun 31 Mar - Thu 4 Apr 2013
Professional Development week for Faculty and Staff	Sun 7 Apr - Thu 11 Apr 2013
Classes resume	Sun 14 Apr 2013
Last day to complete Work Experience	Thu 13 Jun 2013
Final Assessment period	Sun 16 Jun - Thu 20 Jun 2013
Supplementary Assessment period	Sun 23 Jun - Thu 27 Jun 2013
Student Progression Advisory	Sun 30 Jun - Thu 4 Jul 2013
Summer Term (Optional)	Sun 23 Jun - Thu 22 Aug 2013
Summer Sessions may be scheduled to run in the weeks between:	Sun 23 Jun - Thu 22 Aug 2013
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 29 Aug 2013

**RELIGIOUS AND PUBLIC HOLIDAYS \***

Ramadan	1 Ramadan 1433	Fri 20 Jul 2012
Eid Al Fitr	1 Shawwal 1433	Sat 19 - Tue 21 Aug 2012
Eid Al Adha	10 Thul Hijja 1433	Thu 25 - Sun 28 Oct 2012
Al Hijra New Year	1 Muharram 1434	Thu 15 Nov 2012
National Day		Sun 2nd Dec 2012
New Year's Day		Tue 1 Jan 2013
Prophet's Birthday	12 Rabee Al Awal 1434	Thu 24 Jan 2013
Al Isra'a Wal Miraaj Day	27 Rajab 1434	Thu 6 Jun 2013
Ramadan	1 Ramadan 1434	Tue 9 Jul 2013
Eid Al Fitr	1 Shawwal 1434	Thu 8 Aug 2013

\* 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 & Islamic Affairs subject to confirmation.

**HCT Meeting Schedules:**

College meetings are scheduled on Sundays, and system meetings are scheduled on Mondays during the Academic year

College Directors determine the date when staff will report for duty at HCT Colleges. The latest date for Faculty to report is recommended to be Sunday 26th August 2012.

Semester 1: 18 weeks  
Total teaching days: 90 days (including public holidays)

Semester 2: 18 weeks  
Total teaching days: 90 days (including public holidays)



# OVERVIEW OF THE HCT





## Overview of the HCT

In 1985, HE Sheikh Nahayan Mubarak Al Nahayan, Chancellor of the United Arab Emirates University, made a commitment to establish a new system of postsecondary 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 programs in the

fields of Applied Communications, Business, Computer and Information Sciences, Education, Engineering Technology, Health Sciences and General Education, with all HCT programs 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 Colleges are dedicated to student-oriented learning, which places the responsibility for education upon the students themselves and promotes lifelong learning.

### PROFILE

Enrolment	over 20,000
Colleges	17
Academic Divisions	7
Graduates	over 32,000
Credentials	over 52,000

# Governance and Organization

## 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-organized under Federal Law no. 17 of 1998. HCT confers degrees at the Graduate Bachelor, Higher Diploma Advanced Diploma 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 Sheikh Nahayan Mabarak Al Nahayan, 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.

## ORGANIZATION

The Higher Colleges of Technology organization comprises a central administration and seventeen campuses. The central administration, under the Office of the Provost, comprises Academic Central Services and Central Services directorates.

Central Administration performs the various functions and services that provide a centralized 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 programs and processes, academic standards and assessment, and learning resources in support of the implementation of academic programs.

#### Academic Divisions

There are seven academic divisions, namely:

- ▶ Applied Communications

- ▶ Business
- ▶ Computer and Information Sciences
- ▶ Education
- ▶ Engineering Technology
- ▶ General Education
- ▶ Health Sciences

The Academic Division Deans provide academic leadership to ensure the quality of teaching, learning, evaluation and assessment. They manage divisional academic resources to support all HCT campuses. Academic Division Deans maintain and enhance the HCT's learner-Centered environment in the following divisions:

#### *Professional and Continuing Education – PACE*

PACE Directorate of the Higher Colleges of Technology is dedicated to the delivery of Cost Recovery System Courses and Programs to UAE Nationals and Expatriates. PACE offers Diploma, Advanced Diploma, and Bachelor level degree credentials aimed at developing the workforce in a constantly changing environment. PACE also provides individuals with the opportunity to join graduate Master's Programs that are offered in response to the Region's needs. The objective of PACE is to serve the wider community of UAE Nationals and Expatriates by providing them with high caliber 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 college libraries, learning centers, student support services and central registry across the HCT system.

#### *Central Services*

Central 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 CAMPUSES

Each campus is headed by a Director who is responsible for the overall leadership of staff, students and campus life, educational programming, quality improvement, financial and human resources, planning, appointment of staff, marketing, and assessment of performance. The College Director is the senior educational leader on site and operates within the framework of the HCT system. Campus Directors manage system-wide issues through membership on the Academic Council that is chaired by the Provost. The Director is the student records custodian on each campus.

In addition to delivering HCT-credentialed programs, campuses also provide access to lifelong learning and training and educational resources through Continuing Education programs to provide flexible, high-quality, market-responsive opportunities that satisfy corporate, personal and professional development needs.

DIRECTORATES	FOUNDED	DIRECTOR	TELEPHONE	FAX	PO BOX	WEB
Al Ain Men's College	1988	Mr. Timothy Smith	03-782 0888	03-782 0099	17155	aam.hct.ac.ae/
Al Ain Women's College	1988	Mr. Timothy Smith	03-782 0777	03-782 0766	17258	aaw.hct.ac.ae/
Abu Dhabi Men's College	1988	Dr. Richard Gibb	02-445 1514	02-445 1571	25035	admc.hct.ac.ae/
Abu Dhabi Women's College	1995	Dr. Jace Hargis	02-641 3839	02-641 3456	41012	www.adwc.hct.ac.ae/
Dubai Men's College	1989	Dr. Howard Reed	04-326 0333	04-326 0303	15825	dbm.hct.ac.ae/
Dubai Women's College	1989	Dr. Howard Reed	04-267 2929	04-267 3939	16062	dwc.hct.ac.ae/
Fujairah Men's College	1989	Dr. David Pelham	09-222 2112	09-222 2113	4114	fjw.hct.ac.ae/
Fujairah Women's College	2004	Dr. David Pelham	09-228 1212	09-228 1313	1626	fjw.hct.ac.ae/
Madinat Zayed Men's College	2006	Dr. Philip Quirke	02-894 3700	02-884 9081	58855	mzc.hct.ac.ae
Madinat Zayed Women's College	2006	Dr. Philip Quirke	02-884 3700	02-884 9081	58855	mzc.hct.ac.ae
Ras Al Khaimah Men's College	1999	Dr. Robert Moulton	07-221 2999	07-221 1611	4793	rkm.hct.ac.ae/
Ras Al Khaimah Women's College	1993	Dr. Robert Moulton	07-221 0550	07-221 0660	4792	rkw.hct.ac.ae/
Ruwais Men's College	2007	Dr. Philip Quirke	02-8943800	02-8778158	58855	-
Ruwais Women's College	2007	Dr. Philip Quirke	02-8943800	02-8778158	58855	-
Sharjah Men's College	1993	Dr. Farid Ohan	06-558 5222	06-558 5252	7946	sjm.hct.ac.ae/
Sharjah Women's College	1998	Dr. Farid Ohan	06-558 5333	06-558 5353	7947	sjw.hct.ac.ae/
PACE - Professional and Continuing Education	2012	Christine Luscombe-Whyte	02-681 4600	02-6815833	25026	hct.ac.ae

## 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 learning model provides a framework within which HCT students receive their education. The model is consistent with the HCT mission and offers a means by 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 learning and teaching, 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 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
- ▶ 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 analyzing 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:

- ▶ Recognizing and analyzing ethical dilemmas, and practicing ethical decision-making;
- ▶ Recognizing and analyzing the issues affecting the local, regional and global environment; and
- ▶ Recognizing and analyzing the interrelations between local, regional and global contexts and cultures.

### GRADUATE OUTCOME FOUR: TECHNOLOGICAL LITERACY

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

- ▶ Recognizing 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
- ▶ Analyzing 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 program 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;
- ▶ Are technologically literate;
- ▶ Are mathematically literate;
- ▶ Are able to work independently and collaboratively; and
- ▶ Are able to think critically and creatively.

# 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 behavior, discipline and attendance issues, safety and security, counseling services, wellness and any special needs accommodations. They give guidance to students organizing 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, finally, organize 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 counseling, which place

strong emphasis on career development in a constantly changing global workforce.

The activities of the HCT Career Centers include:

- ▶ Assisting students to make informed career decisions, and provide career assessment opportunities
- ▶ Providing one-to-one counseling to help students match their interests with suitable careers
- ▶ Building relationships between the HCT, employers and business communities
- ▶ Organizing career fairs and other career-Centered 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

## COUNSELING SERVICE

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

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

## 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 organize 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 authorized 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 authorized 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 organizing 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 organizational 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 recognizes 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 Counselor for details regarding financial aid.

Student Services can also assist in various ways, such as helping to organize 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 programs. 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 catalog 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
- ▶ DVDs, 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 catalog 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 program.

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 CENTERS

The Learning Resource Centers provide students with computers and a variety of interactive software and print-based learning materials. Students can use the Learning Resource Centers 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, 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 recognized 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 offer instructional programs leading to Bachelor of Applied Science Degrees in the fields of Applied Communications, Business, Computer and Information Sciences, Education, Engineering and Health Sciences.

### GRADUATION REQUIREMENTS

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

#### BACHELOR LEVEL DEGREE

To earn a Bachelor Level degree 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 program.
3. Complete all required courses for a major or program.

#### ADVANCED DIPLOMA

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

Students admitted to a Bachelors of Applied Science program at HCT may be awarded an Advanced Diploma upon the completion of the following requirements for certain majors.

1. Have a minimum cumulative GPA of 2.0 in all baccalaureate coursework.
2. Complete at least 60 credit units including:
  - a. 8 general education courses in specified areas.
  - b. A minimum of 36 units in a major or program.
3. Complete all required courses for a major or program.

## GENERAL EDUCATION PROGRAM

Our students will live in a global society where change is fast paced and inevitable. At the Higher Colleges of Technology we recognize 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 programs including a General Education program that will introduce them to ideas which will prepare them

for a lifetime of continuing education. The career and technical programs prepare our students for jobs in the markets we serve, while General Education is a course of study in Communication, Humanities, 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 EDUCATION PATTERN FOR THE BACHELOR OF APPLIED SCIENCE DEGREE		
AREAS		UNITS
<b>AREA A:</b>	<b>COMMUNICATION</b> Four 3-unit courses	12
<b>AREA B:</b>	<b>MATHEMATICS*</b> One 3-unit course	3
<b>AREA C:</b>	<b>ARTS &amp; HUMANITIES</b> Two 3-unit courses	6
<b>AREA D:</b>	<b>SOCIAL &amp; BEHAVIORAL STUDIES</b> Three 3-unit courses	9
<b>AREA E:</b>	<b>PHYSICAL &amp; BIOLOGICAL SCIENCES*</b> Two 3-unit courses, one with lab	6
<b>AREA F:</b>	<b>GLOBAL STUDIES</b> One 3-unit course upper division	3
<b>AREA GE:</b>	<b>CREDITS/UNITS</b> Thirteen courses	39

\*Courses within content areas that are at or above designated level may be double counted as meeting major and general education requirements.

GENERAL EDUCATION PATTERN FOR THE ADVANCED DIPLOMA		
AREAS		UNITS
<b>AREA A:</b>	<b>COMMUNICATION</b> Four 3-unit courses	12
<b>AREA B:</b>	<b>MATHEMATICS*</b> One 3-unit course	3
<b>AREA C:</b>	<b>ARTS &amp; HUMANITIES</b> One 3-unit course	3
<b>AREA D:</b>	<b>SOCIAL &amp; BEHAVIORAL STUDIES</b> One 3-unit course	3
<b>AREA E:</b>	<b>PHYSICAL &amp; BIOLOGICAL SCIENCES*</b> One 3-unit course	3
<b>AREA GE:</b>	<b>CREDITS/UNITS</b> Eight courses	24

\*Courses within content areas that are at or above designated level may be double counted as meeting major and general education requirements.

## Program Accreditation

To ensure programs 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. Program quality and consistency is also achieved through accreditation with recognized international bodies

PROGRAM OF STUDY	ACCREDITATION/BENCHMARKING
<u>Business</u>	Selected Business programs are accredited by the Association of Collegiate Business Schools and Programs, (ACBSP), USA.
<u>Computer and Information Science</u>	<ul style="list-style-type: none"> <li>▶ The HCT BAS programs are accredited by the Canadian Information Processing Society (CIPS), Canada.</li> <li>▶ Next round of accreditation will be by ABET-IT and ABET-IS.</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 Division 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</u>	<ul style="list-style-type: none"> <li>▶ Chemical Engineering Technology programs are accredited by the Chemical Engineering Institute of Chemical Engineers (ICHEME), UK.</li> <li>▶ The Aviation programs are licensed by the UAE General Civil Aviation Authority (GCAA, UAE).</li> <li>▶ The Engineering Technology Division Civil Engineering programs have been accepted as Candidates for accreditation through the Accreditation Board for Engineering and Technology (ABET-ETAC*), USA.</li> </ul>
<u>Health Sciences</u>	<ul style="list-style-type: none"> <li>▶ The BSc in Medical Laboratory Technology program is accredited by the Institute of Biomedical Science (IBMS), UK.</li> <li>▶ The Bachelor of Applied Science in Nursing is benchmarked with the University of Oklahoma, USA.</li> <li>▶ The BAS in Health Information Management. Health Information Management Association of Australia (HIMAA, Australia) 2009-13.</li> <li>▶ The BSc Medical Imaging is accredited with Society of Radiographers (SCOR,UK).</li> </ul>

\* Engineering Technology Accreditation Commission.

# Regulations, Academic Policies and Procedures



# Regulations, Academic Policies and Procedures

## ADMISSION TO THE HCT AND PLACEMENT INTO PROGRAMS

Admission and placement to all HCT credential programs 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 program)
- ▶ 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.

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

### PROGRAM PLACEMENT CRITERIA

#### Bachelor of Applied Science Program

Applicants who meet the general admission requirements and have achieved:

- ▶ CEPA English with a minimum of 180 and
- ▶ IELTS (Academic) overall band 5.0 with no individual skill band less than 5.0 or an accepted equivalency, and
- ▶ CEPA Math with a minimum of 170 or accepted equivalency

may enroll into a Bachelor of Applied Science program. Each program may require additional program-specific admission criteria. Successful completion of UGRU at UAE University or the Academic Bridge Program at Zayed University may be accepted for direct entry to an HCT Bachelor Program, these are considered as 'Non-current' applicants.

### Foundation Studies

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

### APPLICATION PROCEDURES

#### Current Student Status:

- ▶ 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:

- ▶ 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.
- ▶ 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 Program 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 apply for re-admission (non-current status) in order to enroll in a subsequent semester.
4. Inter-institutional transfers, re-admissions and non-current applicant approvals will be finalized 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 (CURRENT STATUS)</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 program on hold while they wait to repeat the course or set of courses in a subsequent term.</li> </ul> <p>Note: The deferral period can span up to three consecutive semesters, after which a re-enrolment hold is applied. Deferred students who enroll 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, extending to the subsequent semester, until the add/drop period of the second subsequent semester.</p>
<p><b>RE-ENROLMENT (NON-CURRENT STATUS)</b></p>	<p>Applicable for</p> <ul style="list-style-type: none"> <li>▶ Students who deferred enrolment but who did not enroll 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.</li> </ul>
<p><b>RE-INSTATEMENT (NON-CURRENT STATUS)</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 program, for academic or other reasons, and have appealed to resume their studies.</li> </ul> <p>Note: Re-instatement is subject to approval of the Associate Provost, Student Services 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>
<p><b>RE-ADMISSION (NON-CURRENT STATUS)</b></p>	<p>Applicable for</p> <ul style="list-style-type: none"> <li>▶ Applicants who did not confirm acceptance of the offer of admission from the HCT by the confirmation date of the given semester, or</li> <li>▶ Applicants who confirmed acceptance but were “no-shows” by the end of the add/drop period in the given semester, or</li> <li>▶ Students who were awarded an HCT credential and seek another at the same or different level (in consecutive semesters or after an absence).</li> </ul>

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 College 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.

## PROGRAM DURATION

Each program 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 program length. It is calculated from the date of first registration in the relevant program major and includes all withdrawn periods. Students who do not complete their studies within the overall duration of the program 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 Associate Provost (Academic). 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 program major as a result of transfer from one program major to another; or
- ▶ Is re-admitted to a new program 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. Official transcripts are 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.

PROGRAM	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 program 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 programs 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 program'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 recognizes 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 program credit
- ▶ 25% of the final two years credit of three or four year programs
- ▶ 25% of the final year credit of two year programs

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

### 1. Exemption (EX)

Courses successfully completed in other HCT programs

### 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 programs 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 counseling, 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 program while on academic warning or probation, he/she has one semester in the new program 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 program; or
- ▶ they have exceeded program 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 program, or</li> <li>▶ Cumulative GPA is below 2.0 at the end of the final semester; or</li> <li>▶ Program 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 Program 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 28 Sep 2012 Semester Two course: - before 1st Mar 2013	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 18 Oct 2012 Semester Two course: - before 21 Mar 2013	W grade in that course shown on transcript.
	After six weeks from beginning of the semester.	Semester One course: - after 18 Oct 2012 Semester Two course: - after 21st Mar 2013	F grade in that course shown on transcript.
Summer Semester Course	Before completion of:	- 35% of the class	W grade in that course shown on transcript.
	After completion of:	- 35% 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 PROGRAM 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 program, 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 program major.

Students must achieve the required number of program 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 program requirements in their program of study are eligible to receive the appropriate degree credential at a Graduation Ceremony. Students will graduate from the college where they completed the program requirements.

Students who have met the program 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 program completion;
- ▶ promote appropriate behavior 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 organization and as a community, and the reputation of all its staff and students, in any communications within or outside the HCT.
- ▶ 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 counseling 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 program;
  - ▶ 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.

### 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 unauthorized removal or possession of HCT property;
- ▶ conduct which disrupts the educational and related activities of other students or staff, including behavior 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;

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 advisor 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 advisor.

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 college will issue a written warning to the student regarding the poor attendance. The student will be encouraged to seek counseling from a college advisor.
- ▶ 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 college 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 unauthorized 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 college policies and procedures and directions from teachers or other college personnel.

College 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 COLLEGE DIRECTOR

If a student is subject to disciplinary measures (except in cases of termination from the HCT and cancellation of the degree or diploma), they may appeal the decision by presenting an appeal in writing to their College Director within one calendar week of the date they are notified of the decision in writing.

If their College Director determines that the case requires further review, he may appoint a committee, not previously involved in the matter, to conduct a review and present their report and recommendations. The decision of the Director, following consideration of the report, shall be final.

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

In the case of Dismissal, if the appeal is denied by the College Director and the student believes that there has been a breach of correct procedure, the student has the right to make a final appeal to the Provost, who will rule on procedural grounds only. The decision of the Provost is final in all cases. No further appeals may be made.

## TRANSFERS

### TRANSFERS BETWEEN PROGRAM MAJORS

On the recommendation of the respective supervisors, students may transfer to another program 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 Program at Zayed University, qualify for direct entry to an HCT Bachelor program 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 college 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 program 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 program placement will be made jointly by the receiving HCT Campus and Academic Central Services.

## AWARDS

### GRADUATION AWARDS

Students graduate with Distinction, Distinction with Honors or Distinction with Highest Honors, provided they meet the following criteria in their program or major:

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

The achievement of 'Distinction', 'Distinction with Honors' and 'Distinction with Highest Honors' will

be noted on the student's credential and transcript. If more than one student achieves the highest GPA in an individual program major, then the appropriate number of awards will be made.

#### THE DIRECTOR'S LIST

Students who achieve a Grade Point Average of 3.50 or above shall be placed on the Director's List at their college.

Students on one-year post-Higher Diploma BAS, BSc, BPharm and BEd top-up programs must maintain a cumulative Grade Point Average of 3.50 or above with a minimum of 15 credits for classes completed.

Students in good standing on programs 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 Director's List.

Records of the Director's List are published and maintained at the individual colleges.

#### 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 program; and
- ▶ contributions to college 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 program Dean.

# Programs





## Applied Communications Division



The Applied Communications Division 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 being exposed to a range of learning opportunities.

Applied Communication provides a blended learning environment which is student-centered and project-based; where practical project work is conceptualized 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.

On graduating from the Division's programs, 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 Communication (Animation)

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

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: 33</b>			<b>Required Credits: 42</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 1203	Photography	3	CDA 3603	3D Modeling	3
COM 1213	Arabic I	3	CDA 3613	Action Scripting for Flash	3
COM 1223	History of Media and Design	3	CDA 4703	3D Animation	3
COM 1703	Introduction to Business and SME Management	3	CDA 4713	Film Analysis and Narrative Structure	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CDA 4723	Action Scripting in Maya	3
COM 2403	Web Development	3	CDA 4803	VFX, Audio, Editing, Compositing	3
COM 2413	Portfolio and Presentation Skills	3	CDA 4816	Senior Animation Project	6
COM 2423	Industry Research Project	3	COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
<b>Applied Communication Requirement</b> See Program Chair for available courses.			<b>General Education</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
Select 1 2000 level course		3	A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<b>Applied Communication Requirement</b> See Program Chair for available courses.					
<b>Required Credits: 3</b>					
Select 1 4000 level course		3			
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		COMAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CDA

## Bachelor of Applied Science in Applied Communication (Corporate Communication)

The BAS in Applied Communication program is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavors. Building on that base of fundamental skills students may also choose one of seven possible majors to specialize in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended, student centered, 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 nationally developing discipline of Corporate Communication. Students will have specific knowledge and skills in business, communication, and media in English, and to a lesser degree Arabic, which will allow them to fill a variety of roles in a variety of business and non-profit organizations involving internal and external communications. It also ensures that graduates satisfy the academic requirements stipulated for entrance into professional bodies, including the Middle East Public Relations Association.

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Corporate Communication Core Courses</b>		
<b>Required Credits: 33</b>			<b>Required Credits: 42</b>		
COM 1103	Introduction to Mass Communication	3	BUS 3003	Managing People and Organizations	3
COM 1113	Drawing	3	BUS 4453	International Events Management	3
COM 1123	Introduction to Media Technology	3	CMC 3503	Social Media	3
COM 1203	Photography	3	CMC 3603	Media Relations	3
COM 1213	Arabic I	3	CMC 3613	Corporate Communication II in Arabic and English	3
COM 1223	History of Media and Design	3	CMC 4703	Public Relations	3
COM 1703	Introduction to Business and SME Management	3	CMC 4713	Law and Ethics	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CMC 4723	Crisis Communication	3
COM 2403	Web Development	3	CMC 4733	Writing for Corporate Communication	3
COM 2413	Portfolio and Presentation Skills	3	CMC 4806	Corporate Communication Project	6
COM 2423	Industry Research Project	3	COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
		Course Credits			Course Credits
<b>Applied Communication Requirement</b> See Program Chair for available courses.			<b>General Education</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
Select 1 2000 level course		3	A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
		Course Credits			Course Credits
<b>Corporate Communication Concentration Requirement</b> See Program Chair for available courses					
<b>Required Credits: 3</b>					
Select 1 4000 level course		3			
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		COMAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CMC

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

The BAS in Applied Communication program is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavors. Building on that base of fundamental skills students may also choose one of seven possible majors to specialize in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended, student centered, 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 international discipline of Fashion Design and Merchandising. 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, including the International Association of Clothing Designers and Executives.

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Fashion Design and Merchandising Core Courses</b>		
<b>Required Credits: 33</b>			<b>Required Credits: 42</b>		
COM 1103	Introduction to Mass Communication	3	CDF 3503	Fashion Design and Textile	3
COM 1113	Drawing	3	CDF 3513	Fashion Draping and Pattern Making	3
COM 1123	Introduction to Media Technology	3	CDF 3523	Fashion Design and Technology I	3
COM 1203	Photography	3	CDF 3603	Fashion Design and Trend Research	3
COM 1213	Arabic I	3	CDF 3623	Fashion Design and Technology II	3
COM 1223	History of Media and Design	3	CDF 4703	Fashion Design and Production	3
COM 1703	Introduction to Business and SME Management	3	CDF 4713	Fashion and CAD Design	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CDF 4723	Fashion Marketing I	3
COM 2403	Web Development	3	CDF 4803	Fashion Merchandising	3
COM 2413	Portfolio and Presentation Skills	3	CDF 4813	Final Collection and Fashion Show	3
COM 2423	Industry Research Project	3	CDF 4823	Fashion Marketing II	3
			COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
<b>Applied Communication Requirement See Program Chair for available courses.</b>			<b>General Education</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
Select 1	2000 level course	3	A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<b>Fashion Design and Merchandising Concentration Requirement See Program Chair for available courses.</b>					
<b>Required Credits: 3</b>					
Select 1	4000 level course	3			
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		COMAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CDF

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

The BAS in Applied Communication program is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavors. Building on that base of fundamental skills students may also choose one of seven possible majors to specialize in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended, student centered, 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: 33</b>			<b>Required Credits: 42</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 1203	Photography	3	CDG 3613	Studio I	3
COM 1213	Arabic I	3	CDG 3623	History of Graphic Design	3
COM 1223	History of Media and Design	3	CDG 4703	Studio II	3
COM 1703	Introduction to Business and SME Management	3	CDG 4713	Packaging Design	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CDG 4723	Sustainable/Social Design	3
COM 2403	Web Development	3	CDG 4803	Photography for Graphic Design	3
COM 2413	Portfolio and Presentation Skills	3	CDG 4813	Capstone - Information Design	3
COM 2423	Industry Research Project	3	CDG 4823	Capstone - Major Exhibition	3
		Course Credits	COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
<b>Applied Communication Requirement</b>			<b>General Education</b>		
See Program Chair for available courses.			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
		Course Credits	C. Art and Humanities		6
<b>Graphic Design Concentration Requirement</b>			D. Social and Behavioral Studies		9
See Program Chair for available courses			E. Physical and Biological Sciences		6
<b>Required Credits: 3</b>			F. Global Studies		3
Select 1 4000 level course		3			
<i>Total Required Credits</i>	120		<i>Minimum Duration of Study</i>	4	
<i>Maximum Duration of Study</i>	6		<i>Program Code</i>	COMAB	
<i>Cost Recovery Program</i>	No		<i>Major Code</i>	CDG	

# Bachelor of Applied Science in Applied Communication (Interior Design)

The BAS in Applied Communication program is designed to produce graduates with a fundamental set of media skills which will allow them to pursue media, design and other creative endeavors. Building on that base of fundamental skills students may also choose one of seven possible majors to specialize in, each of which will lead to more specific areas within the larger field of Applied Communications. Applied Communications students participate in blended, student centered, 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 regionally strong discipline of Interior Design. Students will be able to create interior designs for a variety of private and commercial environments. It also ensures that graduates satisfy the academic requirements stipulated for entrance into professional bodies, including the National Council of Interior Design Qualification (NCIDQ).

		Course Credits			Course Credits
<b>Applied Communication Core Courses</b>			<b>Interior Design Core Courses</b>		
<b>Required Credits: 33</b>			<b>Required Credits: 42</b>		
COM 1103	Introduction to Mass Communication	3	CDI 3503	Design Studio I	3
COM 1113	Drawing	3	CDI 3513	Technical Drawing I	3
COM 1123	Introduction to Media Technology	3	CDI 3603	Design Studio II	3
COM 1203	Photography	3	CDI 3613	Technical Drawing II	3
COM 1213	Arabic I	3	CDI 3623	Commercial Design Studio I	3
COM 1223	History of Media and Design	3	CDI 4703	Materials and Construction Details	3
COM 1703	Introduction to Business and SME Management	3	CDI 4713	Commercial Design Studio II	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CDI 4723	Project Design and Research I	3
COM 2403	Web Development	3	CDI 4803	Furniture and Fittings	3
COM 2413	Portfolio and Presentation Skills	3	CDI 4806	Project Design and Research II	6
COM 2423	Industry Research Project	3	COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
<b>Applied Communication Requirement</b>			<b>General Education</b>		
See Program Chair for available courses.			<b>Required Credits: 39</b>		
<b>Required Credits: 3</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<b>Interior Design Concentration Requirement</b>					
See Program Chair for available courses					
<b>Required Credits: 3</b>					
Select 1 4000 level course		3			
<i>Total Required Credits</i>	<i>120</i>		<i>Minimum Duration of Study</i>		<i>4</i>
<i>Maximum Duration of Study</i>	<i>6</i>		<i>Program Code</i>		<i>COMAB</i>
<i>Cost Recovery Program</i>	<i>No</i>		<i>Major Code</i>		<i>CDI</i>

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

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

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 rapidly changing discipline of Media Communication. 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>Media Communication Core Courses</b>		
<b>Required Credits: 33</b>			<b>Required Credits: 42</b>		
COM 1103	Introduction to Mass Communication	3	CMC 3503	Social Media	3
COM 1113	Drawing	3	CMM 3503	Journalism and Society	3
COM 1123	Introduction to Media Technology	3	CMM 3513	News and Feature Stories	3
COM 1203	Photography	3	CMM 3603	Photojournalism	3
COM 1213	Arabic I	3	CMM 3613	Digital Broadcasting	3
COM 1223	History of Media and Design	3	CMM 4703	Designing and Developing Online News Packages	3
COM 1703	Introduction to Business and SME Management	3	CMM 4713	Communication Theory	3
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	CMM 4723	Mobile Communication	3
COM 2403	Web Development	3	CMM 4733	Media Project I	3
COM 2413	Portfolio and Presentation Skills	3	CMM 4803	Media Law and Ethics	3
COM 2423	Industry Research Project	3	CMM 4813	Media Project II	3
			COM 3503	Arabic II	3
			COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
		Course Credits			Course Credits
<b>Applied Communication Requirement</b> See Program Chair for available courses.			<b>General Education</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 39</b>		
Select 1	2000 level course	3	A.	Communication	12
			B.	Mathematics	3
			C.	Art and Humanities	6
			D.	Social and Behavioral Studies	9
			E.	Physical and Biological Sciences	6
			F.	Global Studies	3
		Course Credits			Course Credits
<b>Media Communication Concentration Requirement</b> See Program Chair for available courses					
<b>Required Credits: 3</b>					
Select 1	4000 level course	3			
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		COMAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CMM

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

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

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: 33</b>		<b>Required Credits: 42</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 1203	Photography	3	CMV 3613	Production Skills II	3
COM 1213	Arabic I	3	CMV 4709	Documentary Video Production	9
COM 1223	History of Media and Design	3	CMV 4803	Advanced Edit and Effects	3
COM 1703	Introduction to Business and SME Management	3	CMV 4806	Capstone Project	6
COM 2303	Communication Research and Writing in an English/Arabic Environment	3	COM 3503	Arabic II	3
COM 2403	Web Development	3	COM 4806	Work Placement OR Integrated Project (Work Related Learning)	6
COM 2413	Portfolio and Presentation Skills	3			
COM 2423	Industry Research Project	3			
	<b>Course Credits</b>			<b>Course Credits</b>	
<b>Applied Communication Requirement</b>		<b>General Education</b>			
See Program Chair for available courses.		See Program Chair for available courses.			
<b>Required Credits: 3</b>		<b>Required Credits: 39</b>			
Select 1	2000 level course	3	A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
	<b>Course Credits</b>				
<b>Video Production Concentration Requirement</b>					
See Program Chair for available courses.					
<b>Required Credits: 3</b>					
Select 1	4000 level course	3			
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		COMAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CMV

## Business Division



The Business Division has a mission of being committed to developing and delivering quality, student-centered Business education that provides students with the knowledge and skills to meet the evolving needs of stakeholders in the UAE. The Division serves the needs of the region by offering sustainable programs 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 program by Accreditation Council for Business Schools and Programs (ACBSP).

The Division provides superior graduates capable of assuming challenging and key positions, integrating the business expertise and skills needed in a rapidly evolving society. These programs enable graduates to meet professional requirements found in a bilingual multicultural business environment and instill lifelong learning skills leading to a variety of management careers in local and international organizations within the UAE. All courses are designed to equip students with the lifelong learning and communication skills that help them excel in their chosen careers.

Business graduates find their skills are highly sought after by many UAE organizations. Graduates can expect to work in a wide range of industries and organizations with the public and private sector including banks, accountancy firms, property companies, the aviation industry, oil and gas companies, the government, information technology firms, or opt to become entrepreneurs.

## 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 specialized 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 specializations 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>Business Administration Requirement</b>		
<b>Required Credits: 48</b>			<b>See Program Chair for available courses</b>		
BUS 1003	Management and Leadership	3	<b>Required Credits: 6</b>		
BUS 1103	Economics for Managers	3	Select 1 2000 level course		3
BUS 1203	Software Applications for Business	3	Select 1 3000 level course		3
BUS 1303	Marketing	3	Course Credits		
BUS 1403	Business Ethics and Corporate Governance	3	<b>General Business 4000 Level Requirement</b>		
BUS 1503	Accounting for Managers	3	<b>See Program Chair for available courses</b>		
BUS 2003	Business and Commercial Law	3	<b>Required Credits: 27</b>		
BUS 2103	Operations Management	3	Select 9 4000 level business courses		27
BUS 2203	Business Statistics for Managers	3	Course Credits		
BUS 2303	Financial Management	3	<b>General Education</b>		
BUS 2403	Innovation and Entrepreneurship	3	<b>Required Credits: 39</b>		
BUS 3003	Managing People and Organizations	3	A. Communication		12
BUS 3103	International Business and Globalization	3	B. Mathematics		3
BUS 3203	Strategic Management and Business Policy	3	C. Art and Humanities		6
BUS 3406	Work Related Learning	6	D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	BADAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	BAD

## Bachelor of Applied Science in Business Administration (Accounting)

This Business Administration major provides students with the knowledge and skills needed to function effectively in business and industry, prepares individuals to practice the profession of accounting and to perform related business functions. It also ensures

that graduates satisfy the academic requirements stipulated for entrance into professional accounting bodies and is directly benchmarked against the Institute of Chartered Accountants in England & Wales (ICAEW).

	Course Credits		Course Credits		
<b>Business Administration Core Courses</b>		<b>Accounting Core Courses</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 4123	Auditing and Accounting Information Systems	3
BUS 1203	Software Applications for Business	3	BUS 4133	Managerial Accounting 1	3
BUS 1303	Marketing	3	BUS 4143	Government Accounting and IFRS	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4153	Financial Accounting 2	3
BUS 1503	Accounting for Managers	3	BUS 4163	Taxation	3
BUS 2003	Business and Commercial Law	3	BUS 4173	Managerial Accounting 2	3
BUS 2103	Operations Management	3	BUS 4183	Corporate Finance	3
BUS 2203	Business Statistics for Managers	3	BUS 4913	Integrative Industry Project (Accounting)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			Course Credits
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
		Course Credits			
<b>Business Administration Requirement</b>		<b>General Education</b>			
See Program Chair for available courses.		<b>Required Credits: 39</b>			
<b>Required Credits: 6</b>		A. Communication	12		
Select 1 2000 level course	3	B. Mathematics	3		
Select 1 3000 level course	3	C. Art and Humanities	6		
		D. Social and Behavioral Studies	9		
		E. Physical and Biological Sciences	6		
		F. Global Studies	3		
<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4		
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	BACAB		
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	BAC		

# Bachelor of Applied Science in Business Administration (Finance and Banking)

This Business Administration program major is designed to provide graduates with high-level skills in both the specialized field of banking and finance and the general field of business management. Graduates will be capable of pursuing careers in the banking and finance industry as well as a wide range of business finance fields. The major blends a conceptual theoretical framework with practical applications and covers basic

discipline material through to more specialized banking and finance requirements. The major also covers a significant percentage of the syllabus for level 1 of the Chartered Financial Analyst (CFA) qualification, and provides pathways to various other external certifications, in particular those covered by the Chartered Institute of Securities and Investment (CISI).

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Finance and Banking Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4213	Financial Quantitative Methods	3
BUS 1103	Economics for Managers	3	BUS 4223	Retail Finance and Marketing	3
BUS 1203	Software Applications for Business	3	BUS 4233	Financial Assets and Markets	3
BUS 1303	Marketing	3	BUS 4243	International Trade and Finance	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4253	Law, Ethics and Professional Standards	3
BUS 1503	Accounting for Managers	3	BUS 4263	Corporate Finance, Banking and Lending	3
BUS 2003	Business and Commercial Law	3	BUS 4273	Wealth and Risk Management	3
BUS 2103	Operations Management	3	BUS 4283	Islamic Finance	3
BUS 2203	Business Statistics for Managers	3	BUS 4923	Integrative Industry Project (Finance and Banking)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
					Course Credits
<b>Business Administration Requirement</b>			<b>General Education</b>		
See Program Chair for available courses			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 3000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
		Course Credits			

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	BFSAB
Cost Recovery Program	No	Major Code	BFS

## Bachelor of Applied Science in Business Administration (Human Resource Management)

This Business Administration program major focuses on the most important resources of any organization – its people. Graduates of this program will have the knowledge, skills and abilities to perform the main functions of HRM, and related responsibilities

that involve organizations' relationships with their employees. The major is benchmarked against the Society for Human Resource Management (SHRM) curriculum.

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Human Resource Management Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4313	Employee Relations and UAE Labor Law	3
BUS 1103	Economics for Managers	3	BUS 4323	Career Development and Planning	3
BUS 1203	Software Applications for Business	3	BUS 4333	Recruitment and Selection	3
BUS 1303	Marketing	3	BUS 4343	Training and Development	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4353	International Human Resource Management	3
BUS 1503	Accounting for Managers	3	BUS 4363	Managing Organizational Change	3
BUS 2003	Business and Commercial Law	3	BUS 4373	Strategic Human Resource Management	3
BUS 2103	Operations Management	3	BUS 4383	Performance Management	3
BUS 2203	Business Statistics for Managers	3	BUS 4933	Integrative Industry Project (Human Resource Management)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
					Course Credits
<b>Business Administration Requirement</b>			<b>General Education</b>		
See Program Chair for available courses			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 3000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	BHRAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	BHR

## Bachelor of Applied Science in Business Administration (International Business Management)

This Business Administration program major provides students with the knowledge, skills, and values to be successful in global commerce. Students who complete the major will be able to conduct global business in areas such as Global Business Management, Global Marketing, Supply Chain Management, International Human Resources Management, International Law and Trade Finance. The major establishes a professional

development pathway to ensure a full understanding of International Business Management. For companies, it assures that employees are able to practice global business at the professional level required in today's competitive environment. The major is benchmarked against the knowledge domains of the Certified Global Business Professional certification of the International Association for Trade Training Organizations (IATTO).

	Course Credits		Course Credits		
<b>Business Administration Core Courses</b>		<b>International Business Management Core Courses</b>			
<b>Required Credits: 48</b>		<b>Required Credits: 27</b>			
BUS 1003	Management and Leadership	3	BUS 4353	International Human Resource Management	3
BUS 1103	Economics for Managers	3	BUS 4623	International Business Finance	3
BUS 1203	Software Applications for Business	3	BUS 4633	Business Negotiations	3
BUS 1303	Marketing	3	BUS 4643	Cross Cultural Management	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4653	International Marketing	3
BUS 1503	Accounting for Managers	3	BUS 4663	International Trade	3
BUS 2003	Business and Commercial Law	3	BUS 4673	International Law	3
BUS 2103	Operations Management	3	BUS 4683	Middle East Economic Growth and Regional	3
BUS 2203	Business Statistics for Managers	3	BUS 4963	Development Integrative Industry Project (International Business)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
					Course Credits
<b>Business Administration Requirement</b>		<b>General Education</b>			
See Program Chair for available courses		<b>Required Credits: 39</b>			
<b>Required Credits: 6</b>					
Select 1 2000 level course					12
Select 1 3000 level course					3
	Course Credits				6
					9
					6
					6
					3
<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4		
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	BIMAB		
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	BIM		

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

This Business Administration program 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 local 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 Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
					Course Credits
<b>Business Administration Requirement</b>		<b>General Education</b>			
See Program Chair for available courses		<b>Required Credits: 39</b>			
<b>Required Credits: 6</b>		A. Communication			
Select 1 2000 level course	3	12			
Select 1 3000 level course	3	B. Mathematics			
		3			
		C. Art and Humanities			
		6			
		D. Social and Behavioral Studies			
		9			
		E. Physical and Biological Sciences			
		6			
		F. Global Studies			
		3			
<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4		
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	BPDAB		
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	BPD		

## Bachelor of Applied Science in Business Administration (Quality and Strategic Management)

This Business Administration program major provides the knowledge, skills and values to apply their knowledge to analyze complex business situations external or internal to the organization, and identify important Quality and Strategic Management issues arising in an evolving business environment; or evaluate complex situations and diagnose problems

or improvement opportunities. They will be able to develop processes and evaluate information to improve the performance of various organizations, and contribute to the development and realization of their strategic plans. The major is benchmarked against the American Society for Quality (ASQ) curriculum.

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Quality and Strategic Management Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4373	Strategic Human Resource Management	3
BUS 1103	Economics for Managers	3	BUS 4513	Strategic Decisions with Management Science	3
BUS 1203	Software Applications for Business	3	BUS 4523	Strategic Supply Chain Management	3
BUS 1303	Marketing	3	BUS 4533	Quality Management Systems, Models and Theories	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4543	Quality Management Tools and Metrics	3
BUS 1503	Accounting for Managers	3	BUS 4563	Strategic Marketing and Global Competitiveness	3
BUS 2003	Business and Commercial Law	3	BUS 4573	Customer Relationship Management	3
BUS 2103	Operations Management	3	BUS 4583	ISO Standards and Institutional Excellence Awards	3
BUS 2203	Business Statistics for Managers	3	BUS 4953	Integrative Industry Project (Quality and Strategic Management)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
			Course Credits		
<b>Business Administration Requirement</b> See Program Chair for available courses			<b>General Education</b>		
<b>Required Credits: 6</b>			<b>Required Credits: 39</b>		
Select 1 2000 level course		3	A. Communication		12
Select 1 3000 level course		3	B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		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>Program Code</b>		<b>BQSAB</b>
<b>Cost Recovery Program</b>		<b>No</b>	<b>Major Code</b>		<b>BQS</b>

## Bachelor of Applied Science in Business Administration (Tourism and Events Management)

This Business Administration program major focuses on the ever growing Tourism and Events industry and provides students with the essential knowledge and skills to become effective managers in the tourism and event industries. These include effective problem-solving, critical and strategic thinking, effective communication and an awareness of the business environment. It provides both academic and vocational preparation for this vibrant and rapidly expanding

industry. The course emphasizes the understanding, the application, and the analysis of management skills applied to live events and the real world of work. With the U.A.E. being one of the world's fastest growing tourist destinations where better to study tourism and events management. The major is benchmarked against the Institute of Hospitality curriculum for accreditation purposes.

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Tourism and Events Management Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4413	Tourism and Events Management	3
BUS 1103	Economics for Managers	3	BUS 4423	Tourism and Events Marketing	3
BUS 1203	Software Applications for Business	3	BUS 4433	Meetings, Incentives, Conferences and Exhibitions (MICE)	3
BUS 1303	Marketing	3	BUS 4443	Special Interest Tourism (SIT)	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4453	International Events Management	3
BUS 1503	Accounting for Managers	3	BUS 4463	Culture and Heritage Tourism	3
BUS 2003	Business and Commercial Law	3	BUS 4473	Sustainable Tourism	3
BUS 2103	Operations Management	3	BUS 4483	Global Tourism: Policy and Planning	3
BUS 2203	Business Statistics for Managers	3	BUS 4943	Integrative Industry Project (Tourism and Events)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
			<b>Course Credits</b>		
<b>Business Administration Requirement</b>			<b>General Education</b>		
See Program Chair for available courses			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 3000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		BTEAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		BTE

## Bachelor of Applied Science in Business Administration (Transportation & Logistics)

This Business Administration program major provides the skills and knowledge required to understand transportation and logistics systems and how to effectively manage them. It builds knowledge in the fields of transportation, logistics, and supply chain management by providing students with the principles

of management, economics and finance for supervisory roles in airlines, shipping, seaports, airports, and global logistics in both government and private industry contexts. The major is benchmarked against the American Society of Transportation & Logistics (ASTL).

		Course Credits			Course Credits
<b>Business Administration Core Courses</b>			<b>Transportation and Logistics Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
BUS 1003	Management and Leadership	3	BUS 4813	Transportation Management	3
BUS 1103	Economics for Managers	3	BUS 4823	Transportation Economics	3
BUS 1203	Software Applications for Business	3	BUS 4833	Intermodal Transportation	3
BUS 1303	Marketing	3	BUS 4843	Logistics Management	3
BUS 1403	Business Ethics and Corporate Governance	3	BUS 4853	Supply Chain Management	3
BUS 1503	Accounting for Managers	3	BUS 4863	Project Management For Transportation	3
BUS 2003	Business and Commercial Law	3	BUS 4873	International Logistics Management	3
BUS 2103	Operations Management	3	BUS 4883	Advanced Business Logistics	3
BUS 2203	Business Statistics for Managers	3	BUS 4983	Integrative Industry Project (Transportation and Logistics)	3
BUS 2303	Financial Management	3			
BUS 2403	Innovation and Entrepreneurship	3			
BUS 3003	Managing People and Organizations	3			
BUS 3103	International Business and Globalization	3			
BUS 3203	Strategic Management and Business Policy Simulations	3			
BUS 3406	Work Related Learning	6			
					Course Credits
<b>Business Administration Requirement</b>			<b>General Education</b>		
<b>See Program Chair for available courses</b>			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 3000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		BTLAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		BTL

## Computer and Information Science Division



The Computer and Information Science Division has a mission of being committed to developing and delivering quality, student-centered programs that provide students with the core knowledge and skills to meet the needs of stakeholders in the rapidly evolving computer science, information systems and technology sectors in the UAE.

The Division's portfolio provides local and global perspectives, develops analytical skills and employability, encourages lifelong learning and promotes effective and ethical leadership and management practices. This mission is informed by, and supports the goal to achieve accreditation from ABET. The Division's programs are continuously reviewed to ensure that the skills students acquire in the classroom and the equipment they use are at the cutting edge of technology and industry-appropriate. As a result, graduates are in high demand from leading industry employers looking for talented people who have both the technical and interpersonal skills they need to enhance their business.

This exciting field provides excellent career prospects for graduates in Education, Government, Private Enterprise, Internet Development, Database Designs, Programming and other areas within the constantly growing computing, networking, security and forensics, information management, multimedia technology, interactive learning, software development and applications industries.

## 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 organizations.

		Course Credits			Course Credits
<b>Computer and Information Science Core Courses</b>			<b>Business Solutions Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
CIS 1003	Information Systems in Organizations and Society	3	BUS 4573	Customer Relationship Management	3
CIS 1103	Hardware and Networking	3	CIB 2003	Technology based Marketing	3
CIS 1203	Web Technologies	3	CIB 3003	Human Resource Management and Systems	3
CIS 1303	Data and Information Management	3	CIB 3103	Object Oriented Analysis and Design	3
CIS 1403	Fundamentals of Programming	3	CIB 3203	Accounting For Managers	3
CIS 1503	Introduction to Multimedia	3	CIB 3303	E-Business Principles	3
CIS 2003	Statistics and Probability	3	CIB 3403	Advanced Database Technologies	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIB 4003	E Business Applications Development	3
CIS 2303	Systems Analysis and Design	3	CIB 4103	Business Finance	3
CIS 2403	Object Oriented Programming	3			
CIS 3103	Project Management	3			
CIS 4103	Emerging Technologies	3			
CIS 4203	Information Technology Strategy and Governance	3			
CIS 4803	Work Related Learning	3			
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6			
					Course Credits
<b>IS and IT Technology Requirement</b>			<b>General Education</b>		
See Program Chair for available courses			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 4000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
		Course Credits			
<i>Total Required Credits</i>	<i>120</i>		<i>Minimum Duration of Study</i>		<i>4</i>
<i>Maximum Duration of Study</i>	<i>6</i>		<i>Program Code</i>		<i>CIBAB</i>
<i>Cost Recovery Program</i>	<i>No</i>		<i>Major Code</i>		<i>CIB</i>

## 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: Security Specialists, Security Practitioners, Managers & 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>Security and Forensics Core Courses</b>		
<b>Required Credits: 45</b>			<b>Required Credits: 30</b>		
CIS 1003	Information Systems in Organizations and Society	3	CIN 2003	Enterprise Network Services	3
CIS 1103	Hardware and Networking	3	CSF 2103	Intrusion Detection and Ethical Hacking	3
CIS 1203	Web Technologies	3	CSF 3003	Cyber Law and Ethics	3
CIS 1303	Data and Information Management	3	CSF 3103	Incidence Response and Disaster Recovery	3
CIS 1403	Fundamentals of Programming	3	CSF 3303	Operating System Administration and Security	3
CIS 1503	Introduction to Multimedia	3	CSF 3403	Computer Forensics and Investigation	3
CIS 2003	Statistics and Probability	3	CSF 3603	Cryptography and Network Security	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CSF 4003	Security and Risk Management	3
CIS 2303	Systems Analysis and Design	3	CSF 4103	Web Application and E-Commerce Security	3
CIS 3103	Project Management	3	CSF 4203	Telecommunications and WAN Security	3
CIS 4103	Emerging Technologies	3			
CIS 4203	Information Technology Strategy and Governance	3			Course Credits
CIS 4803	Work Related Learning	3	<b>General Education</b>		
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6	<b>Required Credits: 39</b>		
		Course Credits	A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<b>IS and IT Technology Requirement</b>					
See Program Chair for available courses					
<b>Required Credits: 6</b>					
Select 1 2000 level course		3			
Select 1 4000 level course		3			
<i>Total Required Credits</i>	<i>120</i>		<i>Minimum Duration of Study</i>		<i>4</i>
<i>Maximum Duration of Study</i>	<i>6</i>		<i>Program Code</i>		<i>CSFAB</i>
<i>Cost Recovery Program</i>	<i>No</i>		<i>Major Code</i>		<i>CSF</i>

# 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 program 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>Applications Development Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
CIS 1003	Information Systems in Organizations and Society	3	CIA 2503	Web Applications Development	3
CIS 1103	Hardware and Networking	3	CIA 3103	Database Design and Administration	3
CIS 1203	Web Technologies	3	CIA 3303	Principles of Mobile Applications	3
CIS 1303	Data and Information Management	3	CIA 4003	Advanced Mobile Applications	3
CIS 1403	Fundamentals of Programming	3	CIA 4103	Data Driven Web Technologies	3
CIS 1503	Introduction to Multimedia	3	CIA 4203	Enterprise Database Applications	3
CIS 2003	Statistics and Probability	3	CIA 4503	Advanced Object Oriented Programming	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIB 3103	Object Oriented Analysis and Design	3
CIS 2303	Systems Analysis and Design	3	CSF 3303	Operating System Administration and Security	3
CIS 2403	Object Oriented Programming	3			
CIS 3003	Human Computer Interaction	3			Course Credits
CIS 3103	Project Management	3			
CIS 4103	Emerging Technologies	3			
CIS 4803	Work Related Learning	3			
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6			
		Course Credits			
<b>IS and IT Technology Requirement</b>			<b>General Education</b>		
See Program Chair for available courses			<b>Required Credits: 39</b>		
<b>Required Credits: 6</b>			A. Communication		12
Select 1 2000 level course		3	B. Mathematics		3
Select 1 4000 level course		3	C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	CIAAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	CIA

# 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 analyze, 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 programs, 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>Instructional Technology and Training Management Core Courses</b>		
<b>Required Credits: 48</b>			<b>Required Credits: 27</b>		
CIS 1003	Information Systems in Organizations and Society	3	CSF 3303	Operating System Administration and Security	3
CIS 1103	Hardware and Networking	3	CTT 2003	Principles of Learning for Instructional Technology	3
CIS 1203	Web Technologies	3	CTT 3103	Learning Environment Design: Support and Administration	3
CIS 1303	Data and Information Management	3	CTT 3303	Assistive Technology	3
CIS 1403	Fundamentals of Programming	3	CTT 3403	Instructional Design for Computer Based Training	3
CIS 1503	Introduction to Multimedia	3	CTT 4003	Distance and Online Education	3
CIS 2003	Statistics and Probability	3	CTT 4103	Customer Relationship Management	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CTT 4203	Staff Development and Corporate Training Strategies	3
CIS 2303	Systems Analysis and Design	3	CTT 4303	Technology Based Assessment Design and Administration	3
CIS 2403	Object Oriented Programming	3			
CIS 3003	Human Computer Interaction	3			
CIS 3103	Project Management	3			
CIS 4103	Emerging Technologies	3			
CIS 4803	Work Related Learning	3			
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6			
					Course Credits
<b>IS and IT Technology Requirement</b> See Program Chair for available courses			<b>General Education</b>		
<b>Required Credits: 6</b>			<b>Required Credits: 39</b>		
Select 1 2000 level course		3	A. Communication		12
Select 1 4000 level course		3	B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
					Course Credits
<i>Total Required Credits</i>		120	<i>Minimum Duration of Study</i>		4
<i>Maximum Duration of Study</i>		6	<i>Program Code</i>		CTTAB
<i>Cost Recovery Program</i>		No	<i>Major Code</i>		CTT

# 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 & interface design, game design &

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 & 3D Graphic Artists, Animation Experts, Interactive Multimedia Developers, Game Designers & Developers and Simulation Specialists.

		Course Credits
<b>Computer and Information Science Core Courses</b>		
<b>Required Credits: 45</b>		
CIS 1003	Information Systems in Organizations and Society	3
CIS 1103	Hardware and Networking	3
CIS 1203	Web Technologies	3
CIS 1303	Data and Information Management	3
CIS 1403	Fundamentals of Programming	3
CIS 1503	Introduction to Multimedia	3
CIS 2003	Statistics and Probability	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3
CIS 2303	Systems Analysis and Design	3
CIS 3003	Human Computer Interaction	3
CIS 3103	Project Management	3
CIS 4103	Emerging Technologies	3
CIS 4803	Work Related Learning	3
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6
		Course Credits

<b>IS and IT Technology Requirement</b>	
See Program Chair for available courses	
<b>Required Credits: 6</b>	
Select 1 2000 level course	3
Select 1 4000 level course	3

		Course Credits
<b>Interactive Multimedia Technologies Core Courses</b>		
<b>Required Credits: 30</b>		
CDG 2303	Introduction to Graphic Design	3
CDA 2303	Principles of Animation I	3
CIM 3103	Storyboarding and Animatics	3
CIM 3203	Programming for Multimedia	3
CIM 3303	2D 3D Animation	3
CIM 4003	Multimedia Scripting	3
CIM 4103	Web Authoring and Administration	3
CIM 4203	Virtual Reality and Simulation	3
CIM 4303	VFX, Audio, Editing and Composition	3
CSF 3303	Operating System Administration and Security	3
		Course Credits

<b>General Education</b>	
<b>Required Credits: 39</b>	
A. Communication	12
B. Mathematics	3
C. Art and Humanities	6
D. Social and Behavioral Studies	9
E. Physical and Biological Sciences	6
F. Global Studies	3

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	CIMAB
Cost Recovery Program	No	Major Code	CIM

## 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>Networking Core Courses</b>			
<b>Required Credits: 45</b>		<b>Required Credits: 36</b>			
CIS 1003	Information Systems in Organizations and Society	3	CIN 2003	Enterprise Network Services	3
CIS 1103	Hardware and Networking	3	CIN 2103	Networking Fundamentals	3
CIS 1203	Web Technologies	3	CIN 2203	Routing Protocols	3
CIS 1303	Data and Information Management	3	CIN 3003	LAN Switching	3
CIS 1403	Fundamentals of Programming	3	CIN 3103	Wireless Networks	3
CIS 1503	Introduction to Multimedia	3	CIN 3203	WAN Technologies	3
CIS 2003	Statistics and Probability	3	CIN 3303	Network Security	3
CIS 2103	Principles of Information Assurance, Security and Privacy	3	CIN 4006	Advanced Routing	6
CIS 2303	Systems Analysis and Design	3	CIN 4106	Advanced Switching	6
CIS 3003	Human Computer Interaction	3	CSF 3303	Operating System Administration and Security	3
CIS 3103	Project Management	3			
CIS 4103	Emerging Technologies	3			Course Credits
CIS 4803	Work Related Learning	3	<b>General Education</b>		
CIS 4906	Capstone Project (Integrative and Consultancy focused)	6	<b>Required Credits: 39</b>		
			A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3
<b>IS and IT Technology Requirement</b>					
See Program Chair for available courses					
<b>Required Credits: 6</b>					
Select 1	2000 level course	3			
Select 1	4000 level course	3			
<i>Total Required Credits</i>	<i>120</i>	<i>Minimum Duration of Study</i>	<i>4</i>		
<i>Maximum Duration of Study</i>	<i>6</i>	<i>Program Code</i>	<i>CINAB</i>		
<i>Cost Recovery Program</i>	<i>No</i>	<i>Major Code</i>	<i>CIN</i>		



## Education Division



The Education Division developed Teacher Education programs specifically for the UAE's teaching needs. The English Language Teaching in Schools and Early Childhood Education programs have been developed in collaboration with the Faculty of Education at the University of Melbourne, Australia.

Prepared with up-to-date knowledge of educational theory, HCT education students practice the skills they learn at their college in actual classroom situations throughout the programs. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers. HCT teacher education graduates are now working in a wide range of educational settings across the UAE. With a willingness to embrace change, our education graduates are making strong contributions to continuous quality improvement in education, and are helping lead in the development of the nation.

## Bachelor of Education in Early Childhood Education

The Bachelor of Education (Early Childhood Education) aims to produce graduates with the knowledge, skills, and attributes to provide care and education for young children to an international standard in a variety of Early Childhood Education settings. Education programs offer students one of the most rewarding careers and an opportunity to shape the future of

their country. Prepared with up-to-date knowledge of educational theory, HCT education students practice the skills they have learned at their college in actual classroom situations and other learning environments throughout the programs. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers.

	Course Credits		Course Credits		
<b>Bachelor of Education Core Courses</b>		<b>Early Childhood Education Core Courses</b>			
<b>Required Credits: 57</b>		<b>Required Credits: 24</b>			
EDU 1003	Introduction to Theories of Learning 1a	3	ECE 2003	Teaching Mathematics in the Early Years: Skills and Concept acquisition	3
EDU 1203	Learning to Teach in the Contemporary UAE 1a	3	ECE 2203	Learning through the Visual Arts	3
EDU 1302	Learning Technologies for the Classroom	2	ECE 2503	Theories of Teaching and Learning that impact the Preschool Curriculum	3
EDU 1503	Introduction to Theories of Learning 1b	3	ECE 2603	Learning through the Performing Arts	3
EDU 1703	Learning to Teach in the Contemporary UAE 1b	3	ECE 3003	Literacies in Early Childhood	3
EDU 1802	Introduction to Mathematics and Science in the Classroom	2	ECE 3203	Learning through Literature	3
EDU 2302	Language and Development: SLA Principles and Pedagogy	2	ECE 3503	Planning and Assessment in Early Childhood Education	3
EDU 2802	Teaching Learners with Special Needs	2	ECE 3703	Building Learning Communities in Early Childhood Education	3
EDU 4003	Research Methods and Reflective Practice in Education	3			
EDU 4103	Managing Innovation and Change in Education	3			
EDU 4203	Curriculum Design	3			Course Credits
EDU 4503	Research Project	3			
EDU 4603	Employment Preparation for New UAE Educators	3			
EPC 1401	Practicum 1a	1	<b>General Education</b>		
EPC 1901	Practicum 1b	1	<b>Required Credits: 39</b>		
EPC 2401	Practicum 2a	1	A. Communication		12
EPC 2901	Practicum 2b	1	B. Mathematics		3
EPC 3403	Practicum 3a	3	C. Art and Humanities		6
EPC 3903	Practicum 3b	3	D. Social and Behavioral Studies		9
EPC 4403	Practicum 4a	3	E. Physical and Biological Sciences		6
EPC 4909	Practicum 4b (Internship)	9	F. Global Studies		3

Total Required Credits	120	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	ECEAB
Cost Recovery Program	No	Major Code	ECE

# Bachelor of Education in Educational Technology

The Bachelor of Education (Educational Technology) aims to produce graduates skilled in the instructional and educational use of ICTs in a variety of educational settings including UAE schools, and the integration of technology into learning and teaching. Education programs offer students one of the most rewarding careers and an opportunity to shape the future of

their country. Prepared with up-to-date knowledge of educational theory, HCT education students practice the skills they have learned at their college in actual classroom situations and other learning environments throughout the programs. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers.

		Course Credits			Course Credits
<b>Bachelor of Education Core Courses</b>			<b>Educational Technology Core Courses</b>		
<b>Required Credits: 57</b>			<b>Required Credits: 24</b>		
EDU 1003	Introduction to Theories of Learning 1a	3	EDT 2003	Technologies for Learning I	3
EDU 1203	Learning to Teach in the Contemporary UAE 1a	3	EDT 2203	Information, Communication and Media Studies	3
EDU 1302	Learning Technologies for the Classroom	2	EDT 2503	Technologies for Learning II	3
EDU 1503	Introduction to Theories of Learning 1b	3	EDT 2703	Distance and Online Education	3
EDU 1703	Learning to Teach in the Contemporary UAE 1b	3	EDT 3503	Web Design for Learning	3
EDU 1802	Introduction to Mathematics and Science in the Classroom	2	EDT 3703	Multimedia Authoring for Learning	3
EDU 2302	Language and Development: SLA Principles and Pedagogy	2	EDT 3003	Computer Platforms	3
EDU 2802	Teaching Learners with Special Needs	2	EDT 3203	Computer-Based Training	3
EDU 4003	Research Methods and Reflective Practice in Education	3			Course Credits
EDU 4103	Managing Innovation and Change in Education	3	<b>General Education</b>		
EDU 4203	Curriculum Design	3	<b>Required Credits: 39</b>		
EDU 4503	Research Project	3	A. Communication		12
EDU 4603	Employment Preparation for New UAE Educators	3	B. Mathematics		3
EPC 1401	Practicum 1a	1	C. Art and Humanities		6
EPC 1901	Practicum 1b	1	D. Social and Behavioral Studies		9
EPC 2401	Practicum 2a	1	E. Physical and Biological Sciences		6
EPC 2901	Practicum 2b	1	F. Global Studies		3
EPC 3403	Practicum 3a	3			
EPC 3903	Practicum 3b	3			
EPC 4403	Practicum 4a	3			
EPC 4909	Practicum 4b (Internship)	9			

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	EDTAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	EDT

## Bachelor of Education in English Language Teaching in Schools

The Bachelor of Education (English Language Teaching in Schools) aims to produce specialist English teachers qualified to teach in UAE schools at all levels. Education programs offer students one of the most rewarding careers and an opportunity to shape the future of their country. Prepared with up-to-date knowledge of

educational theory, HCT education students practice the skills they have learned at their college in actual classroom situations and other learning environments throughout the programs. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers.

		Course Credits			Course Credits
<b>Bachelor of Education Core Courses</b>			<b>English Language Teaching in Schools Core Courses</b>		
<b>Required Credits: 57</b>			<b>Required Credits: 24</b>		
EDU 1003	Introduction to Theories of Learning 1a	3	ELT 2003	Language Arts A (Speaking, Listening and Vocabulary)	3
EDU 1203	Learning to Teach in the Contemporary UAE 1a	3	ELT 2203	Language Arts B - Teaching Methods for the Primary School Teacher A	3
EDU 1302	Learning Technologies for the Classroom	2	ELT 2503	Language Arts C (Reading/Writing/Literature)	3
EDU 1503	Introduction to Theories of Learning 1b	3	ELT 2603	Language Arts D - Teaching Methods for the Primary School Teacher	3
EDU 1703	Learning to Teach in the Contemporary UAE 1b	3	ELT 3003	Child and Adolescent Literature	3
EDU 1802	Introduction to Mathematics and Science in the Classroom	2	ELT 3203	Language Arts E - Teaching Methods for the Secondary School English	3
EDU 2302	Language and Development: SLA Principles and Pedagogy	2	ELT 3503	Literacy and Grammar in the Second Language Curriculum	3
EDU 2802	Teaching Learners with Special Needs	2	ELT 3703	Language Arts F - Teaching Methods for the Secondary School English	3
EDU 4003	Research Methods and Reflective Practice in Education	3			
EDU 4103	Managing Innovation and Change in Education	3			
EDU 4203	Curriculum Design	3			
EDU 4503	Research Project	3			
EDU 4603	Employment Preparation for New UAE Educators	3			
EPC 1401	Practicum 1a	1			
EPC 1901	Practicum 1b	1			
EPC 2401	Practicum 2a	1			
EPC 2901	Practicum 2b	1			
EPC 3403	Practicum 3a	3			
EPC 3903	Practicum 3b	3			
EPC 4403	Practicum 4a	3			
EPC 4909	Practicum 4b (Internship)	9			
					Course Credits
			<b>General Education</b>		
			<b>Required Credits: 39</b>		
			A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	ELTAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	ELT

## Bachelor of Education in Primary Education

The Bachelor of Education (Primary) aims to produce graduates qualified to teach English, Mathematics and Science in the medium of English in UAE primary schools. Education programs offer students one of the most rewarding careers and an opportunity to shape the future of their country. Prepared with up-to-date

knowledge of educational theory, HCT education students practice the skills they have learned at their college in actual classroom situations and other learning environments throughout the programs. This hands-on approach to learning gives students the teaching skills they need to excel in their future careers.

		Course Credits			Course Credits
<b>Bachelor of Education Core Courses</b>			<b>Primary Education Core Courses</b>		
<b>Required Credits: 57</b>			<b>Required Credits: 24</b>		
EDU 1003	Introduction to Theories of Learning 1a	3	EPR 2003	Language Arts A (Speaking, Listening and Vocabulary)	3
EDU 1203	Learning to Teach in the Contemporary UAE 1a	3	EPR 2203	Language Arts B - Teaching Methods for the Primary School Teacher A	3
EDU 1302	Learning Technologies for the Classroom	2	EPR 2503	Language Arts C (Reading/Writing/Literature)	3
EDU 1503	Introduction to Theories of Learning 1b	3	EPR 2603	Language Arts D - Teaching Methods for the Primary School Teacher	3
EDU 1703	Learning to Teach in the Contemporary UAE 1b	3	EPR 3003	Mathematics for the Primary School Teacher	3
EDU 1802	Introduction to Mathematics and Science in the Classroom	2	EPR 3203	Mathematics Teaching Methods for the Primary School Teacher	3
EDU 2302	Language and Development: SLA Principles and Pedagogy	2	EPR 3503	Science for the Primary School Teacher	3
EDU 2802	Teaching Learners with Special Needs	2	EPR 3703	Science Teaching Methods for the Primary School Teacher	3
EDU 4003	Research Methods and Reflective Practice in Education	3			
EDU 4103	Managing Innovation and Change in Education	3			
EDU 4203	Curriculum Design	3			Course Credits
EDU 4503	Research Project	3			
EDU 4603	Employment Preparation for New UAE Educators	3			
EPC 1401	Practicum 1a	1	<b>General Education</b>		
EPC 1901	Practicum 1b	1	<b>Required Credits: 39</b>		
EPC 2401	Practicum 2a	1	A. Communication		12
EPC 2901	Practicum 2b	1	B. Mathematics		3
EPC 3403	Practicum 3a	3	C. Art and Humanities		6
EPC 3903	Practicum 3b	3	D. Social and Behavioral Studies		9
EPC 4403	Practicum 4a	3	E. Physical and Biological Sciences		6
EPC 4909	Practicum 4b (Internship)	9	F. Global Studies		3

<i>Total Required Credits</i>	120	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	EPRAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	EPR



## Engineering Technology Division



The Engineering Technology Division offers a wide range of programs. These programs prepare students to successfully move to challenging and critical positions requiring technical expertise in a modern and evolving world.

Students experience a hands-on approach to learning that combines theory with practice and focuses on the demands of the modern workplace. Graduates are competent in their chosen technical specialization, communications, information technology, critical thinking and problem solving, project management and teamwork.

Employment prospects are excellent in many local industrial sectors such as construction, energy, oil and gas, aviation, telecommunications, computing, manufacturing, consulting, government departments and the military.

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

The Aviation Engineering programs 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 organizations.

**Note:** General Education Mathematics requirement and 3 credit units of Physical and Biological Sciences are covered by AMTAA Core Courses.

		Course Credits			Course Credits
<b>Aviation Maintenance Technology Core Courses</b>			<b>Airframe and Aeroengines Requirement</b>		
<b>Required Credits: 115</b>			<b>Required Credits: 4</b>		
EAA 1403	Electronic Fundamentals (Mod 4 B1)	3	Select 2 4000 level courses		4
EAA 1503	Digital Techniques/Electronic Instrument Systems (Mod 5 B1)	3			
EAA 1612	Materials and Hardware (Mod 6 B1)	12			Course Credits
EAA 2109	Gas Turbine Engine (Mod 15 B1)	9			
EAA 2712	Maintenance Practices (Mod 7 B1)	12			
EAA 3104	Propeller (Mod 17 B1)	4			
EAA 3215	Turbine Aeroplane Aerodynamics, Structures and Systems (Mod 11 B1) Part A	15			
EAA 3221	Turbine Aeroplane Aerodynamics, Structures and Systems (Mod 11 B1) Part B	21			
EAM 1103	Aviation Mathematics	3	A. Communication		12
EAM 1203	Aviation Physics	3	B. Mathematics		3
EAM 1306	Electrical Fundamentals	6	C. Art and Humanities		6
EAM 2003	Basic Aerodynamics (Mod 8 B1 and B2)	3	D. Social and Behavioral Studies		9
EAM 2013	Human Factors (Mod 9 B1 and B2)	3	E. Physical and Biological Sciences		6
EAM 2023	Aviation Legislation (Mod 10B1 and B2)	3	F. Global Studies		3
EMM 4003	Advanced Human Factors	3			
EMM 4013	Total Quality Management in Aviation	3			
EMM 4203	Aviation Operations Management	3			
EMM 4213	Aviation Project Management	3			
EMM 4223	Human Resources and Relations Management	3			
			<b>General Education</b>		
			<b>Required Credits: 39</b>		

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

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

The Aviation Engineering programs 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 organizations

**Note:** General Education Mathematics requirement and 3 credit units of Physical and Biological Sciences are covered by AMTA Core Courses.

		Course Credits			Course Credits
<b>Aviation Maintenance Technology (Avionics) Core Courses</b>			<b>Avionics Requirement</b>		
			See Program Chair for available courses		
<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 B1 and B2)	3			Course Credits
EAM 2013	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 1608	Materials and Hardware (Mod 6 B2)	8			
EAV 1708	Maintenance Practices (Mod 7 B2)	8			
EAV 2145	Propulsion (EASA Mod 14 B2)	5			
EAV 3120	Aircraft Aerodynamics, Structures and Systems (Mod 13 B2) Part A	20			
EAV 3220	Aircraft Aerodynamics, Structures and Systems (Mod 13 B2) Part B	20			
EMM 4003	Advanced Human Factors	3			
EMM 4013	Total Quality Management in Aviation	3			
EMM 4203	Aviation Operations Management	3			
EMM 4213	Aviation Project Management	3			
EMM 4223	Human Resources and Relations Management	3			
			<b>General Education</b>		
			<b>Required Credits: 39</b>		
			A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

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

## Bachelor of Applied Science in Chemical Engineering Technology

The program covers the laws of Chemistry, Physics, and Mathematics which form the basis of many industrial processes in areas such as energy, oil and gas, chemical processing, etc. The program prepares the students for positions as Engineers with the technical and managerial skills necessary to enter careers in the design, manufacturing, operation, and maintenance of chemical processes. Students will gain practical

knowledge in heat and mass transfer in plants and process control design projects. Graduates typically have strengths in applied design, development and implementation of chemical engineering systems.

**Note:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Chemical ET Core courses.

		Course Credits			Course Credits
<b>Chemical Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 66</b>			<b>Required Credits: 21</b>		
ECH 1003	General Chemistry	3	LSM 113	Statistical Mathematics	3
ECH 1103	Chemical Engineering Principles I	3	MTH 1103	Pre Calculus	3
ECH 2003	Physical Chemistry	3	MTH 1203	Calculus I	3
ECH 2013	Chemical Engineering Principles II	3	MTH 2103	Calculus II	3
ECH 2033	Fluid Mechanics	3	MTH 2503	Linear Algebra and Differential Equations	3
ECH 2043	Analytical Chemistry	3	MTH 3013	Calculus III	3
ECH 2053	Organic Chemistry	3	PHY 1103	Physics I	3
ECH 2063	Thermodynamics	3			
ECH 2073	Petroleum Testing	3			Course Credits
ECH 3003	Mass Transfer	3	<b>Chemical Engineering Technology Requirement</b>		
ECH 3013	Materials and Corrosion	3	<b>See Program Chair for available courses</b>		
ECH 3023	Heat Transfer	3	<b>Required Credits: 12</b>		
ECH 3033	Electrical Fundamentals and Instrumentation	3	Select 4 4000 level courses		12
ECH 3043	Process Control: Chemical	3			Course Credits
ECH 3053	Unit Operation I	3	<b>General Education</b>		
ECH 3063	Reaction Kinetics	3	<b>Required Credits: 39</b>		
ECH 4002	Design Project I	2	A. Communication		12
ECH 4022	Design Project II	2	B. Mathematics		3
ECH 4053	Transport Phenomena	3	C. Art and Humanities		6
EGN 1103	Engineering Measurements and CAD Introduction	3	D. Social and Behavioral Studies		9
EGN 3102	Project Management	2	E. Physical and Biological Sciences		6
EGN 3202	Engineering Economics	2	F. Global Studies		3
EGN 3332	Health Safety and Environment	2			
ERK 3002	Work Placement	2			

<i>Total Required Credits</i>	129	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	ECHAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	ECH

# Bachelor of Applied Science in Civil Engineering Technology

The program 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 analyze

and design systems, specify project methods and materials, perform cost estimates and analysis, and manage technical tasks in support of municipalities and regions, as well as globally.

**Note:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Civil ET Core courses.

		Course Credits			Course Credits
<b>Civil Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 66</b>			<b>Required Credits: 21</b>		
ECV 1003	Applied Drafting and CAD: Civil	3	LSM 113	Statistical Mathematics	3
ECV 1103	Construction Materials	3	MTH 1103	Pre Calculus	3
ECV 2003	Soil Mechanics	3	MTH 1203	Calculus I	3
ECV 2013	Engineering Mechanics I	3	MTH 2103	Calculus II	3
ECV 2023	Fluid Mechanics and Hydraulics	3	MTH 2503	Linear Algebra and Differential Equations	3
ECV 2033	Strength of Materials	3	MTH 3013	Calculus III	3
ECV 2043	Foundation Engineering	3	PHY 1103	Physics I	3
ECV 2053	Site Surveying	3			
ECV 2072	Chemistry for Civil Engineering	2			Course Credits
ECV 3003	Highway Engineering	3	<b>Civil Engineering Technology Requirement</b>		
ECV 3013	Waste Water Engineering	3	<b>See Program Chair for available courses</b>		
ECV 3023	Quantity Surveying and Estimating	3	<b>Required Credits: 12</b>		
ECV 3033	Structural Analysis I	3	Select 4 4000 level courses		12
ECV 3053	Water Resources and Supply	3			Course Credits
ECV 3063	Concrete Design I	3	<b>General Education</b>		
ECV 3073	Civil Engineering Construction	3	<b>Required Credits: 39</b>		
ECV 3263	Steel Design I	3	A. Communication		12
ECV 4002	Design Project I	2	B. Mathematics		3
ECV 4022	Design Project II	2	C. Art and Humanities		6
ECV 4053	Environmental Engineering	3	D. Social and Behavioral Studies		9
EGN 1103	Engineering Measurements and CAD Introduction	3	E. Physical and Biological Sciences		6
EGN 3102	Project Management	2	F. Global Studies		3
EGN 3202	Engineering Economics	2			
ERK 3002	Work Placement	2			

<i>Total Required Credits</i>	129	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	ECVAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	ECV

# Bachelor of Applied Science in Electrical Engineering Technology

The program deals with the generation, transmission, distribution and control of electric energy systems and related equipment. This program 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.

**Note:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Electrical ET Core courses.

		Course Credits			Course Credits
<b>Electrical Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 24</b>		
EEC 1003	Electric Circuits I	3	LSM 113	Statistical Mathematics	3
EEC 2003	Electric Circuits II	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 2053	Electronics I	3	MTH 2503	Linear Algebra and Differential Equations	3
EEC 3003	Instrumentation and Control	3	MTH 3013	Calculus III	3
EEC 3073	Signals and Systems	3	PHY 1103	Physics I	3
EEC 4043	Control Systems	3	PHY 1203	Physics II	3
EEL 2003	Power Electronics	3			
EEL 2023	Power Generation and Transmission	3			
EEL 2043	Principles of Machines and Power	3			
EEL 3003	Electrical Machines	3			Course Credits
EEL 3013	Electrical Power Distribution	3			
EEL 3023	System Protection and Coordination	3			
EEL 4002	Design Project I (CC)	2			
EEL 4022	Design Project II (CC)	2			
EEL 4413	Power Systems Analysis	3			
EGN 1103	Engineering Measurements and CAD Introduction	3			Course Credits
EGN 2003	Computer Programming	3			
EGN 3102	Project Management	2			
EGN 3202	Engineering Economics	2			
EGN 3332	Health Safety and Environment	2			
ERK 3002	Work Placement	2			
			<b>Electrical Engineering Technology Requirement</b>		
			<b>See Program Chair for available courses</b>		
			<b>Required Credits: 12</b>		
			Select 4 4000 level courses		12
					Course Credits
			<b>General Education</b>		
			<b>Required Credits: 39</b>		
			A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

Total Required Credits	129	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	EELAB
Cost Recovery Program	No	Major Code	EEL

# Bachelor of Applied Science in Electronic Engineering Technology

The program focuses on the fields of Telecommunications, Instrumentation and Control Systems and Data Communications and Networks. This program prepares the students for positions as engineers with the technical and managerial skills necessary to enter careers in the design, application, installation and maintenance of electronic systems. Students gain experience in digital and embedded

systems, programming and system control. Graduates are well prepared for analysis, applied design, development and implementation of electronic systems.

**Note:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Electronic ET Core courses.

		Course Credits			Course Credits
<b>Electrical Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 24</b>		
EEC 1003	Electric Circuits I	3	LSM 1113	Statistical Mathematics	3
EEC 2003	Electric Circuits II	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 2053	Electronics I	3	MTH 2503	Linear Algebra and Differential Equations	3
EEC 3003	Instrumentation and Control	3	MTH 3013	Calculus III	3
EEC 3013	Electronics II	3	PHY 1103	Physics I	3
EEC 3043	Communication Systems	3	PHY 1203	Physics II	3
EEC 3073	Signals and Systems	3			
EEC 3103	Digital Communications	3			Course Credits
EEC 3503	Embedded System Design	3			
EEC 4002	Design Project I	2	<b>Electrical Engineering Technology Requirement</b>		
EEC 4013	Data Communications and Networks	3	<b>See Program Chair for available courses</b>		
EEC 4022	Design Project II	2	<b>Required Credits: 12</b>		
EEC 4043	Control Systems	3	Select 4 4000 level courses		12
EEL 2043	Principles of Machines and Power	3			Course Credits
EGN 1103	Engineering Measurements and CAD Introduction	3	<b>General Education</b>		
EGN 2003	Computer Programming	3	<b>Required Credits: 39</b>		
EGN 3102	Project Management	2	A. Communication		12
EGN 3202	Engineering Economics	2	B. Mathematics		3
EGN 3332	Health Safety and Environment	2	C. Art and Humanities		6
EMT 3003	Programmable Logic Controllers	3	D. Social and Behavioral Studies		9
ERK 3002	Work Placement	2	E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	129	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	EECAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	EEC

# Bachelor of Applied Science in Mechanical Engineering Technology

The program deals with the manipulation of energy through useful mechanical devices and the application of thermodynamics and heat transfer systems. The program 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.

**Note:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Mechanical ET Core courses.

		Course Credits			Course Credits
<b>Mechanical Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 24</b>		
EEC 2073	Electrical Engineering Fundamentals	3	LSM 1113	Statistical Mathematics	3
EGN 1103	Engineering Measurements and CAD Introduction	3	MTH 1103	Pre Calculus	3
EGN 3102	Project Management	2	MTH 1203	Calculus I	3
EGN 3202	Engineering Economics	2	MTH 2103	Calculus II	3
EGN 3332	Health Safety and Environment	2	MTH 2503	Linear Algebra and Differential Equations	3
EMC 2003	Computer Aided Drafting	3	MTH 3013	Calculus III	3
EMC 2013	Materials Selection and Testing	3	PHY 1103	Physics I	3
EMC 2023	Statics and Dynamics	3	PHY 1203	Physics II	3
EMC 2033	Manufacturing Technology	3			Course Credits
EMC 2043	Mechanics of Materials	3	<b>Mechanical Engineering Technology Requirement</b>		
EMC 2053	Fluid Mechanics	3	<b>See Program Chair for available courses</b>		
EMC 3003	Industrial Plant Maintenance	3	<b>Required Credits: 12</b>		
EMC 3013	Fabrication and Welding	3	Select 4 4000 level courses		12
EMC 3023	Thermodynamics I	3			Course Credits
EMC 3033	Heat Transfer	3	<b>General Education</b>		
EMC 3053	Thermodynamics II	3	<b>Required Credits: 39</b>		
EMC 3063	Mechanical Design I	3	A. Communication		12
EMC 3163	Process Control: Mechanical	3	B. Mathematics		3
EMC 4002	Design Project I	2	C. Art and Humanities		6
EMC 4003	Turbomachinery	3	D. Social and Behavioral Studies		9
EMC 4022	Design Project II	2	E. Physical and Biological Sciences		6
EMC 4043	Refrigeration and Air Conditioning System	3	F. Global Studies		3
ERK 3002	Work Placement	2			

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

# Bachelor of Applied Science in Mechatronic Engineering Technology

The program combines the fields of mechanical and electronic systems for applications in automation, robotics and manufacturing plants. The program 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:** General Education Physical and Biological Science and Mathematics requirements are satisfied by Mechatronic ET Core courses.

		Course Credits			Course Credits
<b>Mechatronic Engineering Core Courses</b>			<b>Mathematics and Science Required Courses</b>		
<b>Required Credits: 63</b>			<b>Required Credits: 24</b>		
EEC 2073	Electrical Engineering Fundamentals	3	LSM 1113	Statistical Mathematics	3
EEC 2033	Microcontroller Systems	3	MTH 1103	Pre Calculus	3
EEC 3003	Instrumentation and Control	3	MTH 1203	Calculus I	3
EGN 1103	Engineering Measurements and CAD Introduction	3	MTH 2103	Calculus II	3
EGN 2003	Computer Programming	3	MTH 2503	Linear Algebra and Differential Equations	3
EGN 3102	Project Management	2	MTH 3013	Calculus III	3
EGN 3202	Engineering Economics	2	PHY 1103	Physics I	3
EGN 3332	Health Safety and Environment	2	PHY 1203	Physics II	3
EMC 2003	Computer Aided Drafting	3			
EMC 2033	Manufacturing Technology	3			Course Credits
EMC 2043	Mechanics of Materials	3	<b>Mechatronic Engineering Technology Requirement</b>		
EMC 2223	Fluid Power	3	<b>See Program Chair for available courses</b>		
EMT 2003	Applied Mechanics	3	<b>Required Credits: 12</b>		
EMT 2023	Electromechanical Systems	3	Select 4 4000 level courses		12
EMT 2033	Electronics Systems and Circuits	3			Course Credits
EMT 3013	Thermofluid Systems	3	<b>General Education</b>		
EMT 3103	Engineering Materials	3	<b>Required Credits: 39</b>		
EMT 4002	Design Project I	2	A. Communication		12
EMT 4003	Robotics Technology	3	B. Mathematics		3
EMT 4013	Industrial Control Systems	3	C. Art and Humanities		6
EMT 4022	Design Project II	2	D. Social and Behavioral Studies		9
EMT 4023	Programmable Logic Controllers	3	E. Physical and Biological Sciences		6
ERK 3002	Work Placement	2	F. Global Studies		3

<i>Total Required Credits</i>	129	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	EMTAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	EMT



## Health Sciences Division



The Health Sciences Division offers programs and courses 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 organizations.

See the Academic Framework section of the catalog for specific GPA and General Education requirements for all degrees.

## Bachelor of Applied Science in Community Health

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

learning. Learners integrate theory and practice during the four years of the program 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 health care systems in the UAE, and pursue further studies in public and community health.

**Note:** General Education Physical and Biological Science requirement 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 Health Care 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 Behavior	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			Course Credits
HED 3253	Planning Health Promotion	3	<b>General Education</b>		
HED 3303	Teaching School Health	3	<b>Required Credits: 39</b>		
HED 3353	Implementing Health Promotion	3	A. Communication		12
HED 3403	Evaluation of Health Care	3	B. Mathematics		3
HED 3503	Occupational Health	3	C. Art and Humanities		6
HED 4003	Advanced Management in Health Care	3	D. Social and Behavioral Studies		9
HED 4103	Health Aspects of Aging	3	E. Physical and Biological Sciences		6
HED 4403	Research Methods I	3	F. Global Studies		3
HED 4453	Research Methods II	3			
HIM 3003	Biostatistics	3			
HIM 3303	Epidemiology	3			
HSC 1003	Introduction to Health Care Systems	3			

<i>Total Required Credits</i>	132	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	HEDAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	HED

## Bachelor in Dental Hygiene

The Bachelor of Applied Science in Dental Hygiene is a four year post Foundations program preparing graduates for professional dental hygiene practice.

Graduates are educated to provide quality dental hygiene care with a patient centered focus. The program 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 program also focuses on helping the students in developing analytical thinking, problem-solving and communication skills in an ethical and responsible manner.

**Note:** General Education Physical and Biological Science requirement 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 Education</b>		
HDH 3603	Law and Ethics for Dental Hygiene	3	<b>Required Credits: 39</b>		
HDH 4003	Epidemiology and Preventive Dentistry	3	A. Communication		12
HDH 4103	Dental Hygiene Theory III	3	B. Mathematics		3
HDH 4203	Management and Supervision of Dental Practice	3	C. Art and Humanities		6
HDH 4403	Scholarship and Research for Evidence Based Practice	3	D. Social and Behavioral Studies		9
HDH 4503	Dental Hygiene Theory IV	3	E. Physical and Biological Sciences		6
HDH 4903	Community Dental Health II	4	F. Global Studies		3
HSC 2503	Microbiology	3			

<i>Total Required Credits</i>	126	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	HDHAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	HDH

## Bachelor of Applied Science in Emergency Medical Services

The Bachelor of Applied Science in Emergency Medical Services is a four year program that follows the U.S. DOT National Standard Curriculum in partnership with Harrisburg Area Community College, U.S.A. Following the successful completion of the third year with a passing score of 75%, students are required to complete an International Work Experience and external examination process to complete the advanced EMT-Paramedic (EMT-P) for U.S. certification. The fourth year of the program allows for paramedic specialization in advanced practice areas such as

Disaster/Rescue, Aeromedical Flight Paramedic, EMS Management, Special Operations (SWAT Medic), and EMS Education. Students are sponsored through local government agencies and after graduation can be employed in Emergency Medical Services at the level of advanced EMT-Paramedic.

**Note:** General Education Physical and Biological Science requirement are satisfied by Emergency Medical Services Core Courses.

		Course Credits			Course Credits
<b>Emergency Medical Services Core Courses</b>			<b>Emergency Medical Services Elective</b> See Program Chair for available courses.		
<b>Required Credits: 60</b>			<b>Required Credits: 8</b>		
HEM 1208	First Responder	8	HEM 4908	Emergency Medical Services Elective	8
HEM 2104	EMT Basic (I)	4			
HEM 2204	EMT Basic (II)	4			Course Credits
HEM 2304	EMT Advanced (I)	4			
HEM 2404	EMT Advanced (II)	4			
HEM 2508	EMT Advanced (III)	8			
HEM 3108	EMT Paramedic (I)	8			
HEM 3208	EMT Paramedic (II)	8			
HEM 4003	Advanced Pharmacology	3			
HEM 4103	Emergency Medical Services Management	3			
HEM 4203	Evidence Based Medicine and Research Analysis	3			Course Credits
HEM 4303	Advanced Clinical Practice	3			
		Course Credits			
<b>Emergency Medical Services Preceptorship Courses</b>			<b>Required Science Courses</b>		
<b>Required Credits: 27</b>			<b>Required Credits: 6</b>		
HEM 2902	Ambulance Preceptorship I	3	LSN 1103	Anatomy and Physiology I	3
HEM 2922	Ambulance Preceptorship II	3	LSN 1203	Anatomy and Physiology II	3
HEM 3902	Hospital Ambulance Preceptorship I	3			
HEM 3922	Hospital Ambulance Preceptorship II	3			
HEM 3944	Summer Preceptorship	5			
HEM 4944	International Preceptorship	5			
HEM 4964	Speciality Paramedic Advanced Preceptorship	5			
		Course Credits			
			<b>General Education</b>		
			<b>Required Credits: 39</b>		
			A. Communication		12
			B. Mathematics		3
			C. Art and Humanities		6
			D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

Total Required Credits	134	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	HEMAB
Cost Recovery Program	No	Major Code	HEM



# Bachelor of Science in Health Information Management

The Bachelor of Science in Health Information Management program is a four year post Foundations program preparing graduates for professional health information management professional practice. In the first two program years students develop an extensive knowledge of health care coding and introductory management studies. The final two years of the program develops students' skills in health informatics, research, quality, advanced data management, leadership and health data analysis. The program 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 health information management and a commitment to lifelong learning. The program is internationally accredited by the Health Information Management Association of Australia (HIMAA), providing both academic recognition and support for students who wish to advance their education into postgraduate studies.

**Note:** General Education Physical and Biological Science requirement are satisfied by Health Information Management Core Courses.

Health Information Management Core Courses		Course Credits
<b>Required Credits: 51</b>		
HIM 1203	Health Information Coding I (Introduction)	3
HIM 2003	Health Information Coding II (Intermediate)	3
HIM 2103	Applied Pathophysiology for Health Information Management	3
HIM 2203	Health Information Management Studies	3
HIM 2303	Health Information Coding III (Advanced)	3
HIM 2403	Introduction to Management in Health Care	3
HIM 3003	Biostatistics	3
HIM 3103	Health Informatics I	3
HIM 3203	Health Informatics II	3
HIM 3303	Epidemiology	3
HIM 4003	Intermediate Management in Health Care	3
HIM 4103	Health Data Analysis	3
HIM 4203	Research Methods in Health Care	3
HIM 4303	Health Care Economics and Health Insurance	3
HIM 4403	Advanced Management in Health Care	3
HSC 1003	Introduction to Health Care Systems	3
HSC 1803	Medical Terminology for Health Sciences	3

Required Science Courses		Course Credits
<b>Required Credits: 6</b>		
LSN 1103	Anatomy and Physiology I	3
LSN 1203	Anatomy and Physiology II	3

Information Technology Core Courses		Course Credits
<b>Required Credits: 15</b>		
CIA 3103	Database Design and Administration	3
CIA 4203	Enterprise Database Applications	3
CIS 1303	Data and Information Management	3
CIS 1403	Fundamentals of Programming	3
CIS 3103	Project Management	3

Health Information Field Courses		Course Credits
<b>Required Credits: 16</b>		
HIM 2903	Health Information Management Hospital Preceptorship	4
HIM 2923	Coding Practicum	4
HIM 3902	Work Experience for Health Information Management	3
HIM 4924	Professional Experience	5

General Education		Course Credits
<b>Required Credits: 39</b>		
A. Communication		12
B. Mathematics		3
C. Art and Humanities		6
D. Social and Behavioral Studies		9
E. Physical and Biological Sciences		6
F. Global Studies		3

Total Required Credits	121	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	HIMAB
Cost Recovery Program	No	Major Code	HIM

## Bachelor of Science in Medical Imaging

The Bachelor of Science in Medical Imaging program is a four-year post Foundations program of undergraduate study which prepares BSc Medical Imaging graduates for employment as professional radiographers within the UAE health care environment. Students study a wide range of technical and clinical subjects to include radiographic anatomy and pathology, X-ray positioning and procedures, medical imaging technology and the core elements of specialist medical imaging modalities such as computed tomography (CT), magnetic resonance imaging (MRI), mammography and ultrasound (US). The program places a strong emphasis on 'learning by doing' where students develop core medical imaging competencies

through supervised clinical preceptorship with real patients in real hospitals and clinics. Upon graduation, employment opportunities for radiographers are varied and exciting ranging from working in Primary Health Care clinics to large multi-disciplinary general and specialist hospital units. The BSc Medical Imaging program is internationally accredited by the Society and College of Radiographers United Kingdom (SCoR), providing academic recognition and support for those students who wish to advance their education through postgraduate studies.

**Note:** General Education Physical and Biological Science requirement are satisfied by Medical Imaging Core Courses.

		Course Credits			Course Credits
<b>Medical Imaging Core Courses</b>			<b>Preceptorship Courses</b>		
<b>Required Credits: 50</b>			<b>Required Credits: 46</b>		
HMI 1103	Introduction to Medical Imaging	3	HMI 2904	Clinical Preceptorship I	5
HMI 2001	Patient Care I	1	HMI 3922	Clinical Preceptorship II	3
HMI 2002	Medical Imaging Technology I	2	HMI 3934	Clinical Preceptorship III	5
HMI 2102	Medical Imaging Technology II	2	HMI 3944	Clinical Preceptorship IV	5
HMI 2303	Medical Imaging Positioning and Procedures I	3	HMI 4952	Clinical Preceptorship V	3
HMI 2403	Medical Imaging Anatomy and Pathology I	3	HMI 4964	Clinical Preceptorship VI	5
HMI 2503	Medical Imaging Positioning and Procedures II	3	HMI 4976	Clinical Preceptorship VII	8
HMI 2603	Medical Imaging Anatomy and Pathology II	3	HMI 4989	Clinical Preceptorship VIII	12
HMI 3001	Patient Care II	1			
HMI 3002	Medical Imaging Technology III	2			Course Credits
HMI 3102	Medical Imaging and Positioning III	2	<b>Required Science Courses</b>		
HMI 3202	Specialized Imaging I	2	<b>Required Credits: 6</b>		
HMI 3212	Radiation Safety and Biology	2	LSN 1103	Anatomy and Physiology I	3
HMI 3312	Cross Sectional Anatomy	2	LSN 1203	Anatomy and Physiology II	3
HMI 4002	Specialized Imaging II	2			Course Credits
HMI 4003	Quality Management in Medical Imaging	3	<b>General Education</b>		
HMI 4102	Specialized Imaging Elective	2	<b>Required Credits: 39</b>		
HMI 4103	Research Project I	3	A. Communication		12
HMI 4203	Professional Practice	3	B. Mathematics		3
HMI 4303	Research Project II	3	C. Art and Humanities		6
HSC 1003	Introduction to Health Care Systems	3	D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

<i>Total Required Credits</i>	135	<i>Minimum Duration of Study</i>	4
<i>Maximum Duration of Study</i>	6	<i>Program Code</i>	HMIAB
<i>Cost Recovery Program</i>	No	<i>Major Code</i>	HMI

## Bachelor in Medical Laboratory Science

The Bachelor in Medical Laboratory Science is a four year post Foundations professional program. Graduates are trained biomedical scientists who possess a broad range of knowledge in medical laboratory diagnostics with the ability to work proficiently and are culturally competent to deliver care to a wide range of clients/patients. The four years of undergraduate study integrates biomedical science theory, laboratory skills, and supervised professional practice in a variety of clinical settings. Medical laboratory technologists are specialized in the area of clinical diagnostics, producing accurate results required by physicians and health care team members for treatment and management of patients and clients. Graduates possess professional knowledge in the areas of hematology, immunology, transfusion

sciences, clinical chemistry, microbiology, molecular and cellular pathology, with the potential to specialize and advance their skills in specialist areas. These skills can be easily transferred to work competently in public health labs, municipality and forensic labs and in the biotechnology industry. Graduates who are successful in their program are recognized internationally by the Institute of BioMedical Scientists (IBMS) in the United Kingdom, which provides access to society activities and program recognition for those students who wish to advance their education into graduate studies.

**Note:** General Education Physical and Biological Science requirement are satisfied by Medical Laboratory Core Courses.

		Course Credits			Course Credits
<b>Medical Laboratory Science Core Courses</b>			<b>Clinical Field Courses</b>		
<b>Required Credits: 67</b>			<b>Required Credits: 18</b>		
HML 1003	Hematology I	3	HML 3913	Clinical Placement I	4
HML 1103	Microbiology I	3	HML 3925	Clinical Placement II	6
HML 1203	Clinical Chemistry I	3	HML 4936	Capstone Project for Medical Laboratory Science	8
HML 1302	Basic Laboratory Skills	2			
HML 2003	Hematology II	3			
HML 2023	Hematology III	3			Course Credits
HML 2103	Microbiology II	3	<b>Required Science Courses</b>		
HML 2123	Microbiology III	3	<b>Required Credits: 6</b>		
HML 2203	Clinical Chemistry II	3	LSN 1103	Anatomy and Physiology I	3
HML 2223	Clinical Chemistry III	3	LSN 1203	Anatomy and Physiology II	3
HML 2302	Transfusion Science I	2			
HML 2342	Transfusion Science II	2			Course Credits
HML 3006	Clinical Correlations	6	<b>General Education</b>		
HML 3022	Introduction to Basic Health Research	2	<b>Required Credits: 39</b>		
HML 3102	Cell Pathology I	2	A. Communication		12
HML 3122	Cell Pathology II	2	B. Mathematics		3
HML 3302	Immunology	2	C. Art and Humanities		6
HML 4003	Biology of Diseases	3	D. Social and Behavioral Studies		9
HML 4004	Laboratory Management	4	E. Physical and Biological Sciences		6
HML 4005	Laboratory Methodologies	5	F. Global Studies		3
HML 4102	Cell Pathology III	2			
HML 4303	Techniques in Molecular Biology	3			
HSC 1803	Medical Terminology for Health Sciences	3			

Total Required Credits	124	Minimum Duration of Study	4
Maximum Duration of Study	6	Program Code	HMLAB
Cost Recovery Program	No	Major Code	HMI

## Bachelor in Pharmacy

The Bachelor of Pharmacy program is a four-year post Foundations program preparing graduates as Pharmacists for professional practice in different areas of Pharmacy. Graduates are educated to provide quality pharmaceutical care with a patient centered focus. The program 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 program 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 health care delivery.

**Note:** General Education Physical and Biological Science requirement 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			Course Credits
HPH 2405	Pharmacology	5			
HPH 3013	Pathophysiology and Therapeutics I	3	<b>Required Science Courses</b>		
HPH 3023	Medicinal Chemistry II	3	<b>Required Credits: 6</b>		
HPH 3033	Pharmaceutics II	3	LSN 1103	Anatomy and Physiology I	3
HPH 3103	Pharmaceutics III	3	LSN 1203	Anatomy and Physiology II	3
HPH 3123	Pharmaceutical Analysis	3			
HPH 3163	Pathophysiology and Therapeutics II	3			Course Credits
HPH 4003	Bio-Technology	3	<b>General Education</b>		
HPH 4013	Complementary Medicine	3	<b>Required Credits: 39</b>		
HPH 4023	Clinical Biochemistry and Toxicology	3	A. Communication		12
HPH 4073	Pathophysiology and Therapeutics III	3	B. Mathematics		3
HPH 4102	Pharmaceutical Care	2	C. Art and Humanities		6
HPH 4112	Research Project for Pharmacy	2	D. Social and Behavioral Studies		9
			E. Physical and Biological Sciences		6
			F. Global Studies		3

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



## General Education Division



The General Education Division contains two primary units: the Foundations Studies Program and General Education. Both of these areas are designed to prepare students for future success through either program readiness or curricular extensions in Bachelor programs.

The Foundation Studies Program supports students needing assistance in meeting Bachelor degree program admission criteria. The Foundation Studies Program consists of four levels of English preparation and two courses in Mathematics. Students are placed according to their ability into the English and Mathematics courses.

General Education supports the Bachelor degrees by providing breadth through introducing students to ideas which will prepare students for a lifetime of continuing education. The General Education courses cover Communication, Mathematics, Humanities, Social Sciences, and Science to offer students a broad base of knowledge which they can draw upon throughout their lives.

## Course Offerings in General Education

The General Education 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 Education complement core courses

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

		Course Credits			Course Credits
<b>Communication</b>			<b>Social and Behavioral Studies</b>		
<b>Required Credits: 12</b>			<b>Required Credits: 9</b>		
LSC 1003	Applied German Communications	3	LSS 1113	Intercultural Intelligence	3
LSC 1103	Academic Reading and Writing 1	3	LSS 1233	Human Growth and Development	3
LSC 1203	Creative Writing	3	LSS 2003	Creating your Future	3
LSC 1303	Introduction to Literature	3	LSS 2053	Cultural Diversity	3
LSC 1503	Academic Spoken Communication	3	LSS 2063	Culture, Climate and Values	3
LSC 2103	Academic Reading and Writing 2	3	LSS 2103	Personal Finance	3
LSC 2113	English for Classroom Management	3	LSS 2203	Psychology	3
LSC 2123	English for Engineering Technology	3	LSS 2313	Economics	3
LSC 2133	English for Health Sciences	3	LSS 2323	Economics of the UAE	3
LSC 2143	English for Computer Users	3	LSS 2333	Sociology	3
LSC 2153	English for the Media	3	LSS 2533	Research Methods	3
LSC 2163	English for Business Studies	3	LSS 3003	Sports, Leisure and Society	3
LSC 3013	Professional Communications	3			
<b>Mathematics</b>			<b>Physical and Biological Science</b>		
<b>Required Credits: 3</b>			<b>Required Credits: 6</b>		
LSM 1003	Applied Mathematics	3	LSN 1003	Human Sciences I	3
LSM 1053	College Algebra	3	LSN 1013	Human Sciences II	3
LSM 1103	Technical Mathematics	3	LSN 1023	Human Biology	3
LSM 1113	Statistical Mathematics	3	LSN 1103	Anatomy and Physiology I	3
LSM 1123	Quantitative Reasoning	3	LSN 1203	Anatomy and Physiology II	3
			LSN 1213	Personal Health and Physical Education	3
			LSN 1223	Chemistry	3
			LSN 1263	Physics	3
			LSN 1303	Health and Wellness	3
			LSN 2313	Scientific Principles	3
			LSN 2433	Ecology	3
			LSN 2503	Introduction to Nutrition	3
<b>Art and Humanities</b>			<b>Global Studies</b>		
<b>Required Credits: 6</b>			<b>Required Credits: 3</b>		
LSF 2083	Introduction to Journalism	3	LSG 1003	Islam and Globalization	3
LSF 2203	Art Appreciation	3	LSG 2013	Globalization, Mass Media and Society	3
LSF 2543	History and Practice of Photography	3	LSG 2023	Globalization and the Arab Gulf	3
LSH 2103	Foundations for Reasoning	3	LSG 2033	Faith, Justice and Globalization	3
LSH 2113	Foundations of Leadership	3	LSG 2453	Global Media Trends	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 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			

## Foundations Studies Program

The Foundations Studies Program provides support for students needing assistance in meeting the academic admissions standards for HCT Bachelor degree programs. The Foundations Studies Program 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 or an accepted equivalence.



# APPENDICES



# 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 PROGRAM:**

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 program, 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 program of study including the Foundations Program and is registered in the relevant courses in an HCT program 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 program 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/program equivalencies and outlines procedures for students to transfer between the institutions.

## **CHEATING:**

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

## **COLLEGE:**

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

## **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 program of study.

**COURSE OUTLINE:**

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

**CREDENTIAL:**

A Diploma, Advanced Diploma, Higher Diploma, Bachelor or Master Degree awarded on successful completion of the relevant program.

**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 Program.

**DISMISSAL:**

Termination from the HCT for non-academic reasons.

**DIVISION ACADEMIC TEAM (DAT):**

A Divisional Academic Team is group of representatives from various colleges and Central Academic Services having oversight for the curricula in an Academic Division's portfolio of programs.

**DURATION OF STUDY:**

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

**ENROLLMENT:**

The act of placing an admitted student into an academic program for which they meet all of the program entry requirements. An enrolled student is a student who has been admitted to a program of study including the Foundations Program and is registered

in the relevant courses in an HCT program at an HCT College.

**EQUIVALENT:**

Courses in HCT program structures at the same or more advanced credential level may be considered equivalent for the purpose of meeting program 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 U.A.E. 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.

**GRADE REPORT:**

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

**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 program.

**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 programs.

**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 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 programs.

**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.

**PROGRAM ENTRY REQUIREMENTS:**

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

**PROGRAM GPA:**

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

**PROGRAM LENGTH:**

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

**PROGRAM MAJOR:**

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

**PROGRAM REGULATIONS:**

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

**REASONABLE ACCOMMODATION:**

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

**REGISTERED STUDENT:**

A student who has been admitted into a specific program 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 Program 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 PROGRAM REQUIREMENTS:**

Specific academic requirements applicable to individual academic programs which must not contravene the general program 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 C: COURSE DESCRIPTIONS

### ANIM N100 - HISTORY AND STYLES OF ANIMATION

This course is a theoretical introduction to the history and development of the field of animation. The course covers the history of animation; as well as the effect painting, design, film, and photography have had on its development.

CREDITS: 4.00

### ANIM N102 - ANIMATION PRINCIPLES 1

This course is designed to introduce students to the fundamental principles of animation that form the foundation of animation practice.

CREDITS: 4.00

### ANIM N200 - ANIMATION PRINCIPLES 2

This course is 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 the students in producing an animation from initial design stages to completion.

CREDITS: 4.00

### ANIM N201 - LAYOUT AND DESIGN

This course addresses the issues of developing effective and powerful layouts and designs through exercises in composition, element placement, perspective, color and rendering techniques. As a companion to drawing skills, it supports the students ability to design, create and communicate clear ideas about the staging and continuity of scenes, and short films.

CREDITS: 4.00

### ANIM N203 - DRAWING FOR ANIMATION I

In this course the students will apply a range of drawing techniques for a range of animation production purposes. Drawing skills are further developed to stimulate visual perception and enhance the skills of observing, interpreting and imagining the motion of people, the development of characters and the development of locations, both real and imaginary, in different styles.

CREDITS: 4.00

### ANIM N204 - INTRO TO STOP-MOTION ANIMATION

This course introduces the student to a variety of experimental 2D and 3D stop-motion animation styles and techniques. The participant will learn to create and animate simple claymation models as well as apply animation principles to a range of two dimensional and live action sequences.

CREDITS: 4.00

### ANIM N205 - INTRODUCTION TO 2D ANIMATION

This course will enable students to develop 2D animation shots and sequences by through a range of object and character animation exercises. Students will learn to create and enhance their animation skills and expressive performance through the application of animation principles to create strong poses and dynamic motion.

CREDITS: 8.00

### ANIM N300 - CHARACTER DESIGN

This course provides the students 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 MODELING

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

This course 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 - CHARACTR ANIMATION 1 AND ACTING FOR ANIMATION**

The course is 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

### **ARAB N100 - ARABIC COMMUNICATIONS I: FOUNDATIONS**

This modern standard Arabic language course aims to develop first language skills to meet a variety of work-related communication needs. It focuses on developing the four language skills in contexts relevant to career needs.

CREDITS: 3.00

### **BMAC N200 - FINANCIAL ACCOUNTING I**

This course 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 organizations. Ethical considerations and management in the global context are integrated into these topics.

CREDITS: 4.00

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

This course 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 on 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.

CREDITS: 8.00

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

This course 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, organizing, and controlling functions.

CREDITS: 8.00

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

This course 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.

CREDITS: 4.00

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

This course 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 program who have continued into the Bachelor of Applied Science. The course builds on 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 behavior.

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 organizations.

CREDITS: 4.00

### **BMAC N460 - AUDIT**

This course is 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**

This course 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**

This course emphasizes 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**

This course 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**

This course introduces techniques and skills of biomaterial technology as applied to real life situations.

CREDITS: 4.00

### **BMET N307 - BIOMEDICAL ENGINEERING TECHNOLOGY PROJECT**

This course is a continuing course spread over a year spent planning, designing, implementing, testing and analyzing, a biomedical engineering project of the student's choice. The student will be guided at all times by a faculty member and is required to meet deadlines and milestones along the way. The course involves the integration and application of technological, organizational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 4.00

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

This course introduces the students to the financial services industry, the organizations 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**

This course 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**

This course is designed to give students the necessary exposure to the various tools used in analyzing and evaluating the financial performance of businesses and of small, medium and large sized companies. Students learn how to calculate and analyze the various liquidity, profitability and debt utilization ratios.

CREDITS: 4.00

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

This course is designed to introduce the financial services and banking student to the basics of marketing in the context of the financial services industry. Marketing financial services is a specialized area of marketing, and therefore emphasizes the application of marketing tools and techniques in financial services and banking.

CREDITS: 4.00

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

This course introduces students to 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**

This course introduces students 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**

This course 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**

This course 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**

This course introduces the 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**

This course has been designed to ensure that students

develop the skills necessary to analyze 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**

This course is designed to provide 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 globalization and the changes this will bring to the local insurance market.

CREDITS: 4.00

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

This course 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 N470 - ISLAMIC BANKING AND INSURANCE**

This course is an introduction to the study of Islamic Banking and Insurance and students gain 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**

The course helps students to learn 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**

This course provides an overview of relevant principles and practices as applied in organizations. The course describes managerial roles and functions with descriptions of different organizational structures, different leading methods and styles, and controlling and planning issues.

CREDITS: 4.00

### **BMGN N250 - ORGANIZATIONAL BEHAVIOR**

This course introduces the reasons behind and issues relating to people's behavior within an organization and the processes of organizational change. The course defines organizational behavior and its importance. It then proceeds to explore motivation, leadership, group behavior, cultural issues, organizational change and conflict and power in organizations. These issues are looked at within the context of organizations generally and those within the UAE specifically. Applications of organizational improvement will synthesize 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 organizations.

CREDITS: 4.00

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

This course 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: recognize competing and conflicting legal interests, rights and obligations in various commercial fact situations; understand basic dispute resolution methods; analyze fact situations; and apply the appropriate law.

CREDITS: 4.00

### **BMGN N320 - LEADERSHIP AND TEAMBUILDING**

This course 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 organization. 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**

This course focuses on the role of computer-based information systems in business organizations from a management perspective. The strategic nature of an information system is emphasized 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 analyze data using off-line and on-line software tools.

CREDITS: 4.00

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

This course requires students to undertake decision making, on a competitive basis, about marketing, production, and finance.

CREDITS: 8.00

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

This course takes an integrated approach to total quality management (TQM). Students draw on what they have learned in courses such as marketing, economics, organizational behavior, 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**

In this course the international business environment is examined, 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; analyze 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**

This course is designed to introduce the use of statistical techniques in solving business problems. The course emphasizes how descriptive and inferential statistics can be applied to business environments. Students will identify the procedures by which data are collected, organized, presented, analyzed 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; analyzes strategy formulation; analyzes strategy implementation in the context of designing organizational 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**

This course covers a range of principles and practices of organizing, manufacturing and service operations with a special focus on operations in the UAE. Students recognize common and unique aspects of the UAE operating environment; determine how the manufacture of goods and provision of services fits into an organization'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**

This course 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**

In this course, 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**

This course extends and deepens the business skills and knowledge the student has gained through their degree program 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 organizations 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 organization, the community and the larger society.

CREDITS: 4.00

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

This course provides students with 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 ORGANIZATIONAL CHANGE**

The aim of this course is to enable students to understand 'change' in relation to the complexities of organizational life. This course takes both a theoretical and practical approach to the issues of organizational change. Aspects of organizational 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**

In this course 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.

CREDITS: 4.00

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

This course looks at human resource planning and recruitment as part of the organizational 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 organization 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 organizational performance is enhanced by managing the talent effectively. Learners in the course will review resources from a variety of theoretical and pragmatic perspectives and able to answer why career management is vital to an organization'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**

The course focuses on the application of computerized 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 organization 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**

This course is 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 organizations performance, reasons for under-performance and the role of compensation in team and individual performance.

CREDITS: 4.00

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

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

CREDITS: 4.00

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

The study of industrial relations looks at how organizations 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 organizational structures.

CREDITS: 4.00

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

This course 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**

This course 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 analyze

the relationship between marketing management and strategic business planning and analyze 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**

This course 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 analyze data using SPSS.

CREDITS: 4.00

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

This course is designed to provide learners with a comprehensive understanding of the key areas of advertising and promotion as part of an integrated approach to marketing communications. Learners 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**

This course 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 analyze the relationship between marketing management and strategic business planning and analyze 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 BEHAVIOR**

This course 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 behavior research project which may be related to their field of work. This course also provides an opportunity to investigate various cultural

issues in purchasing behavior 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**

In this course students gain 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 analyze and evaluate aspects of on-line retail and distribution.

CREDITS: 4.00

### **BMKT N450 - INTERNATIONAL MARKETING**

This course 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**

This course is a combined study of business to business marketing and services, marketing concepts and practices. In the first part of the course, students investigate organizational buying behavior, 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**

This course 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**

This course 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**

The course includes an analysis of critical quality planning practices and how to implement evaluations and audits as part of a quality assurance program.

CREDITS: 4.00

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

This course provides an overview of the issues facing production environments. It explores the key concepts of quality management, waste reduction and supply chain management.

CREDITS: 4.00

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

This course provides basic knowledge of International Organization for Standardization'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 organization.

CREDITS: 4.00

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

This course provides 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 organization for a selected quality award.

CREDITS: 4.00

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

This course 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. The course covers 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 N302 - INTRODUCTION TO EVENT MANAGEMENT (FESTIVALS AND SPECIAL EVENTS)**

This course will introduce the student 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 N457 - DESTINATION MARKETING**

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

CREDITS: 4.00

### **BUS 1003 - MANAGEMENT AND LEADERSHIP**

This course will give students an understanding of how the concept of leadership and management has been understood by practicing managers and behavioral 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**

This course introduces the basic concepts of Microeconomics and Macroeconomics and their impact(s) on businesses and business decisions. It focuses on the mechanism of demand and supply, price elasticity of demand, costs of production and the basic characteristics of market structures. The course introduces the three main Macroeconomic goals, economic growth, price stability and full employment, as they relate to the economy of the UAE. Students will also research the interactions and impacts between macroeconomic variables and industries in the UAE.

CREDITS: 3.00

### **BUS 1203 - SOFTWARE APPLICATIONS FOR BUSINESS**

This course introduces computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus is on business applications of software for personal and organizational productivity, including word processing, spreadsheets, databases, presentations, graphics, statistical packages and business-oriented utilizations of the Internet and mobile communications technology. It provides an overview of the integrated software packages most often 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**

This course 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.

CREDITS: 3.00

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

This course provides an 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 provides students with an introduction to corporate social responsibility (CSR) and governance from local and international perspectives. The ethical administration and moral responsibility of corporations

is studied. Students are exposed to the principles of CSR as they relate to business and politics, industrial pollution, environmental policy, and institutional investor participation.

CREDITS: 3.00

### **BUS 1503 - ACCOUNTING FOR MANAGERS**

This course is an 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**

This course 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**

This course provides a detailed study of the management of an organization'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**

This course is designed to develop students' ability to assess and critically interpret statistics and business information and apply them in changing business environments. The subject places strong emphasis on developing a clear theoretical understanding of various analytical tools including descriptive statistics;

probability; hypothesis testing and correlation and regression analysis; as well as an appreciation of the application of analytical tools to business decision contexts. These skills and competencies provide a foundation for professional practice and for further study in the many different majors of the degree.

CREDITS: 3.00

### **BUS 2303 - FINANCIAL MANAGEMENT**

This course provides 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**

This course develops the concepts and skills of how to start and run new ventures, and discusses the challenges entrepreneurs face in a rapidly changing economic environment. Informed by industry and local entrepreneurs the course discusses how to formulate a business plan and financial feasibility study and synthesizes the knowledge students have obtained 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**

This course examines fundamental concepts of supply chain management (SCM) and logistics. SCM involves the coordination of suppliers, manufacturers, distributors and retailers to ensure goods and services are available to the end user in a timely and cost effective manner while maintaining the service level customers demand. Logistics is a service activity directly responsible for achieving these objectives. Together they underpin corporate strategies aimed at achieving business performance goals.

CREDITS: 3.00

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

This course provides insight into the Tourism and Event Industries and the importance of maintaining cultural

identity. Globalization 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 emphasizes 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**

This course 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.

CREDITS: 3.00

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

This course is designed to help students understand the linkage between organizations; human resource management (HRM) and business success. To do this, students will be exposed to the principles of organizational behavior and the fundamentals of HRM. Students will be introduced to the concepts of: organization 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 organization.

CREDITS: 3.00

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

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 a capstone course for the business administration discipline. Through case studies it analyzes the nature of competitive advantage, and the various strategies available for firms to develop sustainable business

growth in a global environment. The course contains a complex business management simulation through which the students are able to put theory into practice.  
CREDITS: 3.00

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

This course is 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 its real life operations (where possible in their chosen major topic) or to undertake an industry based project which meets the same outcomes. Students will be assessed using reflection and investigation to make the most of their work related learning and to be able to bring their contextual learning into the final year of study.  
CREDITS: 6.00

### **BUS 3713 - CORPORATE REAL ESTATE**

This course introduces students to real estate in the context of a business and through its strategic management the significant potential for reducing costs and increasing productivity. It will examine procurement options and their suitability for business in terms of flexibility, sustainability, costs and security and examine methods for benchmarking occupancy costs. It will also examine contemporary approaches to how real estate can be managed to increase productivity, connectivity and knowledge management within an organization.  
CREDITS: 3.00

### **BUS 3803 - TOURISM AND EVENTS MANAGEMENT**

This course provides an overview of the tourism field including the major components and functions along with the methods and techniques utilized in planning, organizing, promoting and delivering events; and the role of events in generating and sustaining a tourist market.  
CREDITS: 3.00

### **BUS 4113 - FINANCIAL ACCOUNTING 1**

This course provides students with the knowledge of how to identify and apply the concepts and principles of accounting for merchandising business. The course also provides an overview of some of the balance sheet items. Specific topics include classification and valuation of accounts receivable, cash flow statement, petty cash and bank reconciliation statements, and accounting concepts and procedures for recording and reporting on shareholders, equity transactions in

a corporate environment. In addition, students learn how to measure and report inventories, tangible and intangible assets.  
CREDITS: 3.00

### **BUS 4123 - AUDITING AND ACCOUNTING INFORMATION SYSTEMS**

This course provides students with a basic understanding of the overall purpose and objectives of audit and to give an insight into the basic concept and function of Accounting Information System (AIS). Course content on audit includes 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. Specific topic on Accounting Information System include role of AIS in decision making, major transaction cycles, activities in data processing, types of information, documents and procedures used in AIS, fundamental concepts of database management system, control activities and computer audit software.  
CREDITS: 3.00

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

This course introduces a business-management approach to the development and 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. Specific topics shall include Job Order Costing, Process Costing, Activity Based Costing, Standard Costing and Balanced Score Card.  
CREDITS: 3.00

### **BUS 4143 - GOVERNMENT ACCOUNTING AND IFRS**

This course enables students to understand government fiscal activities that impact the economy, government financial reporting models; Governments' 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. This course also enables students to have an overview of IFRS on its structure and

requirement. Specific topics on IFRS include method of accounting and disclosure requirements of Insurance Contracts, Financial Instruments, and Business Combinations, Non-Current Assets Held for Sale and Discontinued Operations and Operating Segments. This course is designed to identify measure, classify, present and disclose financial information according to IFRS.

CREDITS: 3.00

### **BUS 4153 - FINANCIAL ACCOUNTING 2**

This course 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 organizations and timing and criteria of revenue recognition. Specific topics include evaluation of share based compensation plans, accounting treatment of retired shares and buyback, analysis of accounting changes and errors, consolidations, recording of income from continued and discontinued operations, extraordinary items and accounting for partnership firms.

CREDITS: 3.00

### **BUS 4163 - TAXATION**

This course emphasizes tax concepts and issues; it 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. 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. Generally, tax models are the underlying theme throughout the course and are treated as an integral part of tax practice in UAE and internationally.

CREDITS: 3.00

### **BUS 4173 - MANAGERIAL ACCOUNTING 2**

This course 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, organizing and controlling functions. It helps students become proficient in structuring business decisions systematically and

identifying the information relevant to a decision. Specific topics include Transfer Pricing, Total Quality Management (TQM), Segment Reporting and Decentralization, Relevant costs for decision making, Service department and cost allocation, Flexible Budget and Overhead analysis.

CREDITS: 3.00

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

This course provides students with the necessary exposure to the various tools used in analyzing and evaluating the financial performance of business in terms of risk and return. Students also learn how to calculate and analyze the various liquidity, profitability and debt utilization ratios and framing of dividend policies. They are also introduced to the international financial management, risk and uncertainty in capital budgeting decisions and cost of capital.

CREDITS: 3.00

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

This course 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 analyze diversified investment portfolios.

CREDITS: 3.00

### **BUS 4223 - RETAIL FINANCE AND MARKETING**

This course analyses the dynamic, competitive and ever changing environment for retail banking and the regulatory framework within which the retail finance industry operates. The course further examines and critically analyzes retail finance products, specifically retail banking, finance and insurance products. It explores advanced marketing techniques, customer relationship management and customer retention applicable to financial services. It also examines quality assurance of service and complaints handling.

CREDITS: 3.00

### **BUS 4233 - FINANCIAL ASSETS AND MARKETS**

This course examines the operation of the financial market of a variety of asset classes including equities; derivatives; fixed income securities and alternative investments.

CREDITS: 3.00

### **BUS 4243 - INTERNATIONAL TRADE AND FINANCE**

This course critically examines the economic, political and market analysis of Foreign Exchange (FOREX) risks, FOREX exposure management and buyer/country risks avoidance for customers using a variety of methods of payments in international trade.

CREDITS: 3.00

### **BUS 4253 - LAW, ETHICS AND PROFESSIONAL STANDARDS**

This course builds upon a basic understanding of law and ethics and examines the legal framework within which financial institutions operate. Students critically examine conflicting legal and ethical interests, rights and obligations, international law and professional standards as applied to banking and financial services.

CREDITS: 3.00

### **BUS 4263 - CORPORATE FINANCE, BANKING AND LENDING**

This course evaluates issues that affect finance managers particularly the cost of capital, capital budgeting, financing decision, working capital and management of cash flow. It also critically analyzes the various commercial and corporate banking products and issues specific to the banking industry such as risk management, capital adequacy, liquidity management and lending principles.

CREDITS: 3.00

### **BUS 4273 - WEALTH AND RISK MANAGEMENT**

This course examines the economic, political, social and technological factors that impact investment returns. It then provides an exploration of the application of financial instruments and modern portfolio theory to equip students to provide financial solutions to meet the investment, retirement, protection, estate and tax planning needs of their clients and how these may help mitigate expected and emergent change.

CREDITS: 3.00

### **BUS 4283 - ISLAMIC FINANCE**

This course critically examines the principles of Islamic Banking, finance and insurance (Takaful) comparing and contrasting it with conventional approaches. It explores different types of Islamic finance contracts and products; the Islamic Bond Market (Sukuk); Islamic asset and fund management and Islamic Insurance (Takaful) as influenced by sharia'a in the Islamic finance industry.

CREDITS: 3.00

### **BUS 4313 - EMPLOYEE RELATIONS AND UAE LABOR LAW**

This course builds upon earlier study of the principles of law, in particular the legal relationship between employer and individual employee; and the common law aspects of that relationship, including contracts and tort. The course focuses on the application of more specific laws to commercial enterprises and workplace situations. Students develop the ability to: recognize competing and conflicting legal interests, rights and obligations in various commercial contexts; understand basic dispute resolution methods; analyze factual situations; and apply the appropriate law.

CREDITS: 3.00

### **BUS 4323 - CAREER DEVELOPMENT AND PLANNING**

This course helps students understand how organizational performance improves by managing the workforce efficiently and effectively. It includes a critical analysis of the value of career development theories in HRM planning (recruiting, selecting, promoting and succession planning). It aims to develop effective decision-making skills through strategic thinking using 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 plateau staff.

CREDITS: 3.00

### **BUS 4333 - RECRUITMENT AND SELECTION**

This course 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 organizations. Throughout the course students will learn the underpinning recruitment and selection processes and the relationship with the overall management of the organization.

CREDITS: 3.00

### **BUS 4343 - TRAINING AND DEVELOPMENT**

This course develops 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. This course emphasizes the practical side of training and development, with project-based learning a primary teaching and learning strategy.

CREDITS: 3.00

### **BUS 4353 - INTERNATIONAL HUMAN RESOURCE MANAGEMENT**

This course examines the opportunities and challenges associated with managing employees in international and cross-cultural contexts, with specific emphasis on international recruitment, selection, preparation, placement, management development, performance management, reward and remuneration in the international, multi-national and trans-national corporation.

CREDITS: 3.00

### **BUS 4363 - MANAGING ORGANIZATIONAL CHANGE**

This course provides students with an understanding of the nature of change, driving forces of change, theories and models of organization change and the process of organizational change within the theoretical frameworks of organization 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 critically analyzes business challenges including HRM long term planning to meet organizational objectives; managing workforce diversity; implementing downsizing strategies, creating outsourcing solutions and managing knowledge based economies. It examines and critically evaluates ethical decision-making approaches and best practices in the Gulf for attracting, retaining and developing employees and management from a strategic perspective

CREDITS: 3.00

### **BUS 4383 - PERFORMANCE MANAGEMENT**

This course examines Human Resource Management as a career. It critically examines the development of performance management systems, setting them in their historical context, comparing traditional and contemporary approaches. It focuses on the application of performance management processes, methods to assess the organization performance, reasons for under-performance and the role of compensation in team and individual performance. Students are encouraged to analyze the performance management systems in various organizations, and to consider the underlying aims of such systems.

CREDITS: 3.00

### **BUS 4413 - TOURISM AND EVENTS MANAGEMENT**

This course provides an overview of the tourism field including the major components and functions along with the methods and techniques utilized in planning, organizing, promoting and delivering events; and the role of events in generating and sustaining a tourist market.

CREDITS: 3.00

### **BUS 4423 - TOURISM AND EVENTS MARKETING**

This course builds on existing knowledge and provides an applied approach to the strategic function of marketing in the context of national and international tourism and events. It provides students with the skills and knowledge to design satisfying travel experiences, evaluate packages and events, and measure the customer satisfaction.

CREDITS: 3.00

### **BUS 4433 - MEETINGS, INCENTIVES, CONFERENCES AND EXHIBITIONS (MICE)**

This course examines the complex nature of the operational aspects of Meetings, Incentives, Conferences and Exhibitions (M.I.C.E) management; including food and beverage management; event marketing; financial management; engineering, technological services; risk management, project management and the theory and practice of developing, planning and evaluating M.I.C.E. activities. Integrating business principles and management practices it explores the strategic relationships of those involved in event management.

CREDITS: 3.00

### **BUS 4443 - SPECIAL INTEREST TOURISM (SIT)**

This course 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: 3.00

### **BUS 4453 - INTERNATIONAL EVENTS MANAGEMENT**

This course 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.

CREDITS: 3.00

### **BUS 4463 - CULTURE AND HERITAGE TOURISM**

This course explores the principles and concepts of Cultural Tourism using international and local examples. It is designed to critically examine the practices necessary for identifying, evaluating, developing and sustaining cultural and heritage tourist attractions.

CREDITS: 3.00

### **BUS 4473 - SUSTAINABLE TOURISM**

This course critically examines the principles of Sustainable Tourism with reference to environmental, economic, and socio-cultural aspects of tourism development and provides students with an understanding of how environmental resources constitute a key element in tourism development.

CREDITS: 3.00

### **BUS 4483 - GLOBAL TOURISM: POLICY AND PLANNING**

This course critically evaluates the policy frameworks and planning strategies designed to encourage more sustainable forms of global tourism. It places particular emphasis on critically assessing the processes used to guide tourism development from environmental and socio-cultural perspectives and examines the drivers that will shape the future of international tourism.

CREDITS: 3.00

### **BUS 4513 - STRATEGIC DECISIONS WITH MANAGEMENT SCIENCE**

This course discusses a wide range of quantitative tools and techniques that support problem solving and improve decision making. This is an interdisciplinary course that provides efficient methods for several resource allocation, general optimization, or transportation problems, and presents game theory, graph theory, project and process management, and decision analysis tools to support strategic planning decisions of quantitative nature. The course utilizes spreadsheets and practical case studies, allowing students to analyze complex business situations and scenarios, identify the suitable management science technique, and recommend a solution for the problems. The course also uses many small case studies to make the content practical for the students.

CREDITS: 3.00

### **BUS 4523 - STRATEGIC SUPPLY CHAIN MANAGEMENT**

This course analyzes why designing and managing the supply chain is one of the key elements to success for public and private; production or service companies. It examines strategies for providing value for customers, and how pricing decisions can contribute to better organizational performance.

CREDITS: 3.00

### **BUS 4533 - QUALITY MANAGEMENT SYSTEMS, MODELS AND THEORIES**

This course systematically evaluates the major components of quality systems, as well as the underlying theoretical and philosophical concepts of different quality models recognized in the UAE, or in internationally. It examines why quality management has a fundamental pillar of strategic management, and how innovation can improve the performance of any organization. The course focuses on comparing and contrasting the various options available for senior managers to improve organizational performance; and through practical examples and local and international case studies; provides a useful set of assessment options for both private or government organizations.

CREDITS: 3.00

### **BUS 4543 - QUALITY MANAGEMENT TOOLS AND METRICS**

This course evaluates the efficiency of the most important qualitative and quantitative analytical tools used in Quality Management systems internationally, to support the strategic decision making process of the management of an organization. It also analyzes various popular process management tools, including efficient lean tools; and it also applies advanced quantitative/statistical assessment techniques, including statistical process control, that help managers to measure quality issues more precisely. The course focuses on the application of the various tools, and compares their efficiency through mini case studies.

CREDITS: 3.00

### **BUS 4563 - STRATEGIC MARKETING AND GLOBAL COMPETITIVENESS**

This course explores the concepts and theories of creating and implementing a marketing strategy and offers a focus on the strategic planning process and marketing's cross/inter-functional relationships. It analyzes the major corporate strategy decisions and their marketing implications, and it presents all major elements of strategic marketing from market opportunity analysis through the design and implementation of marketing strategies to the strategic management of

mature and declining markets. This is a comprehensive marketing strategy course that also evaluates international aspects of strategic marketing, and the special challenges caused by rapid globalization.

CREDITS: 3.00

### **BUS 4573 - CUSTOMER RELATIONSHIP MANAGEMENT**

This course evaluates customer identification and segmentation methods, as well as systems related to multiple and diverse customer relationship management. The course applies basic customer service principles to improve customer relationships, and thus contributes to the success of the strategic goals of organizations. It examines how the management of customer expectations, satisfaction or complaints, is a key element of success of any organization that has long term strategic goals and objectives.

CREDITS: 3.00

### **BUS 4583 - ISO STANDARDS AND INSTITUTIONAL EXCELLENCE AWARDS**

This course provides an exploration of important and relevant ISO standards including ISO 9001 Quality Management; and ISO 14000 Environmental Management standards through the application of these standards to case studies; it also compares and contrasts various other quality award systems such as the Baldrige National Quality Award, and the Khalifa Quality Award.

CREDITS: 3.00

### **BUS 4623 - INTERNATIONAL BUSINESS FINANCE**

This course provides a study of the theory and practice of corporate international financial management, including the study of foreign exchange markets, exchange rate determination, international parity conditions, managing foreign exchange risks and exposure, and optimal policy tools to manage international financial environment.

CREDITS: 3.00

### **BUS 4633 - BUSINESS NEGOTIATIONS**

This course introduces students to the art of negotiation in the business environment. It utilizes practical exercises, role plays and case studies to illustrate strategies and tactics employed in negotiations. There is a focus on recognizing distributive negotiation and integrative bargaining both in the students' personal lives and within the business workplace. Furthermore the subject leads students into the field of cross cultural negotiations and ethical considerations.

CREDITS: 3.00

### **BUS 4643 - CROSS CULTURAL MANAGEMENT**

This course adopts a multi-disciplinary approach to introduce students to important issues and challenges in managing cultural diversity in the workplace. Conceptual and theoretical frameworks are used to develop an understanding of the ways in which cultures differ and how such differences impact on organizations.

CREDITS: 3.00

### **BUS 4653 - INTERNATIONAL MARKETING**

This course broadens student understanding of marketing related factors pertinent to developing competitive international marketing entry strategies. International marketing principles are applied to product, service and country specific situations. Specific marketing skills and contingencies which are required to strategically move into a foreign country are developed, and applied through a project-based approach.

CREDITS: 3.00

### **BUS 4663 - INTERNATIONAL TRADE**

This course is designed to help students gain an understanding of those international trade issues which have become increasingly important in recent years as a result of trends towards international economic interdependence and globalization. Key topics covered include the theory of international trade; the practice of trade policies; international trade and economic development; world trading arrangements, and issues concerning an open economy, such as the balance of payments, foreign exchange and exchange rate systems.

CREDITS: 3.00

### **BUS 4673 - INTERNATIONAL LAW**

This course covers the legal regulation of the world of international business and provides an introduction to the basic tenets of the legal system in the world market. The fundamental components of international business law are reviewed, followed by the basic elements of the rules of sales, transportation, financing, the legal structure of the WTO, foreign investment, the judicial process and Alternative Dispute Resolution (ADR).

CREDITS: 3.00

### **BUS 4683 - MIDDLE EAST ECONOMIC GROWTH AND REGIONAL DEVELOPMENT**

This course provides students with insights to issues such as economic growth, governance and the distribution of wealth in Middle Eastern countries by equipping

them with a set of analytical tools which allow them to identify factors which influence economic growth over time and distance; consider some of the effects and side effects of economic growth, and develop and evaluate policies that seek to promote regional trade and development.

CREDITS: 3.00

### **BUS 4713 - REAL ESTATE CONCEPTS**

The course 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 behaviors 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**

The course provides 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**

This course 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**

This course 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 2**

This course extends the knowledge gained from the Property Valuation Methods 1 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**

This course 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 maximizing the highest and best use from both a commercial and social perspective.

CREDITS: 3.00

### **BUS 4783 - SUSTAINABLE PROPERTY DEVELOPMENT**

This course 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 optimize the social, environmental and financial return from the site. This course will underpin the integrated project for this major.

CREDITS: 3.00

### **BUS 4813 - TRANSPORTATION MANAGEMENT**

This course provides an overview of the transportation sector and its stakeholders, including providers, users and government agencies. It examines contemporary public policy issues, such as deregulation, promotion of sustainable solutions and innovative transportation technologies. It also examines the principal managerial strategies for transportation.

CREDITS: 3.00

**BUS 4823 - TRANSPORTATION ECONOMICS**

This course focuses on the micro and macroeconomic issues associated with international, national, and local transport, logistics, and other issues in the transportation industry. Topics include the economic aspects of rail, water, air, ground, and other transport modes; inventory, and supply. It also examines public policy including subsidies and taxation and their impact upon the economics of transport.

CREDITS: 3.00

**BUS 4833 - INTERMODAL TRANSPORTATION**

This course 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: 3.00

**BUS 4843 - LOGISTICS MANAGEMENT**

This course studies the logistics functions of business involved in the movement and storage of supplies, work-in-progress, and finished goods. It examines the trade-offs between cost and service and the purchase and supply of raw materials; the warehousing and control of inventory; industrial packaging; materials handling within warehouses; and the distribution of finished goods to customers required to minimize costs, maximize profits or increase customer service levels.

CREDITS: 3.00

**BUS 4853 - SUPPLY CHAIN MANAGEMENT**

This course is a study of supply chain management from the consumer back to raw materials. The entire process is studied from the standpoint of the leading theory and practice of cutting-edge organizations. 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 organizations develop to maintain effective supplier relationships. The course gives learners the opportunity to evaluate its increasing contribution to business objectives. The course also considers how supply chain business solutions help to integrate the supply chain for competitive advantage.

CREDITS: 3.00

**BUS 4863 - PROJECT MANAGEMENT FOR TRANSPORTATION**

This course 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. The course strives to strike a balance between the general knowledge of project management and the computerized tools that are available to assist students/managers managing projects.

CREDITS: 3.00

**BUS 4873 - INTERNATIONAL LOGISTICS MANAGEMENT**

This course addresses the design and operation of international logistics systems. Topics include export-import issues, multi-national sourcing and distribution strategies, channel management, and comparative transportation systems and policies. The course allows learners the opportunity to survey the impact of market, government regulations, and technological forces on ground, ocean, and air transportation systems.

CREDITS: 3.00

**BUS 4883 - ADVANCED BUSINESS LOGISTICS**

This course examines and applies advanced management tools and principles to complex supply and distribution problems. Emphasis is first placed on developing a broad overview of the logistics field: what are its principle activities, decisions and how these activities produce value by supplying customer service through order fulfillment. Inter-functional coordination is reviewed by examining how logistics is coordinated or integrated with marketing and corporate strategy. Next, a thorough grounding in concepts, alternatives and tools for the primary activities of logistics: inventory, transportation, warehousing and order processing are presented. This provides the basis for examining issues in logistics system design, including stock location, sourcing, number and location of facilities and flow management.

CREDITS: 3.00

**BUS 4913 - INTEGRATIVE INDUSTRY PROJECT (ACCOUNTING)**

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 4923 - INTEGRATIVE INDUSTRY PROJECT (FINANCE AND BANKING)**

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.

CREDITS: 3.00

### **BUS 4933 - INTEGRATIVE INDUSTRY PROJECT (HUMAN RESOURCE 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.

CREDITS: 3.00

### **BUS 4943 - INTEGRATIVE INDUSTRY PROJECT (TOURISM AND EVENTS)**

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.

CREDITS: 3.00

### **BUS 4953 - INTEGRATIVE INDUSTRY PROJECT (QUALITY AND STRATEGIC 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.

CREDITS: 3.00

### **BUS 4963 - INTEGRATIVE INDUSTRY PROJECT (INTERNATIONAL BUSINESS)**

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.

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.

CREDITS: 3.00

### **BUS 4983 - INTEGRATIVE INDUSTRY PROJECT (TRANSPORTATION AND LOGISTICS)**

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.

CREDITS: 3.00

### **BUSI N1150 - BUSINESS ESSENTIALS**

This course 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 program. 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**

This course 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**

This course 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 program. 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 organization and functioning of a business.

CREDITS: 12.00

### **BUSI N2150 - BUSINESS ESSENTIALS III**

This course applies and extends the basic skills and knowledge acquired in semesters one and two of the Applied Business and Technology Diploma program.

CREDITS: 4.00

### **BUSI N2160 - INFORMATION AND COMMUNICATION TECHNOLOGY**

This course 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 program 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**

This course is 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 flavor of entrepreneurship which is much needed in the UAE business environment.

CREDITS: 4.00

### **CADV N425 - APPLIED CAREER ADVISING AND COUNSELING**

This course 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 N440 - CAREER DEVELOPMENT IN ORGANIZATIONS**

This course will prepare students to work in the field of organizational career development. The focus will be on systems, policies and programs used within organizations 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 organization/employer and the employee will be considered at all times.

CREDITS: 2.00

### **CADV N445 - GROUP COUNSELING AND FACILITATION**

This course provides theory and practice in group facilitation and counseling. It covers theory of stages of group development, group processes, group dynamics, needs of group members and behaviors/roles that members take on in groups. The transferability of individual counseling skills to the group setting will be demonstrated and practiced.

CREDITS: 3.00

### **CADV N460 - BASIC COUNSELING SKILLS: INTERPERSONAL COMMUNICATION II**

This course provides students with counseling skills, processes and strategies to apply to career advising and counseling interviews. Students will learn strategies to implement different counseling interventions including decision-making, learning and self-management strategies and techniques. These skills and strategies will be applied in a goal-directed, solution based counseling framework. Advanced theory and practice will be covered within a social-dynamic/constructivist career counseling approach. Throughout the course the generic counseling skills and processes will be related to their application in practice in the UAE.

CREDITS: 3.00

### **CADV N466 - RESEARCH PROJECT**

This course will offer learners 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 analyze 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. Through the completion of a research project, learners will gain insight into the process of implementing research designs; collecting, representing and analyzing data; and presenting research.

CREDITS: 3.00

### **CADV N470 - PRACTICUM - LEVEL II**

The 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 discussing potential practicum sites.

CREDITS: 2.00

### **CADV N475 - INFORMATION AND RESOURCE MANAGEMENT**

This course 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 counseling context, the role of the career information specialist, the role of the client in the gathering and use of information, as well as how to evaluate, choose and organize information and resources. As the UAE does not have a wealth of career information and resources specific to the country and the population, strategies to identify and evaluate appropriate resources from other sources will receive special attention. All forms of information and resources will be considered: electronic resources, print resources, people resources, video resources, etc. Students will learn a number of different classification systems used in the field, how to access and utilize labor market information, as well as career exploration systems.

CREDITS: 3.00

### **CADV N520 - PRACTICUM - LEVEL III**

The 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.

CREDITS: 3.00

**CDA 3513 - CHARACTER DESIGN**

This course provides the students with the skills to design a variety of characters that meets the requirements of the script, scene, genre and storyline. Students will the design of characters that reflect a range of costuming, ethnic influence and cultural references and in major animation styles

CREDITS: 3.00

**CDA 3523 - PRINCIPLES OF ANIMATION II**

This course is 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 the students in producing an animation from initial design stages to completion.

CREDITS: 3.00

**CDA 3603 - 3D MODELING**

In this course the students learn to model three-dimensional objects, and simple characters, using a variety of techniques in the Autodesk Maya environment. The students select and use a variety of introductory 3D modeling and basic texturing techniques to create simple models with different levels of complexity. Case-based instruction is used with special attention paid to selecting and applying appropriate techniques and to efficient workflow decisions. Students also critique their own work and the work of others.

CREDITS: 3.00

**CDA 3613 - ACTION SCRIPTING FOR FLASH**

This course introduces students to Action Script 3, as well as object-oriented concepts. It also covers data types, variables, constants, conditionals and loops. Students learn to combine Action Script's Building Blocks and how to use different Flash objects such as sounds, color, date, and movie clip. Using Functions (built-in and user-defined), Array concepts and how Action Script Array can be used in Flash animation, are also covered.

CREDITS: 3.00

**CDA 4703 - 3D ANIMATION**

This course 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**

This course develops in students, skills in storytelling (narrative structure) through the analysis of short animation and live action films, shots and sequences.

CREDITS: 3.00

**CDA 4723 - ACTION SCRIPTING IN MAYA**

The course begins by introducing students to the basic commands and scripts in MEL, and then continues to guide them through increasing levels of complexity to maximize their control of the commands, macros, scripts, and custom interface elements that can be created with MEL. Students also use MEL commands to bypass Mayas' user interface, quickly create shortcuts, and access advanced features.

CREDITS: 3.00

**CDA 4803 - VFX, AUDIO, EDITING, COMPOSITING**

This course integrates key skills in visual effects, music and sound, rendering, and compositing to assemble all the assets of a short animation production into its final form.

CREDITS: 3.00

**CDA 4816 - SENIOR ANIMATION PROJECT**

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. Projects may be either individual or group productions that demand a high level of independent or collaborative teamwork. 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**

This course builds on 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.

CREDITS: 3.00

### **CDF 3503 - FASHION DESIGN AND TEXTILE**

This course leads students through the study and analysis of the relationship between textiles and fashion design. The objective is to improve students knowledge about various fibers and fabrics (natural and man made) and their application in fashion design. Students gain knowledge of the characteristics of textile and materials, and their influence on the design of some specific garments. Students learn how to choose appropriate fabrics for their collections while analyzing various aspects of fabrics and textile-comfort, appearance, textures, draping abilities, and various combinations of fabrics for fashion (lines, forms and styles).

CREDITS: 3.00

### **CDF 3513 - FASHION DRAPING AND PATTERN MAKING**

This course introduces students to the fundamental techniques of draping and basic pattern making. Students master the vocabulary and practical skills of an industrial dress form.

CREDITS: 3.00

### **CDF 3523 - FASHION DESIGN AND TECHNOLOGY I**

This course provides students a foundation in the concepts and theories of the process of fashion design from development to editing and balancing a collection.

CREDITS: 3.00

### **CDF 3603 - FASHION DESIGN AND TREND RESEARCH**

The primary goal of this course is to develop in students the skills and knowledge related to the basic connection between design and market; and the know how to apply, or even create, trends to produce and design various commercial fashion collections.

CREDITS: 3.00

### **CDF 3623 - FASHION DESIGN AND TECHNOLOGY II**

This course covers the second part of the fashion design process. Students learn to apply more complex principles and theories of creation in the designing of fashions.

CREDITS: 3.00

### **CDF 4703 - FASHION DESIGN AND PRODUCTION**

In this course, students analyze the fashion production process and apply that knowledge to produce specific collections.

CREDITS: 3.00

### **CDF 4713 - FASHION AND CAD DESIGN**

This course provides students with the skills and knowledge to develop fashion projects using various computer software programs-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 I**

This course deals with the theoretical and practical understanding of fashion marketing decision making.

CREDITS: 3.00

### **CDF 4803 - FASHION MERCHANDISING**

This course provides students with a solid foundation for success in entry-level positions within the Fashion Merchandising field, by analyzing concepts related to the commercial and professional elements of fashion. Students analyze all aspects of merchandising, and marketing, within fashion and its related industries.

CREDITS: 3.00

### **CDF 4813 - FINAL COLLECTION AND FASHION SHOW**

This course is the final stage of the students graduation projects. Students are required to develop and produce an original collection that demonstrates their mastery of technical and aesthetical skills.

CREDITS: 3.00

### **CDF 4823 - FASHION MARKETING II**

This course builds on the skills and knowledge students gained in Fashion Marketing I related to fashion marketing and the mix of management, retail, fashion/trend research, and planning.

CREDITS: 3.00

### **CDG 2303 - INTRODUCTION TO GRAPHIC DESIGN**

This course provides an introduction to the fundamental elements and principles of both two and three dimensional design.

CREDITS: 3.00

**CDG 3503 - TYPOGRAPHY I**

This course 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**

This course introduces students to the professional field of illustration, with a strong emphasis on concept. While drawing skills and techniques are a large part of the class students also explore the importance of concepts and ideas in relaying visuals successfully.

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**

This course approaches the project design situations faced by professional visual communication offices in an educational context. Problems that represent current visual communication issues are solved through extensive research and the application of learned concepts and skills. Students further develop their own creative processes while also critiquing their own work and the work of others.

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 and the relationship of that work to other visual arts and design disciplines.

CREDITS: 3.00

**CDG 4703 - STUDIO II**

This course 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**

This course 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**

This course addresses the designer's role in shaping the public narrative on sustainable/social issues, causes and other needs-based topics. Students analyze 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

**CDG 4813 - CAPSTONE: INFORMATION DESIGN**

In this course the student presents a final project which addresses visual problem solving and which emphasizes methods of translating complex data into clear, visually dynamic solutions.

CREDITS: 3.00

**CDG 4823 - CAPSTONE: MAJOR EXHIBITION**

This course is a final project/exhibition using information in large-scale, three-dimensional formats. Students produce exhibition and environmental designs, including developing imagery and typography through research, analysis, conceptualization, and

production as part of a design process to solve a social, environmental, or artistic problem or issue.

CREDITS: 3.00

### **CDI 2303 - INTRODUCTION TO INTERIOR DESIGN**

This course 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

### **CDI 3503 - DESIGN STUDIO I**

This course introduces students to the basic application of the design elements and principles of art and design, furniture and styles. Students undertake research which they record in the form of a sketch book, acquire a knowledge of how these elements and principles affect design, and provide answers for basic design briefs.

CREDITS: 3.00

### **CDI 3513 - TECHNICAL DRAWING I**

This course provides students with hands-on experience on graphical presentation through the study and practice of manual drafting techniques, terminology and symbology used on drawings. Students apply drawing techniques to produce drawings to scale and in different orthographic projections. Students also apply basic visual skills through exploring a variety of presentation media to render presentation drawings for interiors.

CREDITS: 3.00

### **CDI 3603 - DESIGN STUDIO II**

This essential studio core course leads students through the development of designs for contemporary interiors - either within a business, commercial or a social environment.

CREDITS: 3.00

### **CDI 3613 - TECHNICAL DRAWING II**

This course provides students with the basic skills of computer-aided drafting (CAD) through a variety of exercises. It introduces the drawing software and its application in the design process through the creation and furnishing of spaces as 2D and 3D computer generated drawings. Students use the different tools of CAD and software to develop their technical skills. Students critique their own work and the work of others.

CREDITS: 3.00

### **CDI 3623 - COMMERCIAL DESIGN STUDIO I**

This course introduces students to the sector of Commercial Interiors and outlines the major design

areas. It provides a foundation on how human behavior, social and cultural changes affect the design outcome.

CREDITS: 3.00

### **CDI 4703 - MATERIALS AND CONSTRUCTION DETAILS**

This course examines materials and construction methods from various perspectives: history, raw and finished materials, applications to finishes and construction methods, new materials and technology, and codes of legislation. Students are introduced to growing issues of sustainability both globally and locally, new codes and sustainable building guidelines, as well as areas of developing technology.

CREDITS: 3.00

### **CDI 4713 - COMMERCIAL DESIGN STUDIO II**

This course offers practical applications of design. It emphasizes the design concept development, space planning, problem solving, and the selection of new materials and technologies.

CREDITS: 3.00

### **CDI 4723 - PROJECT DESIGN AND RESEARCH I**

This course is the first half of a year-long capstone project, in which students undertake research about a specific personal area in interior design and then analyze, evaluate, clarify and respond to the needs and requirements of the project. The students prepare a program and put their findings in a research form, including an initial design concept.

CREDITS: 3.00

### **CDI 4803 - FURNITURE AND FITTINGS**

This course introduces the soft furnishings used in the interior design industry, such as fabrics and textiles, window treatments, and upholstery. It also explores customized furniture designs and the issues related to anthropometrics and ergonomics through the study of the human form through sketchbook studies.

CREDITS: 3.00

### **CDI 4806 - PROJECT DESIGN AND RESEARCH II**

This course is the second half of a year-long project and it requires a capstone project to put into practice the various skills acquired in the program. The students continue to produce design work which form the main body of their personal portfolio.

CREDITS: 6.00

### **CETE N400 - MANAGEMENT INFORMATION SYSTEMS**

This course focuses on the role of computer-based

information systems in business and industrial organizations from a management perspective. The strategic nature of an information system is emphasized 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 N207 - CHEMICAL ENGINEERING PRINCIPLES I**

This course is the first of two 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 N224 - FUNDAMENTALS OF ELECTRONICS AND INSTRUMENTATION**

This course 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**

This course is an 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**

This course 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**

This course 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; polymerization processes; properties of thermosets and thermoplastics; production of specialist organic chemicals.

CREDITS: 3.00

### **CHEM N3117 - CHROMATOGRAPHIC TECHNIQUES I**

This course provides 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**

This course 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 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: 4.00

### **CHEM N3127 - SPECTROSCOPIC TECHNIQUES I**

This course provides 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**

This course 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 analyzed using equilibrium behavior 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**

This course covers the chemical process industries that are relevant in the UAE and includes the production of industrial gases, fertilizers, inorganic acids, food products, cement, aluminum, 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**

The course provides an introduction to the properties and corrosion behavior 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 N3215 - INTRODUCTION TO CORROSION**

This course 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**

This course covers the application of tests and analyzes 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**

This course provides an introduction to the theory and laboratory procedures required to analyze 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 programs and an overview of water treatment methods are also included.

CREDITS: 3.00

### **CHEM N3240 - CHEMICAL PROJECT**

This course aims to develop abilities in applying knowledge and skills acquired throughout all the courses within the program. 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**

This course covers the study of operational aspects of major process equipment. It emphasizes 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**

This course 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**

This course 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 - OPTIMIZATION AND APPLICATION IN REFINERY AND PETROCHEMICAL PLANNING**

This course introduces optimization 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 optimization 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 optimization techniques or other means that aid in developing possible solutions, resolving implementation issues, and evaluating performance results.

CREDITS: 4.00

### **CHEM N415 - SEPARATION PROCESSES**

This course is 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 flavor 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 analyze 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**

This course is 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**

This course provides an introduction to the specific approaches and techniques which may be used to analyze, 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 characterize accidents are reinforced through case studies. Students work in groups to perform a HAZOP analysis and individually to perform a consequence analysis and event tree and LOPA analysis.

CREDITS: 4.00

### **CHEM N433 - PETROLEUM GAS PROCESSING**

This course is 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 teaches students how to use cascaded style sheets and JavaScript to enhance the appearance and functionality of web sites. The course teaches the methodologies in developing and maintaining site wide style sheets within multi-page web sites. Students will also learn how to use a standards-compliant web design framework to style websites.

CREDITS: 3.00

### **CIA 3103 - DATABASE DESIGN AND ADMINISTRATION**

This course focuses on database design concepts, tools, and processes for data modeling: functional dependencies, normalization, DB design methodologies, entity-relationship modeling. The course introduces Structured Query Language (SQL) to define, manipulate, and administer data and also covers the concept of database administration, defines duties and responsibilities of database administrators.

CREDITS: 3.00

### **CIA 3303 - PRINCIPLES OF MOBILE APPLICATIONS**

This course teaches students to develop and deploy mobile applications using a current mobile development technology. Students will compare current mobile devices and their application development tools. They will 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 will then be deployed to the mobile devices. Students will learn how to store and read data on the mobile storage device.

CREDITS: 3.00

### **CIA 4003 - ADVANCED MOBILE APPLICATIONS**

This course 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**

This course develops in students 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 authorization.

CREDITS: 3.00

### **CIA 4203 - ENTERPRISE DATABASE APPLICATIONS**

This course 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**

This course continues to enhance the student's 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 develop also applications that include a database backend component.

CREDITS: 3.00

### **CIB 2003 - TECHNOLOGY BASED MARKETING**

This course examines core strategies, principles and concepts relating to marketing applications in business organizations in general, IT related products and services in particular. It will also explore market processes, delivery channels, customer loyalty, pricing, communications, and capacity. Students will gain the knowledge, analytical and practical skills required to understand and diagnose the key aspects of developing and marketing IT products successfully. The course will also explore the elements of marketing the IT function in organizations.

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. The course is also aimed at providing human resource practitioners with knowledge and skills related to general human resource management concepts and the external environment in which UAE human resource practitioners operate as well as the knowledge underlying the provision of human resources in organizations. Special topics in IT human resource

management and the development of employees' careers in the IT profession as well as labor relations management in the UAE.

CREDITS: 3.00

### **CIB 3103 - OBJECT ORIENTED ANALYSIS AND DESIGN**

This course 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**

This course 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. Students will learn to analyze and prepare a set of financial statements, and to use financial, non-financial and management accounting concepts and terminology in business decision-making.

CREDITS: 3.00

### **CIB 3303 - E-BUSINESS PRINCIPLES**

This course 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. They become familiar with current infrastructure requirements needed for e-business, e-business software, online security and online payment systems. E-Business strategies including advertising, e-mail marketing, customer relationship management, branding, search engine positioning and business models like virtual communities, mobile commerce and online auctions are analyzed. Students discuss cyber law and examine the protection of intellectual property, privacy, copyright and ethical issues related to e-business.

CREDITS: 3.00

### **CIB 3403 - ADVANCED DATABASE TECHNOLOGIES**

This course discusses the internals and performance issues of a DBMS: storage mechanisms, indexing, query evaluation, transaction management, concurrency control, and query optimization. Course focuses on advanced database technologies: data warehousing, data mining, XML data and information retrieval, multimedia support for database systems.

CREDITS: 3.00

### **CIB 4003 - E BUSINESS APPLICATIONS DEVELOPMENT**

This course develops students' skills required for building e-commerce applications regardless of the technology used. Students will learn how to develop server side applications that generate content, maintain state, authenticate users, connect to databases, and provide security and confidentiality of transactions. At the end of the course students will be able to build a complete e-commerce web application that handles memberships, online catalogs, 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

### **CIM 2003 - GRAPHIC DESIGN**

This course is a basic introduction to design as it applies to visual elements, rhythm, proportion and composition. Students produce a series of exercises that explore and analyze the relationship and interaction between design principles and visual elements individually, and in varying combinations, using a variety of media. Students are taught to apply creative solutions to design problems and produce artwork that clearly demonstrates the design process from thumbnail through presentation of visuals.

CREDITS: 3.00

### **CIM 2103 - PRINCIPLES OF ANIMATION**

This course is designed to introduce students to the fundamental principles of digital animation that form the basis of animation practice. Through guided tutorials, lectures, practical assignments and projects, students learn how to create animations. The differences between 2D and 3D animations are also introduced in this course. Students are also introduced to issues in digital animation in the 21st century as well as the current critical and methodological debates within the field.

CREDITS: 3.00

### **CIM 3103 - STORYBOARDING AND ANIMATICS**

This course 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. Students will learn traditional and digital storyboarding skill, and a range of digital tools, to both facilitate the storyboarding process and to create basic animatics from their boards. All aspects of storyboard production will be covered including: drawing, artistic interpretation of scripts, software skills for the production of animatics, understanding camera angles, film direction and storytelling.

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. The student will learn to design, assemble and write a multimedia application using a programming language.

CREDITS: 3.00

### **CIM 3303 - 2D 3D ANIMATION**

This course will introduce students to the basics of 2D graphics, 3D graphics, audio and video contents. Students will explore various stages involved in the design, development and delivery of interactive multimedia content using software packages in each of the following areas: 2D Graphics; 3D Graphics; Audio Editing; Video Editing; Web Authoring. In addition, the students will also evaluate interactive multimedia products in terms of their visual and functional design from the user's perspective.

CREDITS: 3.00

### **CIM 4003 - MULTIMEDIA SCRIPTING**

This course will introduce students 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**

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. 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**

This course will examine the emerging electronic technology of virtual reality. 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 delivery of this course will include a lab component featuring virtual walkthroughs. This course will feature an emphasis on educational application of virtual reality. The course also covers the topic of simulation which includes sub-topics such as stochastic modeling, 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**

This course 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**

This course 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. Students will build their skills starting from the administration of standalone Windows servers in a workgroup environment to the level required to administer domain based enterprise networks.

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. A detailed study of the functions of key layers in the OSI/TCP/IP models and the devices and protocols used will also be covered. This course will cover the characteristics of Ethernet as a predominant LAN technology. This course will equip students with practical skills on how to setup a simple peer-to-peer network, and test and establish network connectivity.

CREDITS: 3.00

### **CIN 2203 - ROUTING PROTOCOLS**

This course is designed to develop knowledge and skills required to implement both distance vector and link state routing protocols such as RIP, EIGRP and OSPF. The course presents a clear picture of how a router learns routes and selects the best path to remote networks. An in-depth study of classless interdomain routing and the implementation of variable length subnet masking are also included. This course not only covers the theoretical aspects but also includes practical labs where students are allowed to apply the concepts learnt.

CREDITS: 3.00

### **CIN 3003 - LAN SWITCHING**

This course analyzes 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. Students will learn the details of the underlying switch processes of common layer 2 technologies. The course discusses theory and practical implementation of switching concepts and protocols: VLANs for segmentation of LANs; VTP for exchanging VLAN information; and STP for loop free redundancy. Practical labs are included for all concepts covered in this course.

CREDITS: 3.00

### **CIN 3103 - WIRELESS NETWORKS**

This course introduces the fundamentals of wireless communication including the various wireless standards and the relevant organizations. Students will learn the terminologies and behavior associated with radio frequencies, as well as the components, basic measurements techniques and antenna concepts used in the planning and design of wireless networks. Students will apply their learning to the basic design, installation and configuration of wireless network. Finally, the course presents techniques for securing and troubleshooting wireless networks.

CREDITS: 3.00

### **CIN 3203 - WAN TECHNOLOGIES**

This course 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 analyzing 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. The principles of traffic control using access control lists (ACLs) are explained. Practical labs on NAT, DHCP, ACLs and WAN protocols are an integral part of this course.

CREDITS: 3.00

### **CIN 3303 - NETWORK SECURITY**

This course provides 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. Students learn the concepts and techniques required to configure routers and switches to prevent network attacks. In particular, students will learn how to configure Access Control Lists (ACLs).

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 eBGP, 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, as well as the configuration of interoperation of IPV6 with IPV4. It also analyzes 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**

The course teaches advanced skills in networking required to configure and implement enterprise wide switched networks. The main focus of this course is to develop skills to design, build and secure switched networks. This course will also include design and implementation of campus network services such as IP telephony and integration of wireless LANs. The configuration and implementation of multilayer switching, VLANs and protocols such as VTP and advanced STP will also be covered in this course. Practical implementation of these concepts also forms an integral part of this course.

CREDITS: 6.00

### **CIS 1003 - INFORMATION SYSTEMS IN ORGANIZATIONS AND SOCIETY**

This course introduces students to information systems and development concepts. The course will cover the fundamental and changing role of information within organizations 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, organizations, and society. CREDITS: 3.00

### **CIS 1103 - HARDWARE AND NETWORKING**

This course introduces students to 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 organization of computing and peripheral devices. Operating system topics include the role of the operating systems, installation, basic system administration and local security. In the networking portion, students will learn about standard network components, devices and media. Students will learn network models and topologies, physical and logical addressing, and will build a peer to peer local area network. CREDITS: 3.00

### **CIS 1203 - WEB TECHNOLOGIES**

This course introduces 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**

This course introduces relational database concepts and simple database application development. It focuses on core skills of identifying organizational 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 customized forms and reports. CREDITS: 3.00

### **CIS 1403 - FUNDAMENTALS OF PROGRAMMING**

This course introduces the fundamentals of programming using an Object Oriented approach. CREDITS: 3.00

### **CIS 1503 - INTRODUCTION TO MULTIMEDIA**

This course introduces students to various multimedia components such as 2D graphics, 3D graphics, audio and video. The course will examine software applications used for creating and editing 2D Graphics, 3D Graphics, Audio files, Video files. The 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 specialization. CREDITS: 3.00

### **CIS 2003 - STATISTICS AND PROBABILITY**

This course offers an introduction to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. The four broad themes include: explaining data (observing patterns and departures from patterns); planning a study (deciding what and how to measure); anticipating patterns producing models using probability and simulating; and statistical inference (guiding selection of appropriate models). 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. It discusses security-related activities, such as inspection and protection of information assets, detection of and reaction to threats, and examines pre- and post-incident procedures. Students will design and implement an information assurance plan to protect an organizations' information. CREDITS: 3.00

### **CIS 2303 - SYSTEMS ANALYSIS AND DESIGN**

This course 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, modeling tools and techniques, testing procedures and the need for systems evaluation.

CREDITS: 3.00

### **CIS 2403 - OBJECT ORIENTED PROGRAMMING**

This course 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. Students will learn to apply those concepts in analyzing and solving business case studies.

CREDITS: 3.00

### **CIS 3003 - HUMAN COMPUTER INTERACTION**

This course 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. The course explores principles of good design through observation and analysis of existing technology solutions.

CREDITS: 3.00

### **CIS 3103 - PROJECT MANAGEMENT**

This course will explore a systematic methodology for initiating, planning, executing, controlling, and closing of projects. An industry standard methodology such as PMI will be adopted. This course will prepare students for the capstone project in their final year. The course will also cover the terminology of project management; skills that a project manager should have and the type of organizational structure he/she will work in.

CREDITS: 3.00

### **CIS 4103 - EMERGING TECHNOLOGIES**

This course provides students with an opportunity to investigate the most recent advances in Information Systems and Technology. In this research-based course, students will select an emerging technology, describe how it works, analyze its strengths and weaknesses, and determine what impact it is likely to have in their chosen major. At the time of writing, examples of emerging technologies include cloud computing, virtualization, green computing and massively distributed computing. Students will receive guidance in how to select a research topic, write a research question, conduct a literature review, analyze and properly attribute outside sources and write an abstract.

CREDITS: 3.00

### **CIS 4203 - INFORMATION TECHNOLOGY STRATEGY AND GOVERNANCE**

This course 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 emphasizes the responsibility of the board of directors and executive management in an organization, and their integral role in enterprise governance. Implementation of IS Strategy and Governance structures require organizations to embrace and manage change to ensure desirable behavior in the use of IT.

CREDITS: 3.00

### **CIS 4803 - WORK RELATED LEARNING**

This course is 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 analyze, 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**

This course emphasizes 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**

This course 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**

This course 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**

This course 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**

This course introduces the topics of wastewater technology, sewer design and construction.

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**

The course deals with basic principles of design, behavior 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**

This course 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 recognize 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**

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.

CREDITS: 4.00

**CIVL N336 - ARABIC FOR CIVIL ENGINEERING**

This course is designed to promote the Arabic language skills of the civil engineering student 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 N399 - 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 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: 5.00

### **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**

This course 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**

This course 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**

This course 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**

This course covers topics such as moment connections, beam-column members and lateral frames. 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**

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

### **CIVL N432 - CONSTRUCTION SURVEYING**

This course 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**

This course 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**

This course 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 programs 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**

This course uses an independent work based project to integrate and apply the management, organizational, communication and interpersonal skills learned in the other courses in the program. The development of managerial planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

### **CIVL N455 - ENVIRONMENTAL ENGINEERING**

This course 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**

This course provides 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 2**

This course 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. The course is closely integrated with the apprenticeship course and observations of learners in schools will focus on how the classroom assistant can assist the teacher in supporting children's development in these areas.

CREDITS: 4.00

### **CLAS N1210 - CREATING, MANAGING AND ORGANIZING RESOURCES**

This course 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 organize and monitor the effective use of these resources.

CREDITS: 4.00

### **CLAS N2100 - SUPPORTING LEARNING IN THE CLASSROOM**

This course will examine 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 CHILDRENS BEHAVIOR**

This course will help students acquire the skills and attitudes needed when dealing with childrens' behavior. It will teach students how to work alongside classroom teachers and to assist them in the management of childrens' behavior. 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**

This course 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 analyze the strategies, which are essential in the contemporary corporate world.

CREDITS: 3.00

### **CMC 3503 - SOCIAL MEDIA**

Social Media has played a critical role in changing the landscape of the corporate and media communication industries in the past few years. This course introduces the students to different issues arising in the online communication field focusing on opportunities and challenges available to organizations.

CREDITS: 3.00

### **CMC 3603 - MEDIA RELATIONS**

This course introduces students to current issues, as well as on-going issues, in communication and media theory in relation to the local media environment. The intent is for students to consider the current situation, rather than the historical.

CREDITS: 3.00

### **CMC 3613 - CORPORATE COMMUNICATION II IN ARABIC AND ENGLISH**

In this course students discuss organizations, audience, the media and how to prepare public relations messages for print and electronic media.

CREDITS: 3.00

### **CMC 4703 - PUBLIC RELATIONS**

Students evaluate organizations, publics, and the media in order to prepare public relations messages for print and electronic media.

CREDITS: 3.00

### **CMC 4713 - LAW AND ETHICS**

This course introduces the study of law and the basic areas of law while developing a philosophical introduction to ethics. Students develop the ability to recognize competing and conflicting legal interests, rights, and obligations under the media and business sectors.

CREDITS: 3.00

**CMC 4723 - CRISIS COMMUNICATION**

In this course students evaluate the impact of crises on organizations by focusing on the difference strategic and effective communication can make during difficult times. The course differentiates between crisis management (dealing with the reality of the crisis) and crisis communication (dealing with the perception of the crisis).

CREDITS: 3.00

**CMC 4733 - WRITING FOR CORPORATE COMMUNICATION**

This course provides students with the knowledge and skills to produce the many forms of business communications in use today and how to effectively write for the ones most commonly used.

CREDITS: 3.00

**CMC 4806 - CORPORATE COMMUNICATION PROJECT**

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.

CREDITS: 6.00

**CMM 2303 - INTRODUCTION TO MEDIA COMMUNICATION**

This course 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

**CMM 3503 - JOURNALISM AND SOCIETY**

This course focuses on the social, cultural and political contexts in which journalism operates today. The course, engaging with critical issues of contemporary media landscape, highlights the role of journalists 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.

CREDITS: 3.00

**CMM 3513 - NEWS AND FEATURE STORIES**

This course introduces students to the basic news writing and reporting skills as practiced by global agencies (e.g. Reuters, AP etc.) including the fundamentals of journalism which are accuracy, newsworthiness, deadlines, objectivity, and fairness; and the basic news writing skills of spelling, grammar, attribution, the inverted pyramid structure, and news leads.

CREDITS: 3.00

**CMM 3603 - PHOTOJOURNALISM**

This course introduces students to the practice of photojournalism and focuses on developing skills and knowledge related to capturing and presenting visual images as a source of news and current affairs.

CREDITS: 3.00

**CMM 3613 - DIGITAL BROADCASTING**

This course 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. This course is taught using both English and Arabic to increase the students Arabic language skills.

CREDITS: 3.00

**CMM 4703 - DESIGNING AND DEVELOPING ONLINE NEWS PACKAGES**

In this course students acquire the skills and knowledge to create engaging online news content. The course focuses on providing students with advanced skills for producing multimedia news packages for different online news platforms.

CREDITS: 3.00

**CMM 4713 - COMMUNICATION THEORY**

In this course students evaluate 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.

CREDITS: 3.00

**CMM 4723 - MOBILE COMMUNICATION**

Mobile devices have been transforming the profession of journalism. This course explores the impact of mobile devices on the news reporting industry. It introduces skills journalists can use to report news from their own smartphones using applications to create video, audio and text reports.

CREDITS: 3.00

**CMM 4733 - MEDIA PROJECT I**

This course provides students the opportunity to work on more complex pieces of journalism at a higher level of detail and in more depth than in earlier courses.

CREDITS: 3.00

**CMM 4803 - MEDIA LAW AND ETHICS**

In this course students discuss media law and ethics, particularly as they apply to the UAE, and analyze 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.

CREDITS: 3.00

**CMM 4813 - MEDIA PROJECT II**

In this capstone media course, students have the opportunity to work on more complex pieces of journalism at a higher level of detail and in more depth than in earlier courses.

CREDITS: 3.00

**CMV 2303 - INTRODUCTION TO VIDEO PRODUCTION**

This course 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**

In this course students go beyond the basics of editing and, while honing their knowledge of the digital editing software workflow, embark on in-depth study of the techniques of film and video post-production.

CREDITS: 3.00

**CMV 3513 - PRODUCTION SKILLS I**

In this course students learn the elements of professional video production requirements in relation to lighting and audio equipment and software.

CREDITS: 3.00

**CMV 3606 - SHORT VIDEO**

This course has a team of students collaborate on all stages of a video production, from the concept to the finished project.

CREDITS: 6.00

**CMV 3613 - PRODUCTION SKILLS II**

During this course students review, and then extend, the video production skills learnt in the previous year. Students are introduced to more creative concepts used in professional video production.

CREDITS: 3.00

**CMV 4709 - DOCUMENTARY VIDEO PRODUCTION**

Through a combination of lecture, film screenings and hands-on demonstrations, this course familiarize students with the basics of producing, shooting, lighting, sound gathering and editing for documentary production.

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 - CAPSTONE PROJECT**

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 behaviors typical of their chosen profession.

CREDITS: 6.00

**COM 1103 - INTRODUCTION TO MASS COMMUNICATION**

The course introduces students to the process of communication focusing on interpersonal, group, and mass communication.

CREDITS: 3.00

**COM 1113 - DRAWING**

This course provides the initial introduction to the basic concepts and language of visual communication by introducing the basic drawing skills needed in Applied Communication professions.

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 programs and practices.

CREDITS: 3.00

**COM 1203 - PHOTOGRAPHY**

This course 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**

This course 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**

This course 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**

This course introduces students to the basic concepts and skills of research methodology and information literacy.

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**

This course instructs students in the preparation and presentation of a personal professional portfolio. Presentation techniques and continued portfolio review are emphasized in the course, and it also provides a forum for critiquing Website projects.

CREDITS: 3.00

### **COM 2423 - INDUSTRY RESEARCH PROJECT**

This course 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**

This course provides students with an advanced level of Arabic language skills, including reading about the history of media and media and design majors, writing and researching techniques, speaking (including debating, group discussion and individual presentation skills), the fundamental principles of translation, and preparing a glossary of media terminology in both Arabic and English.

CREDITS: 3.00

### **COM 4806 - WORK PLACEMENT OR INTEGRATED PROJECT (WORK RELATED LEARNING)**

This course is designed as a framework within which a range of work related learning activities can be accommodated to meet defined learning outcomes.

CREDITS: 6.00

### **COMA N0125 - GRAPHIC DESIGN I**

This course provides 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 color theory and color systems are discussed. Composition, rendering and production techniques are demonstrated using industry-standard software.

CREDITS: 3.00

### **COMA N101 - DRAWING BASICS**

This course will introduce 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**

This course is 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**

In this course, 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 program. 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, presets, or prescriptive, step-by-step instructions. Topics include

sampling, quantizing, color models, file formats, and compression, among others, as they apply to practical production in imaging, audio and video.  
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 journalists 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 students' Arabic language skills. The course also explores the use of social and convergent media.  
CREDITS: 4.00

### **COMA N202 - DRAWING II**

This course 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 an 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**

In this course 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**

In this course, 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 CORP COMM I**

The course 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**

This course 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**

This course 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 organizations.

CREDITS: 4.00

**COMA N224 - MEDIA SKILLS**

The course enables students to engage with a wide range of media forms and develop their own media skills and 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**

This course provides students with 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 program using appropriate documentation. This course also teaches the fundamentals of marketing strategies, including the development of client/team dialogue and the basics of audience/market research, concept, and message development. Students prepare a media campaign proposal, enhance their translation skills, and continue preparing a glossary in Arabic. Translation is a very important skill in this course.

CREDITS: 4.00

**COMA N240 - WRITING FOR CORPORATE COMMUNICATIONS**

This course provides students with 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 the student's conceptual ability to analyze design problems and produce commercially acceptable solutions. Students are taught to analyze 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**

This course provides 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**

This course 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 students, the industry client and the teachers involved.

CREDITS: 4.00

### **COMA N326 - CORPORATE COMMUNICATIONS II**

The course is 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 practice 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 organizations from a public relations/ corporate communications point of view.

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**

This course is 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**

This course 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**

This course 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 specialization such as a graphic design studio, independent video production, freelance writing business, or an integrated communications project.

CREDITS: 4.00

### **COMA N405 - COMMUNICATIONS THEORY**

This course 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**

This course examines the impact of crises on organizations, 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 analyze contemporary trends and debates arising from the information revolution and emerging world communication processes and systems.

CREDITS: 4.00

### **COMA N416 - MEDIA PROJECT I**

In Media Project 1 students will choose a topic in their specialization and write four academic essays on the historical, social, technical aspects and practical application. Each student will design and complete an individual experiment and individually produce a short but achievable practical application of their topic.

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. .

CREDITS: 4.00

**COMA N420 - PORTFOLIO PRODUCTION**

This course instructs students in the preparation of a personal professional portfolio.

CREDITS: 4.00

**COMA N427 - PRESENTATION AND CRITIQUE**

This course sharpens the students' 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**

This course 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, analyze, and interpret a range of topics in international politics, economics, globalization, culture, the environment, technology and private and public organizations.

CREDITS: 4.00

**COMA N453 - ENTREPRENEURSHIP**

In this course 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 2 enables students to individually further develop their creative, technical and project management competencies to a professional industry standard. Students work in their area of specialization.

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

**COMP N100 - APPLIED COMPUTING I: FOUNDATIONS**

This practical, hands-on course covers the basic and essential computer skills needed for further study and employment. Students learn keyboarding, file management, Microsoft Word and Excel and other chosen software. Skills are developed through online materials, college based materials and projects. Cross-curricular links to Mathematics and English courses through integrated projects are encouraged.

CREDITS: 4.00

**CONS N1120 - CONSTRUCTION MATERIALS**

This course introduces the engineering properties and performance of soils, concrete, asphalt, masonry, timber, steel, aluminum, glass and plastics. Standard laboratory tests, performed in conjunction with the use of these materials in construction, are included. In addition to international standards references are also made to local codes of practices governing the use of these materials in the UAE.

CREDITS: 4.00

**CONS N1225 - CONSTRUCTION METHODS**

This course introduces students to the elements of the built environment at an introductory level in the Construction Technology Diploma program. Upon completion of the course students will be able to discuss environmental, physical and design considerations for various construction projects, understand procedures of site characterizations, site preparations and site organizations.

CREDITS: 4.00

**CONS N2120 - CONSTRUCTION SURVEYING**

This course introduces the student to the tools and practice of linear surveying and measurements. Horizontal and vertical distance measurement using traditional and electronic equipment and angular measurements is covered, along with an introduction to topographic surveying and traversing. It also extends the students learning to sections and their importance in construction. Modern techniques to acquire data with GPS, GIS data collectors and use of simple menu driven software to set out construction works and carry out building surveys is also introduced.

CREDITS: 5.00

**CONS N2125 - BUILDING CONSTRUCTION I**

This course presents the elements of building construction practice, techniques, components and procedures. Upon completion of the course the students will be able to discuss various areas of the substructure, superstructures and the internal construction and finishes of buildings. Deep and shallow foundations and ground water control will be covered as part of the substructure section. The superstructures made of steel frames and concrete as well as different types of external finishes will also be covered.

CREDITS: 4.00

**CONS N2145 - SITE SUPERVISION**

Major construction projects need continuous supervision from the mobilization stage through to the end. The contribution of competent supervisory personnel is of the highest importance for timely and on-budget completion. This course introduces the student to the roles, responsibilities and main functions of site supervisory personnel within the construction process. Topics discussed also include the relationships between the various parties involved in the planning and execution of construction projects

CREDITS: 4.00

**CONS N2150 - CONSTRUCTION EQUIPMENT AND TOOLS**

The construction and maintenance methods for buildings and roads are heavily dependent on the tools and construction equipment, which are continuously evolving with technological advances over time. This course introduces to students the most recent tools and equipment used for earthwork (excavation, loading, hauling, placing and compacting soils), concrete work (aggregate crushers, concrete mixers, placement and finishing tools), equipment for pavement construction and transportation of construction materials.

CREDITS: 4.00

**CONS N2155 - BUILDING CONSTRUCTION II**

This is the second component of two integrated building construction courses delivered within the Construction Technology Diploma program. The course identifies the requirements, design alternatives and construction processes of secondary building elements such as exterior and interior finishes, roof finishes, doors and windows. Details of building services at an introductory level are also presented to the students. This includes water supply, plumbing, drainage, electrical and air conditioning systems, together with the discussion of fire protection alternatives and installation requirements of central household waste collection system in buildings.

CREDITS: 4.00

**CONS N2165 - PROJECT ADMINISTRATION**

This course covers construction management techniques, critical path methods and resource management. Outlines of other project planning techniques such as application to construction issues, planning ruction issues, planning and control of construction work and site administration will also be introduced. This is followed by a review of drawings and specifications, together with the techniques used to determine the bill of quantities and the extent of work related to a project through the standard methods of measurement used by quantity surveyors.

CREDITS: 4.00

**CONS N2216 - ARABIC FOR CONSTRUCTION**

This course relates Arabic and English terminology used in the construction industry with emphasis on local practice. The course enables students to strengthen their proficiency in Arabic and English languages and prepares them to communicate effectively in both oral and written media as applied in work related situations.

CREDITS: 2.00

**CONS N3241 - CONSTRUCTION PROJECT**

The course is designed to evaluate students in their personal development and technical skills in the form of an integrated project covering most of the courses in the program.

CREDITS: 4.00

**CSC 2003 - OBJECT ORIENTED PROGRAMMING 2**

This course is continuation of 'Object Oriented Programming 1'. It emphasizes programming techniques in large programs. Topics include: the object oriented programming paradigm; objects and classes; data abstraction and encapsulation; inheritance; polymorphism; and exception handling. The course explores graphics, event handling, and graphical user interfaces. Students will learn to apply those concepts in analyzing and solving business case studies.

CREDITS: 3.00

**CSC 2103 - CALCULUS 1**

This course is designed to provide the students with calculus of one variable: limits, continuity, differentiations, chain rule, maxima and minima, curve plotting, integration and substitution, definite integrals with application to areas, volume and arc length, fundamental theorem of integral calculus, exponential and logarithmic functions, trigonometric functions, parametric equations.

CREDITS: 3.00

### **CSC 2203 - COMPUTER ORGANIZATION AND ARCHITECTURE**

This course introduces the organization and architecture of computer systems. It covers the functionality of all components, and their inter-relationships during data processing. Topics include machine level internal representation of numeric and non-numeric data, digital logic design, memory system organization, and object coding. Students will write programs in a common assembly language.

CREDITS: 3.00

### **CSC 2303 - DIGITAL SYSTEM DESIGN**

This course is an introduction to the design of electronic circuits. Digital circuits are employed in the design and construction of systems such as digital computers, data communications, digital recordings, and other application that require digital hardware. The course provides the students with the basic tools for the design of digital circuits as well as the fundamental concepts in the design of digital systems such as combinational logic, synchronous sequence logic, programmable logic and other essential concepts.

CREDITS: 3.00

### **CSC 2403 - DATA STRUCTURE AND ALGORITHMS**

This course discusses the representation and use of primitive data types and built-in data structures. Students learn how to implement user-defined data structures in a high-level language. Topics include detailed study of data structure and data abstraction such as queues, linked list, and trees.

CREDITS: 3.00

### **CSC 3003 - DATABASE SYSTEMS**

This course covers the organization and architecture of computer systems, focusing on the functionality of all components, and their inter-relationships during data processing. Examples include the internal representation of numeric and non-numeric data. Students will write programs in a common assembly language.

CREDITS: 3.00

### **CSC 3103 - LINEAR ALGEBRA**

This course covers systems of linear equations, matrices, determinants, inverses, vector spaces, subspaces and dimensions, rank and nullity, eigenvalues and eigenvectors, linear transformations and matrices, similar matrices, inner products, orthogonal projection. Other topics include numerical methods and linear programming.

CREDITS: 3.00

### **CSC 3203 - OPERATING SYSTEMS**

This course covers operating system functions and features, including process management and scheduling, resource management, virtual memory, file systems, concurrent processing and synchronization, inter-process communication, deadlock and disk scheduling, and storage management. Students will apply theoretical concepts through shell programming in UNIX/LINUX.

CREDITS: 3.00

### **CSC 3303 - COMPUTER NETWORKS**

This course is designed to present a top-down view of the layered architectural elements of communication systems, focusing on TCP/IP model. Topics included are network addresses, sub netting, client/server network programming via the sockets API, network utilities, structure of packets, routing, fragmentation, connection and termination.

CREDITS: 3.00

### **CSC 3403 - COMPUTER GRAPHICS**

This course covers 2D and 3D computer graphics through an application-based approach. Topics include: graphics output primitive, their attributes, colors, transformation, texture mapping, and curves and surfaces. Other topics include: 2D graphics of algorithms, essential of user interface and windows management system, and graphics hardware. The course culminates with a programming project using a windowing system and graphics standard such as Open GL.

CREDITS: 3.00

### **CSF 2103 - INTRUSION DETECTION AND ETHICAL HACKING**

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 3003 - CYBER LAW AND ETHICS**

This course 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 organizations. The course touches on numerous topics, including intellectual property, on-line contracts, laws governing the use of computers and the Internet, security and computer crime, as well

as the ethical issues relating to cyber law. Students will examine regulatory, compliance and liability issues in UAE cyber law, as well as the role of the respective government bodies.

CREDITS: 3.00

### **CSF 3103 - INCIDENT RESPONSE AND DISASTER RECOVERY**

This course develops two threads: how to identify and respond to an attack, and how to recover the system from an attack or other disaster. Students will learn how to identify system vulnerabilities, take appropriate countermeasures, and identify and apprehend attackers, with the end goal of minimizing downtime and the accompanying organizational loss. The course then focuses on procedures to develop, implement and manage an incidence response and disaster recovery plan. A procedure-centric approach is taken throughout the course, with case studies providing a real-world basis for the topics discussed.

CREDITS: 3.00

### **CSF 3303 - OPERATING SYSTEM ADMINISTRATION AND SECURITY**

This course introduces Open Source Software and the GNU/Linux operating system. Students will perform installation, 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 and Apache.

CREDITS: 3.00

### **CSF 3403 - COMPUTER FORENSICS AND INVESTIGATION**

This course explores 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 will 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: 3.00

### **CSF 3603 - CRYPTOGRAPHY AND NETWORK SECURITY**

This course 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. Standards for encryption include DES, 3-DES, AES, RSA, SHA, WPA and WPA2. The course also reviews concepts in systems security, attacks and countermeasures. The concepts discussed are reinforced through research assignments, hands-on projects and experiments.

CREDITS: 3.00

### **CSF 4003 - SECURITY AND RISK MANAGEMENT**

This course provides a detailed study of information security from the management and administration perspective. The course specifically covers guidelines for access management, control and communication, and business continuity management. Students will learn methods for information security risk assessment, intellectual property protection, organizational structure assessment and modeling 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**

The course provides a practical guide to discovering and exploiting security flaws in web applications. Students will learn different steps involved in detecting and exploiting each kind of security weakness found within a variety of applications such as online banking, e-commerce and other web applications. The course covers techniques such as bypassing login mechanisms, injecting code, exploiting logic flaws, compromising other users, defeating web authentication, SQL injections, cross-site scripting, cross-site request forgery, phishing and XML injection. The course also provides methods on how to find and fix vulnerabilities in ASP.NET, PHP and J2EE execution environments.

CREDITS: 3.00

### **CSF 4203 - TELECOMMUNICATIONS AND WAN SECURITY**

The course aims to provide knowledge in securing the critical infrastructure by creating a starting point in securing wide-area and telecommunication networks. It includes concepts, theories and practices to secure current and new generation telecommunications networks and WANs. Students will learn emerging threats and systems vulnerabilities, and defense mechanisms relevant to the field. Students will also

gain a strong foundation in vulnerabilities, access and authentication methods in mobile telephony and how to mitigate those threats.

CREDITS: 3.00

### **CTT 2003 - PRINCIPLES OF LEARNING FOR INSTRUCTIONAL TECHNOLOGY**

This course 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, such as behavioral learning, cognitive information processing theory, and constructivist learning as well as the factors affecting human learning. It introduces specific instructional strategies, techniques, and approaches that can be used to impact learning effectiveness, efficiency, and appeal using different technology platforms.

CREDITS: 3.00

### **CTT 3103 - LEARNING ENVIRONMENT DESIGN, SUPPORT AND ADMINISTRATION**

This course provides an overview of the management and utilization of technology-based training practices in corporate settings. The course focuses on the selection, planning, development, administration, organization and delivery of training to adult learners with the special attention to the role of instructional technologists. It defines the principles of the design of effective technology-driven learning environment and defines its functional components. The course equips students with knowledge and skills required to make an optimal decision regarding technology infrastructure, learning management systems, course and assessment development tools. It contains case studies which reflect best industry practices related to organization, support and administration of the technology-aided training programs.

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. A guided research and presentation project, focusing on one particular area of special needs provides in depth understanding of a topic. The course explores the strategies used to evaluate instructional methods and curricula for students with special needs and examines design and implementation of individual learning and behavior

management programs and the use of technology to support special needs.

CREDITS: 3.00

### **CTT 3403 - INSTRUCTIONAL DESIGN FOR COMPUTER BASED TRAINING**

This course 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. Students will use instructional design principles and models to develop interactive learning environments. Students learn current development tools to create effective, efficient, and appealing learning environments. Students will learn basic administration of current learning management systems.

CREDITS: 3.00

### **CTT 4003 - DISTANCE AND ONLINE EDUCATION**

This course 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. This course explores the meaning of e-learning and its development and impact on education and training, and the changing roles of the teacher and student brought about by these technological developments. 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 4103 - CUSTOMER RELATIONSHIP MANAGEMENT**

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 organization.

CREDITS: 3.00

### **CTT 4203 - STAFF DEVELOPMENT AND CORPORATE TRAINING STRATEGIES**

This course 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**

This course will explore 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 familiarization 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 2109 - GAS TURBINE ENGINE (MOD 15 B1)**

This course 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)**

This course 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 3215 - TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS (MOD 11 B1) PART A**

This course is taught over two semesters and culminates with a final exam at the conclusion of the second semester, covering EAA 3221 and EAA 3215 material. This first course examines aircraft systems in the field of aviation maintenance engineering as required by GCAA CAR 66 Module 11 B1.1. Topics covered include; CAR 66 regulations 11.1 to 11.9 including theory of flight, airframe systems, and airframe structures.  
CREDITS: 15.00

### **EAA 3221 - TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS (MOD 11 B1) PART B**

This course is taught over two semesters and culminates with a final exam at the conclusion of the second semester, covering EAA 3221 and EAA 3215 material. This second course examines aircraft systems in the field of aviation maintenance engineering as required by GCAA CAR 66 Module 11 B1.1. Topics covered include CAR 66 regulations 11.10 to 11.18 including fuel systems, hydraulic power, ice and rain protection.  
CREDITS: 21.00

### **EACE N231 - LANGUAGE AND DEVELOPMENT: SLA PRINCIPLES AND PEDAGOGY**

This course builds on the knowledge and awareness of both how language impacts learning and how young children acquire a second or additional language. Bilingualism and multilingualism will be explored and contrasting theories of first and second language acquisition including the nature of interlanguage and universal grammar will be analyzed and evaluated.  
CREDITS: 8.00

**EACE N233 - COMMUNICATION STUDIES 2A**

This course aims to improve general English and Arabic communication and English language skills through reading, writing, speaking and listening to facilitate learning and interaction in Early Childhood Centers in the UAE. The course will support students in effectively developing and using fundamental communicative strategies in key skills of the English language such as elicitation and questioning, paraphrasing, presenting using appropriately graded language to various target audiences, and academic writing.

CREDITS: 8.00

**EACE N235 - PRACTICUM 3**

This practicum will allow student teachers to gradually take on greater responsibility for young childrens' development through carefully planned and guided educational experiences in a variety of local UAE ECE settings. It will familiarize student teachers with both the curriculum and the general organization of the local government preschool and provide them with the opportunity to plan, implement and evaluate learning experiences within this framework in the Arabic medium under the close supervision of experienced early years practitioners.

CREDITS: 2.00

**EACE N237 - LEARNING THROUGH THE CREATIVE ARTS**

This course explores recent thinking about creativity (Pope, 2005), nurtures student teacher creativity which will include 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: 4.00

**EACE N241 - CREATING LEARNING ENVIRONMENTS II: INTELLECTUAL AND EMOTIONAL**

This course builds on previous learning with a key focus on how a range of approaches to teaching and learning in ECE settings have been 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: 10.00

**EACE N243 - COMMUNICATION STUDIES 2B**

This course aims to further students' knowledge and skills in English and Arabic. As well as developing

their general academic skills, they will apply effective communication skills to facilitate learning and interaction in early childhood centers. Students will identify and implement communication strategies that encourage and value talk. They will plan strategies to facilitate childrens' development of language, communication and literacy skills. Students will also use information technologies to search for, retrieve, evaluate and apply information appropriate to the needs of a particular task or audience. Students will become familiar with the IELTS exam and develop strategies for success when they sit the IELTS exam at the end of the semester.

CREDITS: 10.00

**EACE N245 - PRACTICUM 4**

This practicum complements teaching and learning in both EACE 241 and EACE 247 and gives students the opportunity to observe and apply knowledge and implement teaching strategies in a variety of learning environments with clear differences both in ideology and teaching and learning foci and in key experiences for the learner.

CREDITS: 5.00

**EACE N247 - LEARNING THROUGH DRAMA**

This course will explore 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 Program (IB PYP), the High/Scope program and the UAE preschool syllabus.

CREDITS: 5.00

**EACE N351 - LITERACIES IN EARLY CHILDHOOD**

This course complements teaching and learning in EACE 353, EACE 355 and EACE 357 and explores a range of current approaches that facilitate the development of language and literacy skills. Included in the concept of literacy on this course are what are currently termed the new literacies, digital or multiliteracies, (Lankshear and Knobel 2003) which integrate screen-based texts, images, text layout and hypertext within their scope of study.

CREDITS: 8.00

**EACE N353 - COMMUNICATION STUDIES 3A**

Students will further analyze the environment discourse in both English and Arabic that helps facilitate development in language, literacy, numeracy and scientific understanding. They will learn how vocabulary can play a key role in learning and make principled choices in terms of the role and function of vocabulary in specific early childhood contexts.

CREDITS: 4.00

**EACE N355 - PRACTICUM 5**

This practicum complements teaching and learning in both EACE 351, EACE 353 and EACE 357 and gives students the opportunity to observe and apply knowledge and implement teaching strategies in both local government and private preschool learning environments with clear differences both in ideology and teaching and learning foci and in key experiences for the learner.

CREDITS: 4.00

**EACE N357 - LEARNING THROUGH LITERATURE**

This course complements teaching and learning in EACE 351, EACE 355 and EACE 353 and will focus on how books, poems and a range of other texts including media and digital or web based texts can be used to develop learning across domains with a particular emphasis on early childhood literacy.

CREDITS: 4.00

**EACE N361 - PLANNING FOR LEARNING**

In this course students will review the factors, including developmental levels, individual learning needs and program aims that need to be considered in planning for learning across both domains (cognitive, physical, social and emotional) and curriculum areas.

CREDITS: 10.00

**EACE N363 - COMMUNICATION STUDIES 3B**

Students will further analyze the environment discourse in both English and Arabic that helps facilitate development in the social and emotional domains with a particular focus on the individual learning needs of particular children. Students will also examine the typical symptoms of a range of language-related learning difficulties including dyslexia and hearing loss. They will learn how linguistic choices can play a key role in enabling children to engage in sensitive interpersonal interactions. Students will develop an awareness of how speaking, listening, reading and writing activities can be used to further children's awareness of individual differences and needs, as well as how they can model sensitive, dialogic interaction inside and outside the environment. They will also look at strategies and linguistic resources for discussing issues relating to language development and learning with other professionals and with parents. Further stress will be placed on developing student accuracy, knowledge of appropriate language, control and fluency.

CREDITS: 5.00

**EACE N365 - PRACTICUM 6**

This practicum complements teaching and learning in EACE 361, EACE 363 and EACE 367 and gives students the opportunity to observe and to apply new learning and implement a broad range of teaching strategies in private preschool learning environments.

CREDITS: 10.00

**EACE N367 - SPECIAL NEEDS IN EARLY CHILDHOOD EDUCATION**

This course is designed to provide students with a basic understanding of the philosophies and practices currently employed to support and facilitate the learning of young children with special needs in the regular early childhood educational environment. An overview of the learning needs of gifted children and children with hearing impairment, visual impairment, language impairment, intellectual disabilities and socio-emotional disabilities will also be provided.

CREDITS: 5.00

**EACE N471 - RESEARCH IN EARLY CHILDHOOD EDUCATION**

This course aims to help students define, examine and analyze action research and explain its purpose as it affects decision-making and educational practice. Students will examine the various elements of an action research project from problem statements to research design and collection and analysis of data.

CREDITS: 12.00

**EACE N473 - PRACTICUM 7**

In Practicum 7 emphasis will be clearly on reflective practice where the student takes on the role of researcher. Through the completion of a small-scale research project clearly rooted in practice, learners will gain insight into the broader processes of designing and interpreting research.

CREDITS: 6.00

**EACE N481 - EARLY CHILDHOOD EDUCATION MANAGEMENT AND ADMINISTRATION**

This course will prepare the students for the challenges of managing and administering settings in the early childhood education sector as well as bringing them to an appreciation of how early childhood settings function as organizations within a legal and financial framework, how they utilize their resources (material and financial) and how they can meet the needs of the child, the family and the community. Students will also identify quality enhancement strategies and examine how effective management contributes to achieving learning and developmental goals for individual

children, whilst also meeting institutional goals and targets and family and community needs.

CREDITS: 12.00

### **EACE N483 - INTERNSHIP- FOCUS: EARLY CHILDHOOD EDUCATION MANAGEMENT AND ADMINISTRATION**

During these ten weeks, interns will assume professional responsibilities within the early childhood education environment and center in collaboration with qualified mentors. Specifically, interns will be expected to take full environment control for three of the four days or an equivalent 60% of their mentor's load. In addition to assuming the responsibilities for teaching a whole class, interns will monitor and track the learning of a group of children. This direct experience will be complemented by a range of strategies to encourage the habit of reflective practice and a continuing concern for self-improvement as a teacher. Interns will also spend time in the center involved in planning and evaluating their practice, becoming involved in wider activities in the center, as well as conducting peer observations in their own or another center. Satisfactory completion of this internship denotes that the student is ready to take on the full responsibilities of a beginning early childhood educator.

CREDITS: 12.00

### **EAIR N301 - ADVANCED AERODYNAMICS, STRUCTURES AND SYSTEMS I (EASA MOD 11)**

This course will provide the student with the theoretical and practical background of advanced aircraft aerodynamics, structures and systems to obtain the knowledge in the specified subjects to the EASA Module 11 B1.1 attainment levels. The subjects covered in this course include: Advanced Aerodynamics, High Speed Flight, Flight Controls, Airframe Construction, Airframe Structures, Fire Protection and Extinguishing, Electrical Power, Water and Waste, Instruments, Lighting and On-board Maintenance systems.

CREDITS: 8.00

### **EAIR N302 - ADVANCED AERODYNAMICS, STRUCTURES AND SYSTEMS II (EASA MOD 11)**

The purpose of this course is to provide the student with detailed knowledge of the theoretical and practical aspects of advanced aircraft aerodynamics, structures and systems and ability to apply that knowledge in order to complete the B1.1 requirements for GCAA Module 11. Subjects include: Fuel Systems, Hydraulic Systems, Oxygen Systems, Pneumatic and Vacuum Systems, Landing Gear Systems, Air conditioning and Pressurization Systems and Ice and Rain Protection Systems.

CREDITS: 8.00

### **EAIR N315 - ADVANCED GAS TURBINE ENGINES (EASA MOD 15)**

This advanced gas turbine engines course shall combine both theory and practical classes in order for the student to obtain the required knowledge to meet the B1.1 requirements of EASA Module 15. This course is delivered to Higher Diploma students who have already satisfactorily completed gas turbine engine course EARC N215. The outline is designed to give equal assessment weighting to the theoretical and practical elements of the course.

CREDITS: 8.00

### **EAIR N317 - ADVANCED PROPELLERS (EASA MOD 17)**

This advanced propeller course shall combine both theory and practical classes in order for the student to obtain the required knowledge to complete the B1.1 requirements of EASA Module 17. This course is delivered to Higher Diploma students who have already satisfactorily completed propeller course EARC N217. This outline is designed to give equal assessment weighting to the theoretical and practical elements of the course.

CREDITS: 6.00

### **EAIR N366 - ADVANCED MATERIALS AND HARDWARE (EASA MOD 6)**

The purpose of this course is to provide the student with detailed knowledge of the theoretical and practical aspects of Advanced Aircraft Materials and Hardware and ability to apply that knowledge. Subjects include: Aircraft Materials (Ferrous, Non-ferrous, Non-metallic, Wood and Fabric), Corrosion, Fasteners, Springs and Control Cables. EASA Module 6 (6.1 to 6.10)

CREDITS: 8.00

### **EAIR N377 - ADVANCED MAINTENANCE PRACTICES - MECHANICAL (EASA MOD 7)**

The purpose of this course is to provide the student with detailed knowledge of the theoretical and practical aspects of aviation Advanced Maintenance Practices - Mechanical and the ability to apply that knowledge. Subjects include: Fits and Clearances, Riveting, Pipes and Hoses, Springs, Bearings, Transmission, Control Cables, Material Handling, Welding, Brazing and Bonding, Aircraft Weight and Balance, Inspection and Repair Techniques.

CREDITS: 6.00

### **EAM 1103 - AVIATION MATHEMATICS**

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 EASA Part 66 Module 1. Topics covered include: arithmetic, algebra and geometry.

CREDITS: 3.00

### **EAM 1203 - AVIATION PHYSICS**

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

CREDITS: 3.00

### **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 utilization of electrical power. This course meets all the requirements of CAR 66 Module 3.

CREDITS: 6.00

### **EAM 2003 - BASIC AERODYNAMICS (MOD 8 B1 AND B2)**

This course introduces and applies basic aerodynamics that is essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 8 B1.1. Topics covered include; physics of the atmosphere, aerodynamics, theory of flight and flight stability and dynamics.

CREDITS: 3.00

### **EAM 2013 - HUMAN FACTORS (MOD 9 B1 AND B2)**

This course introduces and applies human factors principles that are essential for engineers in the field of aircraft maintenance as required by GCAA CAR 66 Module 9 B1.1. Topics covered include; human performance and limitations, social psychology, factors effecting performance, physical environment, communication, human error and hazards in the workplace.

CREDITS: 3.00

### **EAM 2023 - AVIATION LEGISLATION (MOD 10B1 AND B2)**

This course 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 organizations, commercial and private air transportation, aircraft certification, CAR M and applicable national and international requirements.

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 utilization 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 utilization 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 familiarization 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 G.C.A.A. 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 familiarization 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 familiarization 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)**

This course 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)**

This course is designed for avionics students and meets the EASA Module 5 requirements.

CREDITS: 9.00

**EBMG N200 - INTRODUCTION TO E-BUSINESS**

This course introduces the learner to the scope of e-business and the benefits it offers to an organization 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 learners to understand the marketing approach to business. The learner explores the marketing fundamentals such as marketing orientation, marketing mix, the importance of buyer behavior and the research process. The student 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 BEHAVIOR**

The aim of this course is to enable learners to understand the purchase decision-making process and to recognize the variables and situations that influence buying behavior. 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 learners 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**

This course is designed to give learners a broad understanding of the ways in which finance is managed within a business organization. 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**

Learners 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 learner's abilities to evaluate and select strategies appropriate to business organizations. 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. S

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 - ORGANIZATIONS AND BEHAVIOR**

This course provides an introduction to the nature of organizations in relation to management practices. The course examines the internal nature of organizations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behavior of people within organizations and the significance of organizational 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**

This course 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 organizations 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**

This course provides 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 organization. Some of the key areas students examine are the utilizing of resources, developing reward systems, retention of employees, motivation of employees and managing the HRM function within an organization. Students are also be required to develop a job description as well as develop an advertisement for a specific job.

CREDITS: 4.00

**EBMG N391 - E-BUSINESS PROJECT**

This course enables learners 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**

This course enables learners to recognize the need for managers to be able to gather, analyze, 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**

This course is designed to introduce learners to the management of finance in organizations from a managerial perspective. Learners will have the opportunity to examine a variety of financial topics that directly impinge on the management of organizations, 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**

This course is 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 ORGANIZATIONS**

This course gives learners an insight into current thinking on leadership from the perspective of the organization. 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 organizations can plan to meet their current and future requirements for leadership.

CREDITS: 4.00

**EBMG N416 - MANAGING QUALITY**

This course is designed to introduce learners 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 emphasized, as is the need to manage changes in both operational systems and organizational cultures for its successful implementation.

CREDITS: 4.00

**EBMG N420 - STRATEGIC MANAGEMENT**

This course is designed to introduce learners to strategic management and to develop 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 organization, within its internal and external environments.

CREDITS: 4.00

**EBMG N460 - MANAGING FINANCIAL PRINCIPLES AND TECHNIQUES**

This course 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, analyze and interpret financial information in order to enhance their decision-making skills in relation to their own organizations. 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 globalization of markets and competition and the need to respect today's more diverse society means that organizations have to ensure they are more aware of the wider environment.

CREDITS: 4.00

**EBMG N464 - COMMUNICATION STRATEGY**

Organizations 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

organization, 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 organizations develop to maintain effective supplier relationships.

CREDITS: 4.00

### **EBMG N476 - CULTURE, CLIMATE AND VALUES**

This course focuses on the crucial importance of understanding culture and climate in a globalized, diverse and repeatedly restructured working environment. The course explores cultural issues at national and organizational levels and the differences between culture, climate and values.

CREDITS: 4.00

### **EBMG N477 - HR PLANNING AND DEVELOPMENT**

This course will enable learners to focus on the knowledge, understanding and skills necessary for the planning and development of an organization's human resources (HR). Learners will research the role of the HR function, analyze HR planning and development methods and how they contribute to organizational objectives and requirements, and analyze performance enhancements.

CREDITS: 4.00

### **ECE 2003 - TEACHING MATHEMATICS IN THE EARLY YEARS: SKILLS AND CONCEPT ACQUISITION**

This course 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**

This course 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**

This course builds on 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**

This course will explore 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 Program (IB PYP), the High / Scope program and in the UAE preschool syllabus.

CREDITS: 3.00

### **ECE 3003 - LITERACIES IN EARLY CHILDHOOD**

This course explores a range of current approaches that facilitate the development of language and literacy skills. Included in the concept of literacy are, new literacies, digital or multiliteracies, integrating screen-based texts, images, text layout and hypertext within their scope of study.

CREDITS: 3.00

### **ECE 3203 - LEARNING THROUGH LITERATURE**

This course focuses on how books, poems and a range of other texts including, media and digital or web based. Texts can be used to develop learning across domains with a particular emphasis on early childhood literacy.

CREDITS: 3.00

### **ECE 3503 - PLANNING AND ASSESSMENT IN EARLY CHILDHOOD EDUCATION**

In this course students review the factors, including developmental levels, individual learning needs and program aims that need to be considered in planning for learning across both domains (cognitive, physical, social and emotional) and curriculum areas.

CREDITS: 3.00

### **ECE 3703 - BUILDING LEARNING COMMUNITIES IN EARLY CHILDHOOD EDUCATION**

This course raises student awareness of the family as the child's first teacher, foundation, and framework for the transmission of culture, language, attitudes, and values.

CREDITS: 3.00

### **ECH 1003 - GENERAL CHEMISTRY**

The course introduces the fundamental concepts of chemistry to chemical engineers.

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**

In this course, the 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: 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 2023 - INDUSTRIAL PROCESSES**

The course covers the chemical process industries that are relevant in the UAE and includes the production of industrial gases, fertilizers, inorganic acids, food

products, cement, aluminum, industrial carbon and iron and steel.

CREDITS: 3.00

### **ECH 2033 - FLUID MECHANICS**

This course 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**

This course 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: 3.00

### **ECH 2063 - THERMODYNAMICS**

This course 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**

The course covers the application of tests and analyzes 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 3003 - MASS TRANSFER**

This course covers mass transfer operations with their fundamental theories as related to industrial application. Special emphasis is made on the diffusion theory of gases and liquids, K values, and equilibrium stages. The design of separation processes are analyzed using equilibrium behavior of the systems and supported by

laboratory experiments. Techniques are developed for the analysis of processes used in local oil industries such as distillation, adsorption, and humidification.

CREDITS: 3.00

### **ECH 3013 - MATERIALS AND CORROSION**

This course provides an introduction to the properties and corrosion behavior 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 - HEAT TRANSFER**

This course covers the principles of heat transfer in three modes: conduction, convection (forced and natural), and radiation. Emphasis is placed on practical applications related to heat flow and heat exchangers' design. A description of the heat transfer process in evaporators, furnaces, and boilers is also included. A series of laboratory experiments are designed to reinforce basic principles and to help students develop skills for operating heat transfer equipment.

CREDITS: 3.00

### **ECH 3033 - ELECTRICAL FUNDAMENTALS AND INSTRUMENTATION**

This course 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 3053 - UNIT OPERATION I**

This course covers 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 3123 - HEAT TRANSFER**

This course covers heat transfer, one of the core subjects in chemical engineering.

CREDITS: 3.00

### **ECH 3133 - MASS TRANSFER**

This course covers mass transfer operations with their fundamental theories as related to industrial application.

CREDITS: 3.00

### **ECH 3173 - MATERIALS AND CORROSION**

The course provides an introduction to the properties

and corrosion behavior of materials including metals, alloys and non - metallic materials.

CREDITS: 3.00

### **ECH 3503 - PLANT OPERATIONS AND PERFORMANCE**

This course covers the study of operational aspects of major process equipment.

CREDITS: 3.00

### **ECH 3533 - PROCESS CONTROL SYSTEMS**

This course 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: 3.00

### **ECH 3543 - REACTION KINETICS**

This course provides an introduction to the kinetics of chemical reactions and the design and operation of elementary chemical reactors.

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**

In this course, the 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**

The course covers the chemical process industries that are relevant in the UAE and includes the production of industrial gases, fertilizers, inorganic acids, food

products, cement, aluminum, 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**

This course 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**

This course 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**

This course covers mass transfer operations with their fundamental theories as related to industrial application.

CREDITS: 4.00

### **ECHM N301 - MATERIALS AND CORROSION**

The course provides an introduction to the properties and corrosion behavior of materials including metals, alloys and non - metallic materials.

CREDITS: 4.00

### **ECHM N302 - HEAT TRANSFER**

This course covers heat transfer, one of the core subjects in chemical engineering.

CREDITS: 4.00

### **ECHM N303 - ELECTRICAL FUNDAMENTALS AND INSTRUMENTATION**

This course 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**

This course covers the 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**

This course is 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**

This course provides 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)**

This course 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

### **ECOM N300 - ORGANIZATIONS AND BEHAVIOR**

This course provides an introduction to the nature of organizations in relation to management practices. The course examines the internal nature of organizations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behavior of people within organizations and the significance of organizational 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**

This course 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 organizations and the influence of stakeholders. Learners are also encouraged to investigate the operation of organizations in relation to the local, national and global environment and to identify how those macro and micro environmental issues affect organization's decision making process. The course also provides learners with a solid base of understanding of the parameters within which organizations 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 analyze 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**

This course provides 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 organization. Some of the key areas students examine are the utilizing of resources, developing reward systems, retention of employees, motivation of employees and managing the HRM function within an organization. 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**

This course 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**

This course develops skills to use CAD drafting as a means of communication in the civil and construction industry.

CREDITS: 3.00

### **ECV 1103 - CONSTRUCTION MATERIALS**

This course 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 behavior 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 I**

This course 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**

This course introduces students 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**

This course 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**

This course extends the core knowledge and understanding of soil mechanics previously taught in the program. Students will be introduced to geotechnical engineering systems and approaches required for their design and stability issues.  
CREDITS: 3.00

### **ECV 2053 - SITE SURVEYING**

This is 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.

### **ECV 3023 - QUANTITY SURVEYING AND ESTIMATING**

This course covers topics related to quantity and cost measurement, estimating and monitoring activities relative to the client, the consultant, and the contractor for civil engineering projects.  
CREDITS: 3.00

### **ECV 3073 - CIVIL ENGINEERING CONSTRUCTION**

This course 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 material reflect local, regional and international building standards and practices.  
CREDITS: 3.00

### **ECV 3123 - STRUCTURAL ANALYSIS I**

This course includes the basics of structural analysis for both determinate and indeterminate structures.  
CREDITS: 3.00

### **ECV 3133 - REINFORCED CONCRETE DESIGN AND DETAILING I**

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**

This course examines project costs relative to the client, the consultant, and the contractor.  
CREDITS: 3.00

### **ECV 3193 - WASTE WATER ENGINEERING**

This course 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

### **ECVL N100 - APPLIED DRAFTING AND CAD: CIVIL**

This course 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**

This course 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**

The course 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**

This course 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**

This course introduces 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**

This is a fundamental course that provides students with appropriate theoretical and practical surveying skills that can be utilized in civil engineering related work.

CREDITS: 4.00

### **ECVL N207 - CHEMISTRY FOR CIVIL ENGINEERING**

This is an introductory course in general inorganic chemistry followed by topics specifically related to civil engineering.

CREDITS: 4.00

### **ECVL N210 - INTRODUCTION TO TRANSPORTATION**

This course 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**

This course examines project costs relative to the client, the consultant, and the contractor.

CREDITS: 4.00

### **ECVL N303 - STRUCTURAL ANALYSIS I**

This course includes the basics of structural analysis for both determinate and indeterminate structures.

CREDITS: 4.00

**ECVL N305 - WATER RESOURCES AND SUPPLY**

This course is an introduction to water supply technology as a branch of municipal engineering.  
CREDITS: 4.00

**ECVL N306 - STRUCTURAL DESIGN I**

This course introduces the student to the properties and design principles of reinforced concrete structural elements.  
CREDITS: 4.00

**ECVL N307 - CIVIL ENGINEERING CONSTRUCTION**

This course 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**

This course introduces 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, analyzes 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 firsthand experience with the tools, software and processes of asset management.  
CREDITS: 4.00

**ECVL N312 - WATER TRANSPORT**

This course 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 main roles and responsibilities of various participants in aviation sector and their contribution to global economy. It covers basic issues such as International Aviation Standards for safety, security and environment and operational issues such as air navigation planning, aircraft maintenance and civil aviation administration. It also provides an insight into the governance issues of international organization, aviation authorities and bodies such as ICAO, ACI, IATA, JAA, FAA and CANSO.  
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 N408 - ROAD DESIGN AND CONSTRUCTION**

This course introduces pavement types and the factors that impact highway and road design and construction. 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 N409 - INTERMODAL TRANSPORTATION**

This course 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**

This course introduces 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**

This course 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**

This course 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**

This course aims to link Harbor, Coastal and Waterways Engineering concepts from subjects such as Hydrographic and Bathymetric Survey, 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 N418 - AIRPORT TERMINAL DESIGN**

This course will equip students with knowledge and skills to design airport passenger and cargo terminals and related infrastructure.

CREDITS: 4.00

### **EDT 2003 - TECHNOLOGIES FOR LEARNING I**

This course 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**

In this course students build on 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**

This course develops students' understanding of current educational theory and practice about learning technologies in distance and online education.

CREDITS: 3.00

### **EDT 3003 - COMPUTER PLATFORMS**

The course covers the basics of network operating

systems, network operating system components, operating system installation, and device drivers and configuration.

CREDITS: 3.00

### **EDT 3203 - COMPUTER-BASED TRAINING**

This course 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.

CREDITS: 3.00

### **EDT 3503 - WEB DESIGN FOR LEARNING**

In this course 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.

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**

In this course 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. Students will have specific observations to carry out, focusing on various aspects of child development and school life:

the teacher's role, student interaction and behavior, classroom management and organization amongst others. Student teachers will discover the classroom and raise their awareness of school realities, as well as develop a respect for teachers/educators and schools/ learning environments.

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**

This course 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 behavior.

CREDITS: 3.00

### **EDU 1703 - LEARNING TO TEACH IN THE CONTEMPORARY UAE 1B**

In this course students will continue to develop an understanding of the broad role of the teacher/ educator, the student and the culture of the classroom/ learning environment. 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. The themes of the course are closely related to educational studies and teaching practice courses for this semester. The course links theories of learning to classroom practice. Students explore a range of methodologies including Gardners theory of multiple intelligences, Blooms taxonomy and other contemporary theories of learning. The students critically reflect on their application to the classroom.

CREDITS: 3.00

### **EDU 1802 - INTRODUCTION TO MATH AND SCIENCE IN THE CLASSROOM**

In this course students define and identify naturalistic,

informal and structured activities that support the development of a range of fundamental mathematical and scientific concepts and skills. Students present an aspect of mathematical or scientific enquiry which has both clear relevance and is of interest to K-12 learners, defining the concepts and principles according to international curricular standards and making suggestions for introducing them using developmentally appropriate practices. Links are made to key learning theorists including Piaget, Vygotsky, Bruner and Gardner.

CREDITS: 2.00

### **EDU 2302 - LANGUAGE AND DEVELOPMENT: SLA PRINCIPLES AND PEDAGOGY**

This course builds on 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 analyzed and evaluated.

CREDITS: 2.00

### **EDU 2802 - TEACHING LEARNERS WITH SPECIAL NEEDS**

This course 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 organizational 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**

This course 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 analyze a range of strategies and materials overtly modelled by the teacher and engage in peer teaching and evaluation. They will develop and maintain an ongoing 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**

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 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**

This course 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-centered 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**

This course further develops students' general and academic English language skills as well as supporting and scaffolding student learning in the B.Ed. Program (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**

This course focuses on the teaching of reading and vocabulary. Throughout the course, and integrated with English Language Studies EDUC 268, students engage in an ongoing extensive and intensive reading program 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**

This course aims to develop 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 utilize 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 2**

In this course students build on 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-centered 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**

This course 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 2**

This course will enable students to build on 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, sensitize students to the language they are teaching and build on their existing knowledge. Students will analyze 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**

This course 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, analyzing 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 2**

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 programd 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 analyze 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**

This course 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**

This course is 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 eg: 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 N405 - MANAGING INNOVATION AND CHANGE IN EDUCATION**

This course aims to develop an awareness of the overall organizational 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 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**

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 analyzes of series, parallel, and series-parallel linear circuits.

CREDITS: 3.00

### **EEC 2003 - ELECTRIC CIRCUITS II**

This course introduces transient and steady state analyzes of linear reactive circuits. Circuit simulation and practical laboratories are utilized to reinforce concepts.

CREDITS: 3.00

### **EEC 2013 - DIGITAL CIRCUITS**

This course introduces fundamental concepts of digital systems, which include numbering systems, digital codes, logic symbols, Boolean expressions, logic minimization techniques, analysis of combinational and sequential circuits, and classification of various integrated circuit (IC) families.

CREDITS: 3.00

### **EEC 2033 - MICROCONTROLLER SYSTEMS**

The course introduces the operation and implementation of microcontrollers to practical applications. Common input and output modules are utilized in typical applications in a laboratory setting.

CREDITS: 3.00

### **EEC 2053 - ELECTRONICS I**

This course introduces 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**

This course introduces the elements of common industrial processes for measurement and control of temperature, flow, level, and pressure.

CREDITS: 3.00

### **EEC 3013 - ELECTRONICS II**

This course introduces the fundamentals of analysis and design of analog amplifier circuits for various applications. Noise measurement and noise reduction techniques are introduced as appropriate.

CREDITS: 3.00

### **EEC 3043 - COMMUNICATION SYSTEMS**

This course introduces the fundamentals of electronic communication systems. Topics include analog modulation and demodulation techniques used in transmitters and receivers, respectively, and propagation characteristics of the transmission channel.

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**

This course 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**

This course introduces the fundamentals of common electrical machines used in industrial applications. Three-phase electrical circuits are introduced and the operation of electrical transformers is analyzed.

CREDITS: 3.00

### **EEL 4413 - POWER SYSTEMS ANALYSIS**

This course aims to equip students with the ability to analyze and solve problems commonly encountered in electric power 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**

This course introduces students 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**

This course develops the concepts on the construction, operation and testing of three phase electrical machines.

CREDITS: 4.00

### **EELT N404 - POWER SYSTEMS ANALYSIS**

This course aims to equip students with the ability to analyze and solve problems commonly encountered in electric power systems.

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 analyzes of series, parallel, and series-parallel linear circuits.

CREDITS: 4.00

### **EELX N200 - ELECTRIC CIRCUITS II**

This course 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**

This course introduces fundamental concepts of digital systems, which include numbering systems, digital codes, logic symbols, Boolean expressions, logic minimization 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**

This course 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**

This course covers the fundamentals of common types of electrical machines used in real-life applications.

CREDITS: 4.00

### **EELX N205 - ANALOG ELECTRONIC DEVICES**

This course covers 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**

This 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**

This course involves completing a project involving

the integration and application of technological, organizational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 4.00

### **EELX N301 - ANALOG CIRCUITS**

This course focuses on fundamentals of analysis and design of analog amplifier circuits for various applications.

CREDITS: 4.00

### **EELX N302 - INSTRUMENTATION AND CONTROL I**

This course 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**

This course is 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**

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; satellite communications.

CREDITS: 4.00

### **EELX N405 - POWER ELECTRONICS AND DRIVES**

This course introduces the basic principles of power electronic drive systems for DC and AC motors including rectifying devices, rectifying circuits,

converter operation, AC inverter circuits, frequency conversion and voltage and torque control.

CREDITS: 4.00

### **EGEN N100 - ENGINEERING GRAPHICS**

The course is 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**

This course is a first year mathematics course for students in Engineering Technology programs. 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**  
This course 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 programs.

CREDITS: 4.00

### **EGEN N201 - ENGINEERING MATHEMATICS II**

In this course, 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 analyzes program 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 program. 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 program 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 Mathematics 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 N481 - TRANSPORTATION ASSET MANAGEMENT**

This course introduces 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**

This course focuses on the tools of micro economic analysis and their applications to the transportation sector.

CREDITS: 4.00

### **EGEN N486 - PROJECT MANAGEMENT FOR TRANSPORTATION**

This course provides the necessary tools and information to manage and control projects and their resources.

CREDITS: 4.00

### **EGN 1103 - ENGINEERING MEASUREMENTS AND CAD INTRODUCTION**

This course gives the opportunity to learn basic hands-on skills, engineering measurements and introduction to CAD.

CREDITS: 3.00

### **EGN 2003 - COMPUTER PROGRAMMING**

This course presents formal, problem solving methods applied to the solution of practical, algorithm-based, problems using a high level programming language.

CREDITS: 3.00

### **EGN 2013 - ENGINEERING MATH II**

In this course, students are introduced to calculus mathematics and associated applications.

CREDITS: 3.00

### **EGN 2023 - ENGINEERING MATH III**

This is the second calculus course in the engineering technology program. This course covers infinite series, Maclaurin's and Taylor's series as well as the Fourier series.

CREDITS: 3.00

### **EGN 3023 - HEALTH, SAFETY AND ENVIRONMENT**

This course includes the most important and comprehensive information and practices for health, safety and environment.

CREDITS: 3.00

### **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 behavior 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 behavior. 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 - ANALOG CIRCUITS AND APPLICATIONS**

This course provides the student with the opportunity to work with and correct faults in electronic circuits and equipments. 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**

This course 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**

This course is 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 EQUIPMENTS**

This course 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 analyzed. 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**

This course 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**

This is 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 analyze circuit faults.  
CREDITS: 4.00

**ELEC N2255 - INDUSTRIAL ELECTRONICS**

This course 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**

This course 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**

This course 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 behavior 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**

This course will cover the 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 utilization, control, protection and maintenance of electrical machines. The course aims to comply with the requirements of various technology programs. 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**

This course covers the concepts of software techniques and tools for implementing computer applications in modern industrial environments. 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 familiarize 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 familiarize 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**

This course aims to give 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 emphasizes 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**

This course covers the fundamental theory of modern electronic communication systems and the electrical and physical properties of communication channels. Channel and bandwidth requirements will be analyzed for both analog and digital systems. Topics include analog and digital signal analysis including the effects of noise, modulation techniques for analog 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 optimized 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**

This course is 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 - ANALOG CIRCUITS**

This course 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 analog signals.

CREDITS: 4.00

**ELEC N332 - LIGHTING SYSTEM ANALYSIS AND DESIGN**

This course introduces students to the fundamentals of light and color and interior and exterior lighting systems design with an emphasis on the electrical characteristics of various sources.

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 program.

CREDITS: 4.00

**ELEC N336 - ELECTRICAL MACHINES I**

This course 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**

This course 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 program.

CREDITS: 4.00

### **ELEC N349 - PROJECT: ELECTRONICS (2 SEMESTERS)**

This course involves completing a project involving the integration and application of technological, organizational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 9.00

### **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**

This course 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: modeling 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**

This course trains the students to use modern computer-based tools to design and analyze 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 utilizing 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**

This course 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 realization 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**

This course 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**

This course aims to equip students with the ability to analyze 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 modeling,

load flow analysis and symmetrical components theory.  
CREDITS: 4.00

**ELEC N443 - ALTERNATIVE ENERGY SYSTEMS**

This course 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**

This course 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**

This course 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**

This course 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**

The course includes the basic important information and practices of occupational health, safety and environment.

CREDITS: 3.00

### **ELME N2145 - MACHINING AND METAL CUTTING**

This course 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**

The course 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 emphasizes 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 program. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the program.

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**

This course 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 program. Optional courses will be offered according to demand. Details of course content can be obtained from colleges offering the program.

CREDITS: 3.00

### **ELME N3240 - ELECTROMECHANICAL PROJECT**

This course 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)**

This course focuses on the teaching of speaking, listening and vocabulary in the English Medium Primary School context. The course stresses the importance of evaluating and synthesizing different approaches and styles in facilitating EFL learning.

CREDITS: 3.00

### **ELT 2203 - LANGUAGE ARTS B : TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER A**

This course 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 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.

CREDITS: 3.00

### **ELT 2603 - LANGUAGE ARTS D : TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

This course 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**

This course develops students' awareness of the value of children's literature as a tool for language teaching. Students explore, evaluate, and utilize a variety of children's literature.

CREDITS: 3.00

### **ELT 3203 - LANGUAGE ARTS E : TEACHING METHODS FOR THE SECONDARY SCHOOL ENGLISH**

This course explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Speaking, Listening, and Vocabulary) in UAE secondary school settings.

CREDITS: 3.00

### **ELT 3503 - LITERACY AND GRAMMAR IN THE SECOND LANGUAGE CURRICULUM**

In this course students build on their knowledge of literacy development, by examining the teaching and learning of writing and grammar, and considering how to plan for literacy and grammar in the second language curriculum.

CREDITS: 3.00

### **ELT 3703 - LANGUAGE ARTS F : TEACHING METHODS FOR THE SECONDARY SCHOOL ENGLISH**

This course explores appropriate methods and strategies for the effective, integrated delivery of Language Arts (Speaking, Listening, and Vocabulary) in UAE secondary school settings.

CREDITS: 3.00

### **EMC 2003 - COMPUTER AIDED DRAFTING**

Fundamentals of graphical communications, computer aided drafting, orthographic projections, drawing standards, drawing scales and tolerance, geometric modeling, descriptive geometry, problem visualization and solution in mechanical engineering applications.

CREDITS: 3.00

### **EMC 2013 - MATERIALS SELECTION AND TESTING**

This course covers the material selection criteria for specific engineering applications by introducing mechanical properties and material defects.

CREDITS: 3.00

### **EMC 2023 - STATICS AND DYNAMICS**

This course 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**

This course is 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**

This course 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**

This course 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 organizational and maintenance planning in industrial settings.

CREDITS: 3.00

**EMC 3013 - FABRICATION AND WELDING**

This course 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 3143 - ROTATING EQUIPMENT**

This course 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.

CREDITS: 3.00

**EMC 3163 - PROCESS CONTROL: MECHANICAL**

This course presents the basic application concepts of automatic process control theory, and the usage of these concepts in modern industrial applications.

CREDITS: 3.00

**EMC 3263 - FABRICATION AND WELDING**

This course 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: 3.00

**EMCH N200 - COMPUTER AIDED DRAFTING**

Fundamentals of graphical communications, computer aided drafting, orthographic projections, drawing standards, drawing scales and tolerance, geometric

modeling, descriptive geometry, problem visualization 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**

This course 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**

This course introduces 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**

This course 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**

In this course the principles of fluid power and components will be studied together with circuit design.

CREDITS: 4.00

**EMCH N301 - FABRICATION AND WELDING**

This course 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 recognize 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**

This course 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.

CREDITS: 4.00

**EMCH N305 - THERMODYNAMICS II**

This course covers the applications of the laws of thermodynamics in the design and optimization of engineering systems.

CREDITS: 4.00

**EMCH N306 - PROCESS CONTROL: MECHANICAL**

This course 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

**EMGT N403 - INTERNATIONAL MARKETING AND BUSINESS**

This course will examine 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 emphasizes 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 organizations 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**

The course will require the integration and application of management theory and work-related experience to a simulated business environment. Competing teams will analyze business environments, formulate and implement strategies, defend decisions, and assess business performance through presentations and reports.

CREDITS: 4.00

**EMGT N431 - CONTRACT MANAGEMENT**

This course aims to give 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**

This course provides a fundamental coverage of total quality management (TQM) and presents a useful set of tools and techniques to implement and manage quality programs in the workplace. Tools and techniques such as statistical process control (SPC), quality systems, quality function deployment (QFD) and the international standard organization (ISO) are covered.

CREDITS: 4.00

### **EMGT N436 - TOTAL QUALITY MANAGEMENT**

This course provides a fundamental coverage of total quality management (TQM) and presents a useful set of tools and techniques to implement and manage quality programs in the workplace. Tools and techniques such as statistical process control (SPC), quality systems, quality function deployment (QFD) and the international standard organization (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 organization. The human resources of an organization consist of all people who perform its activities. Human Relations management concerns human behavior 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**

This course uses an independent work based project to integrate and apply the management, organizational, communication and interpersonal skills learned in the Engineering Management program. The development of managerial planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

### **EMGT N454 - OPERATIONS MANAGEMENT**

This course is 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

### **EMM 4003 - ADVANCED HUMAN FACTORS**

This course 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 4013 - 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 organization (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**

This course 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 4213 - AVIATION PROJECT MANAGEMENT**

This course 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 4223 - 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 organization. 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 organization, and in different regions and countries, and to consider what constitutes ethical human resource management.

CREDITS: 3.00

### **EMT 2003 - APPLIED MECHANICS**

This course 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**

This course introduces the application of semiconductor devices and operational amplifiers to digital and analog circuits.

CREDITS: 3.00

### **EMT 2623 - INSTRUMENTATION AND CONTROL I**

The purpose of this course is to provide a practical working knowledge of the components found in the forward and feedback loops of common industrial process controls and the calibration and interfacing of various input and output transducers to signal conditioning amplifiers.

CREDITS: 3.00

### **EMT 3103 - ENGINEERING MATERIALS**

This course 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.

CREDITS: 3.00

### **EMT 3123 - INSTRUMENTATION AND CONTROL II**

In this course, emphasis is placed on the study of closed loop automatic process control systems and some of their related problems.

CREDITS: 3.00

### **EMTX N300 - PROJECT: MECHATRONICS ENGINEERING TECHNOLOGY**

This course involves completing a project using the integration and application of technological, organizational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 4.00

### **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 Programs. 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 Center, 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 program. 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 program. 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 B<sub>1</sub> 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 program.

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 program. 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 B<sub>2</sub> 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 PET or recognized equivalent such as IELTS 4.5 with no band below 4.0.

CREDITS: 7.00

**ENGL N2255 - DIPLOMA ENGLISH IV**

This course focuses on the achievement of the English Language graduation requirement.

CREDITS: Pass/fail only

**ENGL N264 - ENGLISH COMMUNICATIONS IV**

This is the final in a series of four courses which develop learners' language proficiency to Level B<sub>2</sub> 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 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 program 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**

This course focuses on writing skills required for various types of program 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 program 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 straight forward 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 program support, subject area integration and career preparation.

CREDITS: 4.00

### **ENGL N470 - PROFESSIONAL WRITING AND COMMUNICATION**

The course 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 utilized 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**

This course builds on 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 organizations involved in the management of these assets is necessary for students to gain firsthand experience with the tools, software and processes of asset management.

CREDITS: 4.00

### **ENHT N3423 - HIGHWAY TECHNOLOGY**

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: 4.00

### **ENHT N3433 - HIGHWAY STRUCTURES MAINTENANCE**

This course 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**

This course is 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 and allows students to observe, implement and reflect upon the theories, methodologies and approaches highlighted in the Education and methodology strands of the program.

CREDITS: 1.00

### **EPC 1901 - PRACTICUM 1B**

The central component of the education program 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 program 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 program, students will conduct the practicum in a relevant setting, e.g. nursery, primary school, special needs center 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.

CREDITS: 3.00

### **EPC 3903 - PRACTICUM 3B**

Student teachers work with children aged between 4-5 years old in local early childhood settings for a total of 15-20 days, typically over a 3-4 weeks period. They continue to implement a range of observational and teaching tasks aimed at improving their understanding of how teachers can facilitate development across domains with particular emphasis on planning - differentiating learning to cater for a range of diverse learning needs and assessment. Students also explore issues concerning the inclusion of children with special needs.

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 childrens' 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)**

This course focuses on the teaching of speaking, listening and vocabulary in the English Medium Primary School context.

CREDITS: 3.00

### **EPR 2203 - LANGUAGE ARTS B TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER A**

This course 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

### **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.

CREDITS: 3.00

### **EPR 2603 - LANGUAGE ARTS D TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

This course 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

### **EPR 3003 - MATHEMATICS FOR THE PRIMARY SCHOOL TEACHER**

This course explores basic mathematical principles, concepts and skills that the student teacher will require in order to attain an appropriate level of understanding and proficiency to effectively teach content in an English medium primary classroom.

CREDITS: 3.00

### **EPR 3203 - MATHEMATICS TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

This course explores appropriate methods and strategies for the effective, integrated delivery of mathematics in an English medium primary classroom.

CREDITS: 3.00

### **EPR 3503 - SCIENCE FOR THE PRIMARY SCHOOL TEACHER**

This course explores basic scientific principles, concepts and skills that the student teacher will require in order to attain an appropriate level of understanding and proficiency to effectively teach content in an English medium primary classroom.

CREDITS: 3.00

### **EPR 3703 - SCIENCE TEACHING METHODS FOR THE PRIMARY SCHOOL TEACHER**

This course explores appropriate methods and strategies for the effective, integrated delivery of science in an English medium primary classroom.

CREDITS: 3.00

### **ETEC N155 - MATHEMATICS II: ENGINEERING**

This course is a second mathematics course for students in Engineering Technology programs. 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

### **ETEC N305 - ORGANIZATIONAL BEHAVIOR AND MANAGEMENT**

This course provides an introduction to the nature of organizations in relation to management practices. The course examines the internal nature of organizations from both a theoretical and practical viewpoint. The course is intended to develop an understanding of the behavior of people within organizations and the significance of organizational design and characteristics.

It also aims to provide the basis for, and to underpin further study in, specialist areas of business.

CREDITS: 4.00

### **ETEC N410 - INTERNATIONAL AND UAE ECONOMICS**

This course 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

### **ETEC N435 - ETHICS AND PROFESSIONAL PRACTICE**

This course is a philosophical introduction to the area of applied ethics.

CREDITS: 4.00

### **ETEC N450 - PROJECT MANAGEMENT FOR ENGINEERING**

This course provides the necessary tools and information to manage and control projects and their resources.

CREDITS: 4.00

### **EWRK N300 - WORK PLACEMENT**

This course 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

### **FASH N210 - FABRICS AND TEXTILES I**

This course combines the study of fabrics and textile design as applied in fashion design. The course also enables students to recognize the main qualities of textiles and fabrics; and to understand the differences between natural and man - made fibers and textiles.

CREDITS: 4.00

### **FASH N212 - PATTERN MAKING II**

This course 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**

This course 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 labeling.  
CREDITS: 4.00

### **FASH N222 - PATTERN MAKING III**

This course further develops the students 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 - COMPUTERIZED PATTERN DRAFTING**

This course provides students with an intermediate level of flat-pattern production, introducing them to the basics of pattern digitizing, and finalizing using industry-specific CAD/CAM applications.  
CREDITS: 4.00

### **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+.  
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.  
CREDITS: 16.00

### **FND 3016 - FOUNDATIONS ENGLISH LEVEL 3**

This is the second of four English language courses at Foundations level, starting at CEFR level B1 and exiting around CEFR B1+.  
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.  
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 MATH 1**

This course is the first of two math courses in the new Foundations Studies Program. Foundations Math 1 (M010) focuses on basic numerical skills to provide a solid mathematical foundation for applications in subsequent courses.  
CREDITS: 5.00

### **FND M020 - FOUNDATION MATH 2**

This course is the second of two mathematics courses in the new Foundations Studies Program. Foundation Math 2 (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

### **GINT 1110 - VISUAL COMMUNICATIONS**

This course provides the initial introduction to the basic concepts and language of visual communication by introducing the basic drawing skills needed in the profession.  
CREDITS: 7.00

### **GINT 1120 - INTRODUCTION TO DESIGN PRINCIPLES**

This course introduces the different elements of design, such as color, texture, shape, form, and design principles such as balance, harmony, unity and variety.  
CREDITS: 5.00

### **GINT 1210 - GRAPHIC ART I**

This course is an introduction to the methods, materials and techniques of graphic reproduction.  
CREDITS: 4.00

**GINT 1220 - DESIGN I**

This course provides the application of the design principles to answer a specific design brief, and the selection of different materials as integral design components.

CREDITS: 5.00

**GINT N1230 - TECHNICAL DRAWING I**

This course provides students with hands-on experience on graphical presentation through the study and practice of manual drafting.

CREDITS: 3.00

**GINT N2120 - DESIGN II**

This course offers more and specific practical applications of design. It emphasizes the design concept development, space planning, problem solving, and the selection of interior finishes and lighting.

CREDITS: 7.00

**GINT N2130 - TECHNICAL DRAWING II**

This course provides students with an introduction to the study and practice of computer-aided design (CAD).

CREDITS: 5.00

**GINT N2210 - PROFESSIONAL PRACTICE AND PORTFOLIO DEVELOPMENT**

This course provides hands-on experience in professional practices: setting up a business, finding clients, charging and collecting fees, taking instructions, translating needs into design, and ethics. It also introduces the students to various techniques in visual presentation.

CREDITS: 3.00

**GINT N2220 - DESIGN III**

This course requires a major project to put into practice the various skills acquired in the program. The students continue to produce design work which will form the main body of their personal portfolio.

CREDITS: 8.00

**GINT N2230 - INTERIORS CONSTRUCTION**

This course introduces the basic principles in the construction of interiors, such as walls, openings, ceilings, stairs, structural materials, and surfaces.

CREDITS: 3.00

**HCL 1103 - SOFTWARE APPLICATIONS FOR HEALTH**

This is an introductory course on software applications. Correct keyboarding technique is emphasized (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 health care are discussed and demonstrated.

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 health care industry. Students will understand the business and legal benefits of establishing a records retention program. Students will utilize basic accounting skills required to address business practices in private and public health care sectors.

CREDITS: 3.00

**HCL 2103 - HEALTH CARE INFORMATION SYSTEMS**

This course introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in health care environments. The course reflects the challenges of health care 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 2503 - BILLING AND REIMBURSEMENT**

This course introduces students to the basics of billing and reimbursement. On the completion of this course, students show an understanding and appreciation of economic analysis of the health care market, identify and assess factors that control the health care cost control including case mix funding systems and managed care programs, describe and discuss the impact of adopting new technologies on cost of health care services, and finally, consider and discuss the ethical and political aspects of these new health care funding models from a global perspective.

CREDITS: 3.00

**HCL 2603 - HEALTH CARE LAW AND ETHICS**

Upon completion of this course, students will understand the principles of ethical decision making in a health care administrative environment; be able to analyze 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 health care, and specific ethical issues such as hospital organizations 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**

This course provides a broad overview of common health care challenges experienced by clients/patients in the health care system. Health promotion and prevention is covered in relation to health care outcomes. It is intended to provide health care administrators and leaders with a working knowledge of common health promotion and prevention issues and diseases in the UAE. Implications for the health care system, and quality management in relation to health care challenges are covered.  
CREDITS: 3.00

### **HCL 2773 - HEALTH CARE CUSTOMER RELATIONSHIP MANAGEMENT**

This course focuses on the concepts and processes of service quality improvement and customer care and how they are applied in health care facilities. The role of the health care administrator will be linked to customer and stakeholder expectations through applying concepts of quality improvement, quality control, quality assurance, risk management and utilization 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 3103 - PROJECT MANAGEMENT HEALTH PROFESSIONS**

This course will explore a systematic methodology for initiating, planning, executing, controlling, and closing of projects. An industry standard methodology such as PMI will be adopted. This course will prepare students for the capstone project in their final year. The course will also cover the terminology of project management;

skills that a project manager should have and the type of organizational structure he/she will work in.  
CREDITS: 3.00

### **HCL 3903 - HEALTH CARE 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 HEALTH CARE**

This course introduces qualitative and quantitative research methods in health care. The emphasis of the course is on applying a scientific approach to the evaluation of literature on health care related states and events in specific populations.  
CREDITS: 3.00

### **HCL 4103 - HEALTH CARE POLICIES**

This course provides an overview to the development of health care 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 4203 - BIostatISTICS AND EPIDEMIOLOGY**

This course provides students with a basic understanding of epidemiology and the use of descriptive and inferential statistics in health care. 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 specialization of Health Information Management.  
CREDITS: 3.00

### **HCL 4303 - GLOBAL TRENDS IN HEALTH CARE SYSTEMS AND ISSUES**

This course provides the opportunity to examine and analyze current health care system issues and trends. The course provides the foundation for a working

knowledge to critical assess and appraise current health care systems and to proactively consider emerging health care system issues and their impact on health care system outcomes.

CREDITS: 3.00

### **HCL 4906 - HEALTH CARE ADMINISTRATION PRECEPTORSHIP/ CAPSTONE PROJECT**

This course provides a consolidation experience with an opportunity to engage in professional practice with a preceptor in the professional field. Students are engaged in professional practice in addition to the development and implementation of an approved capstone project.

CREDITS: 8.00

### **HDH 1203 - CHEMISTRY FOR DENTAL HYGIENE**

This course 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 organization of elements to molecules and polymers; molecular modeling; 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**

This course provides an introduction to the chemistry of organic compounds, and biochemistry as it applies to the organization, 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 modeling, 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 recognize 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 emphasizes the role of the dental hygienist in relation to other health care 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 recognizing main procedures needed in cleaning, sterilizing and maintaining instruments and dental units.

CREDITS: 6.00

### **HDH 2103 - ORAL HISTOLOGY**

This course 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 recognize common oral diseases.

CREDITS: 3.00

### **HDH 3003 - DENTAL RADIOLOGY THEORY AND PRACTICE**

This course 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 recognizing any significant and common discrepancies and technical errors.  
CREDITS: 3.00

### **HDH 3103 - COMMUNITY DENTAL HEALTH I**

This course is 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**

This course 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 the 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 recognize 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 health care. 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**

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.  
CREDITS: 4.00

### **HDH 3955 - 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: 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 flouride and fissure sealants are summarized. This course also prepare the students for planing 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 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: 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**

Community Dental Health I focuses on the students role as dental health promoters and program planners. Needs analysis for community programs 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 malodor 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 health care 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 emphasizes the strategies and health care and management guidelines of the World Health Organization (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 health care 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**

The course 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**

This course 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 Organization and the Centers 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 BEHAVIOR**

This course provides the fundamental concepts in social-behavioral sciences and health; social behavioral factors identified as causes and antecedents to health; mechanisms for changes in health, prevailing health behavior change concepts and models; and methods for developing, implementing and evaluating health behavior 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**

This course is 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**

This course provides an overview of models and theories of health promotion as applied in mental health care. Topics pertinent to mental health care 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**

This course 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**

This course 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 programs 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 recognize 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**

This course emphasizes the translation of theoretical processes, health related information and data, into a program 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 HEALTH CARE**

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 programs.

CREDITS: 3.00

**HED 3503 - OCCUPATIONAL HEALTH**

This course provides the basic principles and concepts of occupational health practice with special focus on the interdisciplinary health care 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**

The course 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 health care 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 programs and/or strategies in a patient care setting. This setting will provide opportunities to practice a variety of teaching and health counseling 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  
HEALTH CARE**

This course looks at the fundamentals of strategic health care management and how it relates to planning, implementing and evaluation of health care provision within a global and regional context. This will include strategic management models of health care delivery systems in different countries. Major areas will be analysis of health care data, licensing and accreditation, and marketing health promotion.

CREDITS: 3.00

**HED 4103 - HEALTH ASPECTS OF AGING**

This course 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 programs 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**

This course is 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**

This course 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 utilized to analyze 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**

The course 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 recognize 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

### **HED 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**

This course 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, immobilization, 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 recognized First Responder Certificate (Harrisburg Area Community College).

CREDITS: 8.00

### **HEM 2104 - EMT BASIC (I)**

This course 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)**

This course 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 immobilization, and emergency transport.

CREDITS: 4.00

### **HEM 2304 - EMT ADVANCED (I)**

This course 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 3902 - HOSPITAL 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 - 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**

This course provides high level training for paramedic students to provide patient care using advanced pharmacological intervention. This course prepares students to utilize department 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**

This course aims to prepare the learner to critically consider the environmental constraints and resource limitations that exist in the United Arab Emirates and similar health care 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**

This course 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**

This course 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 utilizing 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 4908 - EMERGENCY MEDICAL SERVICES ELECTIVE**

This course provides the student with the opportunity for specialized training and clinical practice in the pre-hospital and emergency response setting. This clinical practice and specialized training will be under the supervision of qualified pre-hospital or emergency response staff.

CREDITS: 8.00

### **HEM 4944 - INTERNATIONAL PRECEPTORSHIP**

This course 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

### **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: 4.0

### **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. 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 1703 - MEDICAL TERMINOLOGY FOR ALLIED HEALTH PROFESSIONS**

This course covers basic medical terminology beginning with prefixes, suffixes and word roots used in the medical and health care language. Students build on this knowledge by identifying, analyzing, 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

### **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 rationale 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**

This course 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 emphasizes the application of knowledge of pathophysiology to Health Information Management.

CREDITS: 3.00

### **HIM 2203 - HEALTH INFORMATION MANAGEMENT STUDIES**

Comprehensive health information management skills; categorization 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 computerized 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 HEALTH CARE**

Health care management is a continually changing and evolving discipline. Basic understanding in organizational 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 utilized

in this practicum in alignment with best practice. During the practicum students are exposed to and code increasingly complex medical, surgical, obstetrical, and newborn records with an emphasis on coding speed, accuracy, completeness and sequencing. The practicum provides an opportunity to identify suggest improvemets 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 emphasizes 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**

This course introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in health care environments. Upon successful completion of this course, students are expected to assess and appreciate the appropriateness of computer hardware, software, and networking technologies in health care 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**

This course 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 program 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: 3.00

### **HIM 4003 - INTERMEDIATE MANAGEMENT IN HEALTH CARE**

This course is and introduction to two areas of management; financial and human resource management in the health care industry. For financial management an overview of accounting systems and controls in health care, managerial accounting, budgeting, staffing and reporting tools will be included. Human resource management will cover introduction to human resource management, strategy and planning. Students will examine processes such as recruitment, selection, training, performance appraisals, counseling, 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**

In this course 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 health care 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 HEALTH CARE**

This course is 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 program.

CREDITS: 3.00

### **HIM 4303 - HEALTH CARE ECONOMICS AND HEALTH INSURANCE**

This course introduces students to the basics of health economics. On completion of this course, students show an understanding and appreciation of economic analysis of the health care market, identify and assess factors that control the health care insurance industry, describe and discuss the different models of health care cost control including case mix funding systems and managed care programs, describe and discuss the impact of adopting new technologies on cost of health care services, and finally, consider and discuss the ethical and political aspects of these new health care funding models from a global perspective.

CREDITS: 3.00

### **HIM 4403 - ADVANCED MANAGEMENT IN HEALTH CARE**

This course focuses on strategic management and its application in health care. Topics covered in this course are strategic planning and forecasting, marketing, organizational assessment, benchmarking, quality improvement, workplace re-design and process re-engineering. On completion of this course, students develop a departmental strategic plan and manage its implementation at departmental and organizational levels.

CREDITS: 3.00

### **HIM 4924 - PROFESSIONAL EXPERIENCE**

This is an application course at selected health care 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 health care 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**

This course 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 computerized record processing systems, utilizing 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 health care 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 analyzes as well as standard classroom lectures.

CREDITS: 3.00

### **HIMP N250 - HEALTH INFORMATION CODING**

This course 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 realize 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**

This course covers the categorization 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 emphasized when categorizing 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 organizational structure and responsibilities of the medical staff realizing 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 newborn 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**

This course introduces the student to the use of descriptive and inferential statistics in health care. The course builds upon statistical applications and concepts

taught in HIMP 200 Health Care 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 HEALTH CARE**

This course introduces students to the essential concepts and applications of information systems (IS) and information technology (IT) in health care environments. The course reflects the challenges of health care 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 HEALTH CARE**

Covers organizational management, motivation, leadership, and conflict management. Managerial functions are examined from the perspective of a health care manager who is responsible for solving and facilitating the creative solutions process for others in the health care environment. The nature of change and the management of change are discussed.  
CREDITS: 4.00

### **HIMP N360 - EPIDEMIOLOGY**

This course 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**

This course provides 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 newborn 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 program 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**

This course builds on 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**

This course is 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**

This course 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 utilized to analyze 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 HEALTH CARE**

This course is an introduction and provides an overview in accounting systems and controls in health care, 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 health care industry with emphasis placed on staffing.

CREDITS: 4.00

**HIMP N418 - QUALITY MANAGEMENT IN HEALTH CARE**

This course focuses on the concepts and processes of quality and how quality is applied throughout health care. It discusses activities and methods of quality improvement in health care 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 utilization review processes.

CREDITS: 4.00

**HIMP N419 - HUMAN RESOURCES MANAGEMENT IN HEALTH CARE**

This course 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 cognizant of relevant

terms relative to human resources.

CREDITS: 4.00

### **HIMP N425 - ADVANCED HEALTH INFORMATICS**

This course builds on 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 N456 - ADVANCED MANAGEMENT IN HEALTH CARE**

This course builds on the management skills learned in HIMP<sub>326</sub> Human Resource Management and HIMP<sub>355</sub> Quality Management in Health Care and focuses on strategic management and its application in health care. 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 health care, organizational assessment and benchmarking.

CREDITS: 5.00

### **HIMP N460 - HI SYSTEMS PROJECT MANAGEMENT**

This course builds on student knowledge gained from HIMP 315 Information Systems in Health Care, 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 health care management information systems in hospitals and other health care settings.

CREDITS: 5.00

### **HIMP N471 - ADVANCED HI CODING AND CASEMIX**

This course builds on 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 health care 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 health care 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**

This course introduces students to the basics of health economics. On completion of this course, students show an understanding and appreciation of economic analysis of the health care market, and can identify and assess factors that control the health care insurance industry.

CREDITS: 5.00

### **HIMP N510 - PROFESSIONAL EXPERIENCE II**

This is an applications course at selected health care 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 health care 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**

This course introduces students to the basics of health economics. On completion of this course, students show an understanding and appreciation of economic analysis of the health care market, and can identify and assess factors that control the health care 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 emphasizes the history of the Arab nation; analyzes 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 behaviors and health problems will be covered and related to their social and biological effects.

CREDITS: 4.00

### **HLED N260 - BIOSTATISTICS**

This course will provide an overview of biostatistics. The types of quantitative analysis used in health education/promotion programs 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 program; understand and use the biostatistical data they meet during their work.

CREDITS: 4.00

### **HLED N307 - TECHNICAL ARABIC HEALTH COMMUNICATION**

This course 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**

Requires students to translate theoretical processes and health related information and data into a program 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**

This course 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**

This course 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 programs 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 programs for various settings and audiences. Students are encouraged to utilize 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 programs in a community setting. There should be an opportunity to utilize 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 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 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 organization/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

### **HLTH N1215 - HEALTH BUSINESS COMPUTING I**

This course 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 programs, 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 health care 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**

This course provides computer skills using Arabic software. Arabic keyboarding skills and technique

are emphasized. 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 brochures and flyers are included. This course will be project-based to allow for more realistic applications.

CREDITS: 2.00

### **HLTH N209 - IMMUNOLOGY**

This course will introduce 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 health care industry using up-to-date Microsoft technology. Students will learn how to provide office support for health care 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 emphasized. 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 ORGANIZATIONAL BEHAVIOR**

This course provides students with a working knowledge of Organizational Behavior. Students will explore approaches to improving services and standards of health care delivery. Students will develop the skills required to work effectively with other members of the multidisciplinary health care team. Students will utilize

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**

This course is designed to provide students with a working knowledge and understanding of medical language used by health care 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 analyze 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 recognizing and articulating medical roots, prefixes and suffixes, in order to analyze 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 emphasized 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 organize 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 health care industry using Microsoft up-to-date technology. Students will learn how to focus on the fundamentals and importance of Health care database information systems while providing office support for health care 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**

This course 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**

This course provides the student with a working knowledge of the clerical processes involved in the management of health information in the health care 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 utilize basic accounting skills required to address business practices in private and public health care 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 health care 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 analyzing, 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 analyzing and evaluating information.

CREDITS: 5.00

### **HLTH N425 - RESEARCH II**

In this course 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 analyze, 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**

Course covers introduction to the profession, core subjects and structure of the medical imaging program. The course examines the history of medical imaging, roles and responsibilities of medical imager, application of core diagnostic imaging modalities, fundamentals of radiation safety practices, clinical ethics and elementary aspects of patient care.

CREDITS: 3.00

### **HMI 2001 - PATIENT CARE I**

This course 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**

This course introduces the basic x-ray machine and other medical imaging systems. Students learn to identify and explain the function of the various parts of an x-ray machine, how x-rays are produced, how they interact with matter and what factors affect the quality and quantity of the x-ray produced. Factors that affect image quality are explained so that students can produce diagnostic images at the lowest possible dose. Students also learn to describe medical images in precise terms such as spatial and contrast resolution.

CREDITS: 2.00

### **HMI 2102 - MEDICAL IMAGING TECHNOLOGY II**

This course provides a comprehensive understanding of how digital images are produced, manipulated and transmitted using a variety of medical imaging modalities. Students develop a basic understanding of Patient Archive and Communication Systems (PACS), and Radiology Information Systems (RIS), that manage and distribute information and images produced in a modern medical imaging department. An understanding of the design and function of fluoroscopy and theater and mobile equipment is also developed.

CREDITS: 2.00

### **HMI 2303 - MEDICAL IMAGING POSITIONING AND PROCEDURES I**

This foundational course prepares students for medical imaging clinical education at the introductory level. Students who are successful in this course will have the knowledge, understanding and skills required for general medical imaging of the appendicular skeleton, spine and chest in a modern patient centric health care environment.

CREDITS: 3.00

### **HMI 2403 - MEDICAL IMAGING ANATOMY AND PATHOLOGY I**

This foundational course equips students with fundamental image critique skills enabling them to recognize, identify and describe normal medical imaging anatomy and pathologies commonly encountered on diagnostic images of the upper and lower extremities, the spine, pelvis, hips, and chest.

This course also promotes an understanding the nature of disease and the role of diagnostic imaging in patient care and clinical management.

CREDITS: 3.00

### **HMI 2503 - MEDICAL IMAGING POSITIONING AND PROCEDURES II**

This course teaches students 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 theater 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, theater 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 theater images and basic contrast media studies as appropriate. Students will develop further skills in basic anatomical image interpretation, image critique and disease classification to recognize, 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**

This course teaches the fundamentals of patient care for ward, theater, 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: 2.00

### **HMI 3102 - MEDICAL IMAGING AND POSITIONING III**

This course focuses on the theory and application of specialist medical imaging modalities to include pediatric 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: 2.00

### **HMI 3202 - SPECIALIZED IMAGING I**

This course is designed to ensure students develop their technical knowledge of specialized 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 Computerized 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 health care 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**

This course develops applied skills in recognizing 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: 3.00

### **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 theater 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, theater 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: 5.00

### **HMI 4002 - SPECIALIZED IMAGING II**

This course 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 specialized elective imaging courses. Specifically this course covers patient preparation care during and after cross sectional imaging and addresses relevant common clinical pathologies. On successful conclusion of this course students will have knowledge and understanding of specific specialized imaging modalities such that they will be able to evaluate their best clinical use and discuss their role in patient care and management.

CREDITS: 2.00

### **HMI 4003 - QUALITY MANAGEMENT IN MEDICAL IMAGING**

This course develops student skills in explaining and evaluating international quality management systems that are used to maintain and improve performance in health care organizations and justify their application in medical imaging. Students learn to apply basic

quality measurement tools and critically appraise the results they provide. Students analyze how quality management tools are used by health care organizations to deliver quality improvement that is timely, effective and patient centered. 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 program.

CREDITS: 3.00

### **HMI 4102 - SPECIALIZED IMAGING ELECTIVE**

This course 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. This course enables students to develop a deeper understanding of a specialist area of practice to provide a coherent understanding of the technical and clinical application of an elected modality.

CREDITS: 2.00

### **HMI 4103 - RESEARCH PROJECT I**

This course 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**

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 analyzing 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 analyzing 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. In this course, students will continue to develop previously acquired radiographic and patient care skills in general X-ray, theater 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: 3.00

### **HMI 4964 - CLINICAL PRECEPTORSHIP VI**

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, theater and mobile imaging and specifically develop fundamental skills in advanced trauma, CT, MRI and ultrasound modalities, the theory of which has been taught prior to clinical learning.

CREDITS: 5.00

### **HMI 4976 - CLINICAL PRECEPTORSHIP VII**

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 focus on enhancing their radiographic and patient care skills in all areas of plain X-ray, in advanced trauma, CT, MRI and ultrasound, the theory of which has been taught prior to clinical learning.

CREDITS: 8.00

### **HMI 4989 - CLINICAL PRECEPTORSHIP VIII**

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 focus on enhancing their radiographic and patient care skills in all areas of plain X-ray, in advanced trauma, CT, MRI and ultrasound, in preparation for graduate clinical practice.

CREDITS: 12.00

### **HML 1003 - HEMATOLOGY I**

This course provides an introduction to the work carried out in a hematology laboratory and emphasizes the importance of correct and complete sample collection on the quality of results. Students learn about normal hematopoietic cell production, the use of blood cell counters and data interpretation. Students will recognize normal and abnormal red cells and describe the causes and effects of various types of anaemia.

CREDITS: 3.00

### **HML 1103 - MICROBIOLOGY I**

This course 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. Through laboratory practical exercises and observation of clinical practice in a hospital microbiology department, the role of the medical technologist in the management of infectious diseases is delineated.

CREDITS: 3.00

### **HML 1203 - CLINICAL CHEMISTRY I**

This course 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**

This course is 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 - HEMATOLOGY II**

This course will begin with instruction on the detection, diagnosis and laboratory investigation of the hemoglobinopathies. 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 hematological malignancies. The structure and importance of the HLA system and stem cell transplantation will also be discussed.

CREDITS: 3.00

### **HML 2023 - HEMATOLOGY III**

This course explains normal hemostasis. The roles and interactions of the blood vessels, platelets, and coagulation and fibrinolytic systems are discussed. The inherited and acquired disorders of hemostasis 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**

This course 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 biohazardous 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 analyzers. 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 are able to perform a range of manual techniques for analysis in Clinical Chemistry and are introduced to automated chemistry analyzers. 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 2302 - TRANSFUSION SCIENCE I**

The course 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 centers 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**

The course brings together the various streams of knowledge taught in Microbiology, Hematology, 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**

In this course 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 health care. 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**

This course 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**

This course builds 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**

This course will introduce 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 specialized 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 specialized 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**

This course introduces students to the biological principles of human disease and the transition from health to disease. The course will synthesize 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 recognize the requirements for good management, organizational 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 emphasize 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**

This course builds on 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**

The course is 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. 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 molecular and biomedical methods and equipments, including handling technical problems and assess the quality of technical work performed by self and others.

CREDITS: 8.00

### **HPH 1204 - FOUNDATION CHEMISTRY FOR PHARMACY**

This course 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**

This course 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**

This course 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 microorganism, sterilization 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**

This course 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; biochemical basis of physiological functions and disorders.

CREDITS: 4.00

### **HPH 2103 - IMMUNOLOGY**

This course introduces students to the role and process of non-specific and specific immunity, the principles of passive and active immunization; 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**

This course introduces 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**

This course 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**

This course 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 2603 - PHARMACEUTICS II**

Syllabus: concepts of key physical-chemical and mathematical principles, which are essential to product design, development and presentation of liquid and semi liquid pharmaceutical dosage forms; pre-formulation and formulation studies of solutions, syrup, emulsion, suspension, ophthalmic, otic and inhaled pharmaceutical preparations.

CREDITS:

### **HPH 3013 - PATHOPHYSIOLOGY AND THERAPEUTICS I**

This course 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**

This course 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 behavior.

CREDITS: 3.00

### **HPH 3033 - PHARMACEUTICS II**

This course 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, otic and inhaled pharmaceutical preparations.

CREDITS: 3.00

### **HPH 3103 - PHARMACEUTICS III**

This course examines the key physical-chemical and mathematical principles, which are essential to product design, development and presentation of 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: 3.00

### **HPH 3123 - PHARMACEUTICAL ANALYSIS**

This course 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**

This course examines the molecular and cellular level concepts behind current treatment strategies for blood and hemopoietic disorders, the actions and the use of drugs in the therapeutic management of cardiovascular disorders, and the actions and verification of the use of drugs in the therapeutic management of respiratory disorders.

CREDITS: 3.00

### **HPH 3904 - COMMUNITY PHARMACY PRECEPTORSHIP I**

This course 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 utilizes 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**

This course facilitates gaining experience in providing patient-centered 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**

This course 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 specialized delivery procedures of biotech products and the impact of biotechnology on pharmaceutical care

CREDITS: 3.00

### **HPH 4013 - COMPLEMENTARY MEDICINE**

This course 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 OTC, herbal and other complementary medication therapy as well as prevention of health risks and fostering healthy lifestyles.

CREDITS: 3.00

### **HPH 4023 - CLINICAL BIOCHEMISTRY AND TOXICOLOGY**

This course introduces students to the 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; mechanisms of toxicity, causes, detection and treatment; clinical toxicology of therapeutic/non-therapeutic agents.

CREDITS: 3.00

### **HPH 4073 - PATHOPHYSIOLOGY AND THERAPEUTICS III**

This course introduces students to the principles of antimicrobial chemotherapy and antineoplastic and immunomodulating drugs; and the therapeutic management of liver and gastrointestinal tract diseases.

CREDITS: 3.00

### **HPH 4102 - PHARMACEUTICAL CARE**

This course 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**

This course provides opportunities for students to apply theoretical knowledge to demonstrate research competencies in a field of study related to pharmacy. It involves 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 consolidating competencies at patient-centered 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: 5.00

### **HPH 4924 - COMMUNITY PHARMACY PRECEPTORSHIP II**

This course provides students with opportunities to undertake a number of formalized daily routine activities such as interpreting, processing and dispensing prescriptions according to legal requirements; extemporaneous compounding as well as counseling patients. Students perform other daily routine pharmacy tasks including administrative procedures, drug procurement, safe storage, handling and disposal of drugs in this setting.

CREDITS: 5.00

### **HPH 4952 - INDUSTRIAL PHARMACY PRECEPTORSHIP**

This course provides opportunities for students to undertake a number of formalized routine activities related to the formulation, manufacture and testing of pharmaceuticals; QA/QC of sterile and non-sterile products; preformulation studies; tablet processing; semi-solid formulation; processing of injectables, environmental monitoring; GMP; elements of Good Control Laboratory Practice and validation methods.

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 program 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 students 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 HEALTH CARE SYSTEMS**

The course explores global systems of health care

delivery and the development of UAE health care from the 1972 joining of the World Health Organization (WHO) until the present. An introduction to the concept of public health and the provision of health care delivery nationally; as opposed to individually is examined, while considering the economic and social factors impacting the provision of public health care. Health care policy and strategies for provision of primary health care are investigated, focusing on current and future challenges for the UAE in the 21st century.

CREDITS: 3.00

### **HSC 1603 - MEDICAL TERMINOLOGY FOR HEALTH SCIENCES PROFESSIONS**

This course introduces health care and medical terminology beginning with prefixes, suffixes and general abbreviations. Students learn root words, related terms, specific abbreviations according to body systems and identify medical specialists. Students will apply their knowledge of medical terminology in sentence and simplified case study contexts.

CREDITS: 3.00

### **HSC 1803 - MEDICAL TERMINOLOGY FOR HEALTH SCIENCES**

This course covers basic medical terminology beginning with prefixes, suffixes and word roots used in the medical and health care language. Students build on this knowledge by identifying, analyzing, 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**

This course will provide students with a basic understanding of concepts pertaining to microbiology with reference to the care of individuals experiencing bacterial and/or viral health challenges and the protection and prevention of infectious diseases. Students will acquire an understanding of the purposes of various microbial agents and the underlying pathophysiology pertaining to select microbial diseases.

CREDITS: 3.00

### **HSCI N200 - HUMAN STRUCTURE AND FUNCTION III**

This course provides students with a comprehensive understanding of core concepts pertaining to pathophysiology beginning at the cellular level and including the epidemiology, pathophysiology, clinical manifestations, and evaluation and treatment

of common disease states (with reference to intrinsic and extrinsic factors that may influence alterations in pathophysiological functioning) which may affect both children and adults. The focus of the course is on concepts rather than descriptions and incorporates on-line learning resources and problem-based exercises.  
CREDITS: 5.00

### **HSCI N250 - MICROBIOLOGY**

This course will provide students with a basic understanding of concepts pertaining to microbiology with reference to the care of individuals experiencing bacterial and/or viral health challenges and the protection and prevention of infectious diseases. Students will acquire an understanding of the purposes of various microbial agents and the underlying pathophysiology pertaining to select microbial diseases.  
CREDITS: 3.00

### **HSDH N211 - ORAL HISTOLOGY AND EMBRYOLOGY**

Upon successful completion of this course, the dental hygiene students will have the satisfactory knowledge of the development and the microscopic structure of the oral tissues. Students will be able to describe the development of oral and facial tissue from the time of fertilization until reaching the fetal stage of the human infant and will be able to recognize the microscopic structure of the soft and hard tissues within the oral cavity.  
CREDITS: 3.00

### **HSDH N214 - HEAD AND NECK ANATOMY**

Upon successful completion of this course, students will be able to recognize 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: 4.00

### **HSDH N220 - 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 recognize common oral diseases.  
CREDITS: 5.00

### **HSDH N250 - PRE-CLINICAL DENTAL HYGIENE THEORY**

Upon successful completion of this course students will be able to comprehend the basic concepts related to the profession of dental hygiene. This course emphasizes the understanding of the role of the dental hygienist in relation to other health care professions. The course describes the dental hygiene model, theories, and practice of care, emphasizes infection control and its principles and protocols that are applied in the dental care settings.  
CREDITS: 6.00

### **HSDH N255 - 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: 5.00

### **HSDH N270 - PRE CLINICAL DENTAL HYGIENE PRACTICE**

Upon successful completion of this course, the dental hygiene students will be able to apply the theoretical material of (pre-clinical Dental Hygiene (theory)) in the dental laboratory and the dental unit. They will be able to identify the main instruments they will be using throughout their profession. Also, they will recognize the main procedures needed in cleaning, sterilizing and maintaining their instruments and dental units.  
CREDITS: 2.00

### **HSDH N280 - 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: 5.00

### **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: 2.00

**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**

This course provides the knowledge of the concepts and principles of ethics and law in health care. 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: 2.00

**HSDH N315 - 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 recognize 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: 2.00

**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 recognizing 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**

This course will give the students 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**

This course will introduce the 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**

This course 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 anesthesia and sedation in the dental practice.

CREDITS: 2.00

**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: 3.00

**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**

On 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 theater 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 on successful completion of this course will be able to recognize 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**

This course 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, theater, 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**

This course 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**

Students on successful completion of this course will have 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**

This course 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 specialized 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 specialized cross sectional imaging in patient care and clinical management.

CREDITS: 4.00

### **IMAG N315 - MEDICAL IMAGING AND POSITIONING III**

This course 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 specialized 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 - SPECIALIZED IMAGING I**

This course is designed to allow students to develop their knowledge of more specialized imaging modalities. The student will be introduced to the design and function of specific equipment used in Computerized 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 health care organizations for quality improvement measures that are timely, effective and patient-centered. Also it will focus on the three major components of image quality as an integral part of the general total quality management program.

CREDITS: 5.00

### **IMAG N411 - RADIATION SAFETY AND BIOLOGY**

This course 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 emphasizes the theory and practice of radiation protection for both patients and health care 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 N440 - RESEARCH PROJECT I**

In this course student/s will conduct research and write up the research study in a publishable form for a recognized medical imaging journal. This will be

accomplished in an individual guided study format intended to examine and analyze 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**

This course will allow students to gain knowledge and understanding of the emerging, imaging technologies and to assess their ability to impact health care 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 health care 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 course 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**

This course 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**

This course introduces students to the computing technology needed to run a modern small office/home office (SOHO). Students learn how to operate SOHO devices, customize 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**

This course 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**

In this course 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 customized reports.

CREDITS: 4.00

### **ITDP N0151 - INTEGRATED IT PROJECT**

This course 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**

In this course 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.

CREDITS: 4.00

### **ITDP N0219 - WEBSITE DESIGN I**

This course 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 behaviors and templates.

CREDITS: 4.00

### **ITDP N0221 - INTERNET PROTOCOLS**

This course 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**

This course 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**

This course introduces 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**

This course 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**

This is 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**

This is a practical course that 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**

This is a practical course that focuses on a review and consolidation of previous skills plus new concepts and skills in developing word processing, spreadsheet and database software application programs. 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 programs in Arabic to produce Arabic/bilingual documents required in a business environment. Some translation may be required.

CREDITS: 4.00

### **ITDP N0241 - PC CONFIGURATION AND SUPPORT I**

This course is 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**

This course 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**

This course 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**

In this course 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**

This course 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**

This course 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**

In this course 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 analyze the benefits and weaknesses of an e-commerce website.  
CREDITS: 4.00

### **ITDP N0281 - IT PROJECT**

In this course 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**

The course provides students with basic knowledge about the application of information technology (IT) within organizations with an emphasis on the use of application software such as spreadsheets and databases.  
CREDITS: 4.00

### **ITEC N177 - WEBSITE DESIGN**

This course provides the students with basic knowledge about planning a Website and introduces the main guidelines for designing Websites. The students gain expertise in an industry standard Website authoring tool and use it to build and publish Websites.  
CREDITS: 4.00

### **ITEC N201 - E-BUSINESS STRATEGY**

This course provides students with 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 organization and between different businesses.  
CREDITS: 4.00

### **ITEC N204 - NETWORKING MODELS**

This course 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**

This course 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, organize 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**

This course 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**

In this practical course, 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 programs 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**

This course 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**

This course 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**

This course 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 modeling 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**

This course 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 organizations 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**

This course 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 modeling 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), serialized 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**

This course aims at teaching 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 AUTHORIZING**

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**

This course covers data modeling concepts, focusing on the entity-relationship data model and normalization technique. Students learn how to translate business requirements into conceptual entity-relationship data models and enhance such models by the normalization 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**

This course 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**

This course 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 analyze, 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**

This course is 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**

This course 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**

This course 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**

This course 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**

This course provides students with an understanding of the structured systems analysis processes by explaining important modeling 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 organizations 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**

In this course 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**

This course 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 organization.

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**

This course 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 analyze 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**

In this course 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: 4.00

### **ITEC N312 - DATABASE ADMINISTRATION**

Students develop the ability to manage Oracle database files, manage table spaces, segments, extents, and blocks while using Globalization 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**

This course 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**

In this course students examine three new software programs currently being used in the corporate world. Students are both taught and expected to work independently to learn these software programs, through research, training materials and online browsing. Students also have to demonstrate an advanced knowledge of the software programs through a teaching demonstration.

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 "Center". 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 N324 - SMALL OFFICE NETWORKS**

This course 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 program 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**

This course considers how e-Business organizations 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**

This course 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 N339 - CUSTOMER RELATIONS MANAGEMENT**

This course 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**

This course 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 - MODELING OF DISCRETE EVENT SYSTEMS**

In this course students learn the fundamentals of discrete event systems and computer simulation modeling. 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 program that can be used to predict system behavior when some parameters are changed over period of time. The students learn how to design experiments, analyze 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**

The course 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**

This course is 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 - ORGANIZATIONAL BEHAVIOR**

This course introduces the reasons behind, and issues relating to, people's behavior within an organization and the processes of organizational change. The course defines organizational behavior and its importance. It then proceeds to explore motivation, leadership, group behavior, cultural issues, organizational change and conflict and power in organizations. These issues are looked at within the context of organizations generally, and those within the UAE specifically. Applications of organizational improvement will synthesize the principles.

CREDITS: 4.00

### **ITEC N354 - INTERNATIONAL STUDIES**

This course is 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**

The course includes an analysis of critical quality planning practices and how to implement evaluations and audits as part of a quality assurance program. It provides an overview of techniques to plan, organize, 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**

In this course 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 customizing 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**

In this course 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 optimize 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**

In this course 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**

This course 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 modeling 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**

This course 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**

This course 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**

This course outlines the business intelligent tools that help Management of an enterprise to store, access and analyze 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 N410 - CURRENT TECHNOLOGIES**

This course 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 behavior of E-business systems.

CREDITS: 4.00

### **ITEC N411 - MANAGEMENT OF INFORMATION SYSTEMS**

This course focuses on a broad view of the role of computer-based information (IT) systems in organizations from a management perspective. The strategic nature of an information system is emphasized

in relation to other organizational 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**

This course 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, conceptualizing, 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**

This course 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**

This course builds on previous courses in Object Oriented Analysis and Design (OOAD) to further develop the student's ability to: a) sufficiently analyze and specify the requirements of a software application or system using OOAD methods, UML diagrams, and standardized 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, organizational, 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**

This course 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 customize 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**

This course 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 utilizes 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**

This course 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**

This course focuses on using Red Hat Linux as an operating system for the Intel family of computers. Students learn installation and system startup 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**

This course 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**

This course 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**

The course 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 optimization techniques, IP Multicasting and IPv6 to support enterprise-class IP routing networks.

CREDITS: 12.00

### **ITEC N492 - ADVANCED SWITCHING**

In this course 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)**

In this course 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 practice

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**

This course 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**

This course familiarizes 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 health care 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 3013 - 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: 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 program. 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**

This course focuses on the development of

communication skills needed in academic programs. 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 program 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**

This course introduces students to the practice of journalism and helps them to understand the role journalists play in reporting, processing and production of news.

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**

In this course 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**

This course introduces students to the practice of journalism and helps them to understand the role journalists play in reporting, processing and production of news.

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**

In this course 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: 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 GLOBALIZATION**

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, 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 globalization as a theme and as a practice on the ground. They will, above all, acquire the skills of international problem solvers.

CREDITS: 3.00

### **LSG 2013 - GLOBALIZATION, 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 - GLOBALIZATION AND THE ARAB GULF**

This course will endeavor to first grasp the cultural, economic, political dimensions of globalization, after which it will then move to explore its varied impact on the Arab Gulf.

CREDITS: 3.00

### **LSG 2033 - FAITH, JUSTICE AND GLOBALIZATION**

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 globalization. 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. Examining the ways in which these beliefs contribute to the controversial political, economic, and social issues stemming from globalization, we will explore how these traditions function as resources both for healing and justice as well as violence and conflict.

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**

This course 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**

This course 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**

This course will introduce 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**

This course 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**

This course 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**

This course 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 organization.

CREDITS: 3.00

### **LSH 2913 - DRAMA APPRECIATION**

This course is 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**

This course is 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**

This course extends the concepts developed in Mathematics Foundation 1 and 2 and is designed for those students requiring a higher level of mathematics for entry into Bachelor programs.

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**

The course 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**

This course 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**

The course 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 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**

This course 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 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 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**

This course provides an introduction to general concepts of chemistry.

CREDITS: 3.00

### **LSN 1263 - PHYSICS**

This course is an introductory level physics that is essential for all engineering programs.

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 2313 - SCIENTIFIC PRINCIPLES**

This is a survey course intended for students without a significant science background who intend to enroll in Science based programs, or wish to extend their scientific knowledge.

CREDITS: 3.00

**LSN 2433 - ECOLOGY**

Students on 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 2003 - CREATING YOUR FUTURE**

This course equips students with advanced workplace transferrable skills to prepare them for the competitive labor market. It is cross disciplinary and applicable to all students.

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**

This course focuses on the crucial importance of understanding culture and climate in a globalized, diverse and repeatedly restructured working environment.

CREDITS: 3.00

**LSS 2093 - INTERCULTURAL INTELLIGENCE**

This course will equip students with knowledge of the role of worldviews and cultural mapping in today's globalized and diverse working environment. In particular, the course will allow students to explore and analyze 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**

This course 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**

This course aims to introduce 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**

This course builds on 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**

The course is 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**

This course 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**

This course provides an introduction to general concepts of chemistry.

CREDITS: 4.00

### **LSSC N123 - HUMAN GROWTH AND DEVELOPMENT**

This course examines human growth and development across the life span. Human growth and development is emphasized 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**

This course is an introductory level physics that is essential for all engineering programs.

CREDITS: 4.00

### **LSSC N231 - SCIENTIFIC PRINCIPLES**

This is a survey course intended for students without a significant science background who intend to enroll in Science based programs, or wish to extend their scientific knowledge.

CREDITS: 4.00

### **LSSC N243 - ECOLOGY**

Students on 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**

This course focuses on the crucial importance of understanding culture and climate in a globalized, diverse and repeatedly restructured working environment.

CREDITS: 4.00

### **LSSS N230 - PSYCHOLOGY**

This course aims to introduce students to psychology, providing an overview of the field.

CREDITS: 4.00

### **LSSS N231 - ECONOMICS**

This course presents essential microeconomic concepts in lay English and is intended for students who have never taken a course in economics before.

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 - ORGANIZATIONAL BEHAVIOR**

This course introduces the reasons behind and issues relating to people's behavior within an organization and the processes of organizational change. The course defines organizational behavior and its importance. It then proceeds to explore motivation, leadership, group behavior, cultural issues, organizational change and conflict and power in organizations. These issues are looked at within the context of organizations generally and those within the UAE specifically. Applications of organizational improvement will synthesize the principles

CREDITS: 4.00

### **LSSS N245 - GLOBAL MEDIA TRENDS**

In this course students identify and analyze 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 analyze 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**

This course focuses on developing knowledge, understanding, skills and competencies needed for effective and appropriate intercultural communication. Various aspects of culture are considered and related firstly to the student's own 'home' community and sense of 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**

This course provides students with an understanding that sport and leisure is a socially driven phenomenon.

CREDITS: 4.00

**MATH N105 - COLLEGE ALGEBRA**

This course 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 programs. 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 N2134 - TECHNICAL MATHEMATICS**

This course is designed to meet the needs of Electromechanical Fundamentals 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 Electromechanical Fundamentals Technology to reinforce Mathematical concepts studied.

CREDITS: 3.00

**MATH N2135 - COMPUTING AND MATHEMATICS**

This course 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 spreadsheet 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 math specific course in the Construction Technology program. 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 spreadsheets. 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 N2255 - DIPLOMA MATHEMATICS**

This course is an optional course in the final year of the Business Diploma program which enables students who may wish to transfer into the higher diploma program the opportunity to increase their math related skills.

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 emphasizes how descriptive and inferential statistics can be applied to business environments.

CREDITS: 4.00

**MATH N3240 - MATH IV**

This course is the final Mathematics course for students in the Highway Technology program. 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 fulfill the needs of the first year of engineering students in the BAS program.

CREDITS: 4.00

### **MECH N201 - ENGINEERING MECHANICS AND STRENGTH OF MATERIALS**

This course introduces the analysis of shaft systems and beam systems under shear and bending stresses, the application of kinetic principles to the solution of impact and variable acceleration problems. The course looks at the basic concepts of linear and angular impulse and momentum, work energy and power by solving practical problems. The course includes a section on determining the deflection of simply supported and cantilever beams using proper differential equations. The students use the relevant laboratory facilities to run, record, compare and analyze different tests results obtained.

CREDITS: 4.00

### **MECH N307 - MATERIALS AND CORROSION**

The course begins with an introduction of general characteristics and properties of metallic materials, alloys and non-metallic materials. The corrosion topics include different forms of corrosion, mechanics and causes of corrosion, corrosion testing and inspection methods, principles of corrosion prevention and cathodic protection. Emphasis is on the right choice of material for an application and prevention methods of corrosion.

CREDITS: 4.00

### **MECH N314 - ROTATING EQUIPMENT**

This course 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. 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**

This course 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 feedforward 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 N319 - MECHANICS OF MACHINES**

This course forms part of a group of courses available within the Electrical Engineering Technology Higher Diploma program. These courses will be offered according to demand. Details of course content can be obtained from colleges offering the program.

CREDITS: 4.00

### **MECH N322 - ADVANCED DYNAMICS AND KINEMATICS OF MACHINES**

This course is 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**

This course 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 analyzing practical problems related to industry.

CREDITS: 4.00

### **MECH N420 - VIBRATIONS IN MECHANICAL SYSTEMS**

This course is to provide students with 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**

This course 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 recognize 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**

This course covers the classification of refrigeration and air-conditioning systems and their applications, psychrometrics to determine moist air properties and to analyze air conditioning processes. It introduces cooling loads calculations using ASHRAE standards, air distribution systems and duct design. Vapor compression refrigeration cycles and components, vapor compression system analysis and energy estimation methods are also covered. It includes lab experiments and demonstrations.

CREDITS: 4.00

### **MECH N445 - POWER AND DESALINATION**

This course forms part of the general optional stream available within the Mechanical Engineering Bachelor of Applied Science program. 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, synthesizing, investigating, problem solving, or other activities the project called for.

CREDITS: 4.00

### **MECH N450 - MECHANICAL ENGINEERING DESIGN**

This course builds on students' 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

### **MEIM N3225 - PLANT SERVICES: COMPRESSED AIR**

This course has a strong hands on approach to develop the knowledge and skills necessary to run, test and maintain compressed air service and related equipment. The student will be able to understand the operating principles of the various compressors and ancillary equipment. Great emphasis is placed on the safety aspects within the areas of study. Ideally this module should be taken in parallel with an electrical plant course.

CREDITS: 4.00

### **MEIM N3230 - INDUSTRIAL PLANT**

This course has a hands on approach that develops the knowledge and skills associated with rotary equipment. Students work with a range of rotary equipment including: centrifugal and axial flow fan systems; reciprocating, rotary and centrifugal pump systems; industrial gas turbine systems and steam turbine systems. Practical work will help develop an understanding of the operating principles of these systems. Emphasis is placed on precision shaft alignment using lasers.

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.

CREDITS: 3.00

### **MLAB N201 - HEMATOLOGY I**

This course provides an introduction to the work carried out in a hematology laboratory and emphasizes the importance of correct and complete sample collection on the quality of results. Students will learn about normal hemopoietic cell production, the use of blood cell counters and data interpretation. Students will be able to recognize 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 specialized 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 - HEMATOLOGY II**

This course will begin with instruction on the detection, diagnosis and laboratory investigation of the hemoglobinopathies. 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 hematological malignancies. The structure and importance of the HLA system and stem cell transplantation will also be discussed.

CREDITS: 4.00

### **MLAB N252 - CELLULAR PATHOLOGY I**

This course 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**

This course builds on 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 (gynecological samples only). Through laboratory practical instruction, the role of the technologist in the cytology laboratory will be understood.

CREDITS: 4.00

### **MLAB N255 - HEMATOLOGY III**

This course explains normal hemostasis. The roles and interactions of the blood vessels, platelets, and coagulation and fibrinolytic systems are discussed. The inherited and acquired disorders of hemostasis 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

### **MLAB N260 - MICROBIOLOGY II**

This course 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 biohazardous 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 analyzers. 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: 4.00

### **MLAB N280 - TRANSFUSION SCIENCE I**

The course 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 centers and laboratories will be presented.

CREDITS: 3.00

### **MLAB N282 - 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

### **MLAB N310 - 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 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 N315 - CELLULAR PATHOLOGY III**

This course builds on 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**

The course brings together the various streams of knowledge taught in Microbiology, Hematology, 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**

This course introduces students to data management, study design, and statistical analysis in the medical laboratory environment. Students learn how to use statistical methods to plan, analyze, and present research projects for research committee approval.

CREDITS: 2.00

### **MLAB N420 - BIOLOGY DISEASE**

This course introduces students to the biological principles of human disease and the transition from health to disease. The course will synthesize 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**

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 emphasize 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 N440 - HISTOLOGY**

This course is a theoretical, 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

### **MTH 1103 - PRE CALCULUS**

This course is a first year mathematics course for students in Engineering Technology programs. 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**

In this course, 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, Optimization and Newton's Method.

CREDITS: 3.00

### **MTH 2103 - CALCULUS II**

In this course, 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**

This is an introduction to systems of linear equations and matrices, Gaussian elimination, matrix operation, inverse, rank and nullity, linear transformation, Eigen values and Eigen vectors. Areas covered include first order differential equations: Linear equations, Separable equations, integrating factors; existence and Uniqueness; second order differential equations: Homogeneous and Non homogeneous equations, Characteristic equation, Method of undetermined coefficients; laplace transform and its use in solving differential equations; simple partial differential equations with boundary value, problem and solution.

CREDITS: 3.00

### **MTH 3013 - LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS**

The course covers topics on Hyperbolic functions and their inverse. Topics included are Taylor, Maclaren and Fourier series, operations with vectors dot and cross products, lines and planes. Functions of several variables, partial derivatives, double and triple integrals, moments, center 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**

This course provides 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**

This course 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 program for a PLC and the solving of industrial related problems form the basis of this course.

CREDITS: 4.00

### **MTRX N309 - COMPUTER AIDED MANUFACTURE**

This course covers the description of numerically controlled systems, numerically controlled axes and program 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**

The course 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, REFRIDGERATION AND PUMPS**

This course provides a broad introduction to the construction and operation of the most common rotating equipments 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**

This course 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 analyze, design and select engineering components and elements and therefore involves economic, societal, safety and manufacturing aspects.

CREDITS: 4.00

### **MTRX N3240 - PROJECT II**

This course 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**

This course enables the 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 N348 - PROJECT: MECHATRONICS ENGINEERING TECHNOLOGY**

This course involves completing a project using the integration and application of technological, organizational, communication and interpersonal skills. Planning, safe implementation, evaluation and presentation skills form the basis of this course.

CREDITS: 9.00

### **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 modeling, 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**

This course 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 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

### **MTRX N449 - INDEPENDENT WORK-BASED PROJECT**

This course uses an independent work based project to integrate and apply the management, organizational, communication and interpersonal skills learned in the Engineering Management program. The development of managerial planning, implementation, evaluation and presentation skills are key aims of this course.

CREDITS: 4.00

### **PDVA N1100 - PERSONAL DEVELOPMENT ASSESSMENT**

The aim of this course is to develop and reinforce the soft skills required in the classroom and the workplace to ensure that the students become fully skilled and productive members of both environments. It is crucial that these skills are developed, encouraged and continually recycled across all five subjects of the Work Readiness Program. This is an experiential course which places responsibility for PPD training on all faculty teaching the Work Readiness Program.

CREDITS: 0

### **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**

On 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 sterilization 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**

Students upon successful completion of this course 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 student will be able to (1) 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**

This course 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**

This course 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, otic 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 immunization 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**

This course 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 behavior.

CREDITS: 4.00

### **PHAR N324 - PHARMACY PRACTICE MANAGEMENT**

Pharmaceutical care and health promotion; Patients need assessments, Social and pathological priority groups, Pharmaceutical care as a management movement, Organizational structure and behavior, 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 nonprescription 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**

This course 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 utilizes 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 counseling of patients and communication with health care professionals. The course examines optimizing 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**

This course is 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**

This course examines the concepts and practical computerized 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 health care. It further provides students with an overview of pharmacy administration, pharmacy and drug laws and pharmacoconomics.

CREDITS: 6.00

### **PHAR N415 - IMMUNOLOGY**

This course 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 immunization, 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 N455 - PATHOPHYSIOLOGY AND THERAPEUTICS II**

Students on successful completion of this course are able to make decisions about patient/client signs and symptoms, to differentiate between side effects of pharmacological therapy, and modifications required to solve or minimize problems due to drug therapy. A case study approach is utilized 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**

This course 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**

This course 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, analyzing and presenting a research project relevant to pharmacy.

CREDITS: 3.00

### **PHY 1103 - PHYSICS I**

This course is an introductory level physics that is essential for all engineering programs. 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**

This course is a continuation of introductory level physics that is essential for all engineering programs. 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, utilizing experimental methodology and written reports, is used to reinforce these principles.

CREDITS: 3.00

### **PMED N240 - CLINICAL PRACTICE I - INTEGRAL**

This course 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**

This course 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**

This course 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**

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: 6.00

### **PMED N315 - PARAMEDICAL SCIENCES VII**

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 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**

This course 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**

This course provides students with the knowledge and skills required for the EMT-Paramedic during complicated situations involving pediatric, 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**

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 - 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 Program. The learning outcomes for this course are adapted from the U.S. DOT EMT-Paramedic National Standard Curriculum.

CREDITS: 6.00

**PPDV N1155 - PERSONAL AND PROFESSIONAL DEVELOPMENT I**

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 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**

This course 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**

This course 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 counselor, 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**

This course 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**

Students on successful completion of this course 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 health care professionals.

CREDITS: 4.00

### **PRAC N301 - CLINICAL PRACTICE III**

Students on successful completion of this course 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 health care professionals. Successful students at the conclusion of this course will have demonstrated that they took part in designated imaging modalities within a patient centric health care environment.

CREDITS: 4.00

### **SCIE N050 - INTRODUCTION TO SCIENCE I: FOUNDATIONS \***

The aim of the preparatory basic science course is to provide students with the fundamentals of Biology, Chemistry and Physics through theoretical and laboratory applications. Topics to be covered will include the functioning of living organisms, the chemical properties of living things, the concepts of matter and the basics of Organic Chemistry.

CREDITS: 3.00

### **SCIE N1205 - SCIENCE**

This course provides an introduction to the fundamentals of Physics, Chemistry and Biology as they apply to Food Sciences. Topics covered include the SI system of measurement, the cellular basis of living organisms, the digestive system, the periodic table, basic concepts of organic chemistry as well as laboratory safety.

CREDITS: 3.00

### **SPC 1003 - SPECIAL TOPICS**

This course has restricted registration and is only for students following a specialized course of study.

CREDITS: 3.00

### **SWET N311 - SOFTWARE ENGINEERING**

In this course logic is taught as it relates to generic problem solving and to the design and validation of programming algorithms in Visual Basic. Logic and code will be developed and documented to implement a selected range of practical applications in engineering.

CREDITS: 4.00

### **TOUR N302 - FUNDAMENTALS OF TOURISM**

Tourism, travel, hospitality 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 exists between these fields. In addition, this course develops awareness of the benefits sought from destinations by travelers and investigates the complexity and impacts of global tourism.

CREDITS: 4.00

### **TOUR N452 - EVENT PLANNING**

The MICE or business event industry, as it is commonly called, has long been recognized 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 N415 - EDUCATION AND SOCIETY IN THE UAE**

This course 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, health care systems, social development systems and organizations, culture, ethnicity, marriage and womens' issues.

CREDITS: 2.00

**WORK DH008 - 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: 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)**

The 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: 6.00

**WORK N2250 - WORK EXPERIENCE I (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 N2251 - WORK EXPERIENCE II (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 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)**

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 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)**

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 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 program. Construction courses will be offered according to demand. Details of course content can be obtained from colleges offering the program. The duration of the work experience session varies from nine to ten weeks depending the program, college and employer situation.

CREDITS: 9.00

### **WORK N350 - WORK EXPERIENCE - AIRLINES (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 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 program 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 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 programs. The extended work experience is intended to give students an opportunity to get more involved in the engineering activities of the host organization. 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, spreadsheets, database entry skills, presentations, file-management, email, internet and

dtg. 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 Program 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 ensures 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

