جامعة عجمان
AJMAN UNIVERSITY

UNIVERSITY CATALOG 2017-2018

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His Highness Sheikh Khalifa Bin Zayed Al Nahayan

President of the United Arab Emirates

His Highness Sheikh Humaid Bin Rashid Al Nuaimi

Member of the Supreme Council

Ruler of Ajman Patron of Ajman University

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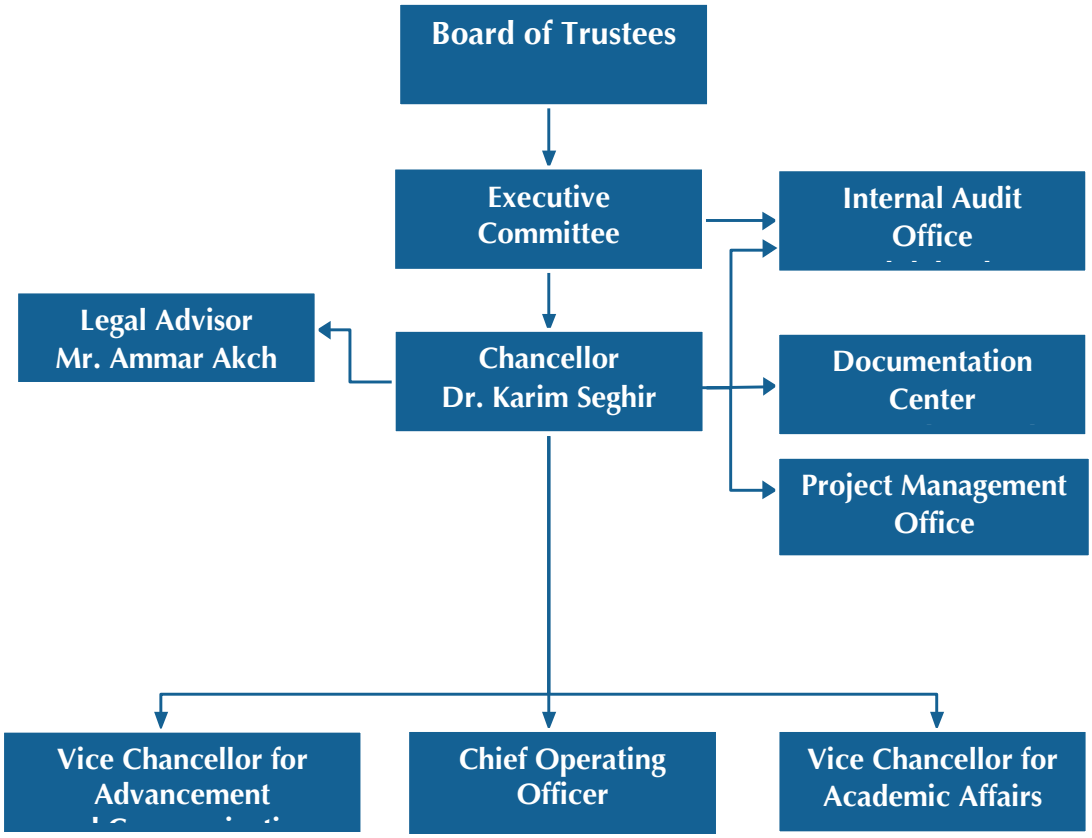
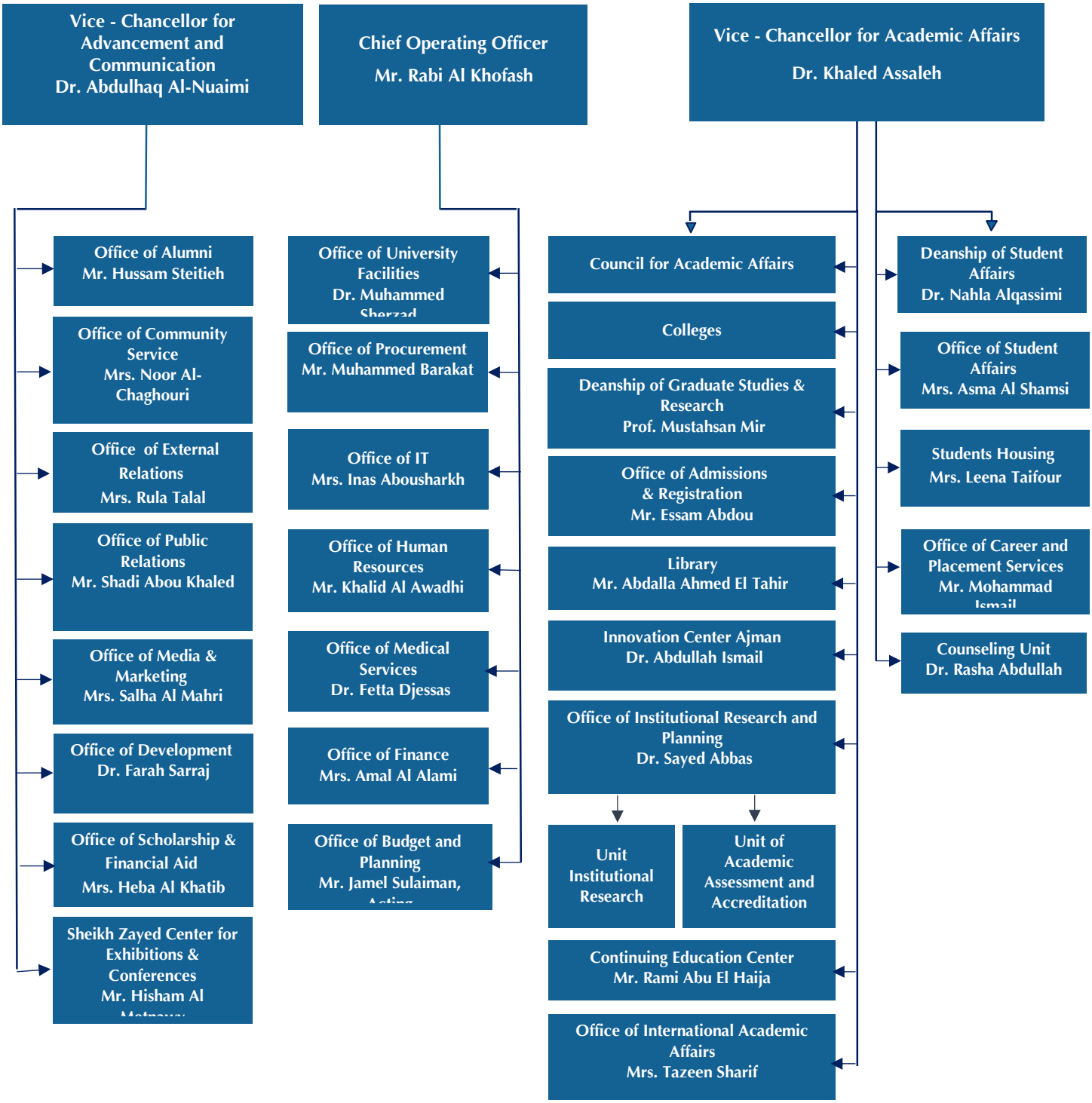
1 Ajman University Organization Chart

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2 Message to AU Students

AU Student Handbook can be used as a quick-reference guide to student life at AU as it provides answers to many of the questions students ask. It gives general information about the university, the programs offered by each of the eight colleges, admission and registration procedures, and the key regulations that are relevant to students.

3 History of AU

Ajman University was founded in 1988 as a non-conventional private institution of higher education. The university was established by His Highness Sheikh Humaid Bin Rashid Al-Nuaimi, Member of the Supreme Council and Ruler of Ajman. On 17th June 1988, His Highness issued an Emiri Decree establishing Ajman University College of Science and Technology (AUCST), as AUST was then called, and the first intake of students commenced its learning journey at AUCST on 15th September that year. The Ministry of Higher Education and Research decree No 54 of 1997, brought a name change to AUCST as it became Ajman University of Science and Technology (AUST). **The name of the university has been changed from Ajman University of Science and Technology (AUST) to Ajman University (AU) starting from 26th of Oct. 2016. AU offers 28 accredited undergraduate programs and 11 accredited graduate programs. The aim of these programs is to provide the community with competent graduates capable of using technology and its applications for the development of UAE society.**

Accreditation and Licensure

Ajman University is licensed and its programs are accredited by the Commission for Academic Accreditation (CAA) of the Ministry of Education in the United Arab Emirates.

4 Vision, Mission, Goals, and Core Values

AU Vision

Ajman University aims to be internationally recognized as one of the leading universities in the Arab world in terms of cutting-edge learning, impactful research and responsible outreach and community engagement.

AU Mission

Ajman University (AU) is a multicultural academic institution that offers a broad range of high quality and relevant academic programs. The University strives to fulfil the needs of students, alumni, employers, and society through quality education, scholarship and community engagement. AU develops well-rounded graduates who are professionally competent, socially responsible, innovative and active contributors to sustainable development of the UAE and beyond.

AU Goals

AU strive to achieve the following goals:

1. Ensuring excellence in teaching and learning
2. Enhancing the quality, relevance, and impact of research and intellectual contribution
3. Recruiting, supporting and fostering the development of a bright anddiverse student body
4. Enhancing the visibility and the positioning of the University
5. Building impactful and long-lasting ties with the external communities
6. Promoting cutting-edge and innovative support services

Core Values

- **Excellence:** All AU activities are conducted with strong emphasis on international quality standards.
- **Integrity:** AU adheres to the principles of honesty, trustworthiness, reliability, transparency and accountability.
- **Inclusiveness:** AU embraces shared governance, inspires tolerance, and promotes diversity.
- **Social Responsibility:** AU promotes community engagement, environmental sustainability and global citizenship. It also promotes awareness of, and support for, the needs and challenges of the local and global communities.
- **Innovation:** AU supports creative activities that approach challenges and issues from multiple perspectives in order to find solutions and advance knowledge.

5 System of Education and Programs Offered

Table 1: Accredited degree programs offered

a. Undergraduate Programs

College	Specializations and degrees offered	Years of Study	Total CrHrs	Certificate and percentage required for admission
Dentistry	Doctor of Dental Surgery *	5	199	Advanced Stream - MOE (80%) with minimum score of (80%) in chemistry, Biology and physics / Grade 12. ADEC (80%) with minimum score of (80%) / Third Level in Chemistry, Biology and Physics
Pharmacy & Health Sciences	Bachelor of Pharmacy *	4	150	Advanced Stream - MOE (70%). ADEC (70%) with minimum score of (70%) / Third Level in Chemistry, Biology
Engineering	B. Sc. in Electrical Engineering/ Electronics *	4	142	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying a foundation course in physics. ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics
	B. Sc. in Electrical Engineering/ Communication*	4	142	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying a foundation course in physics. ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics
	B. Sc. in Electrical Engineering/ Instrumentation and Control *	4	142	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying a foundation course in physics. ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics
	B. Sc. in Biomedical Engineering *	4	141	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying a foundation course in physics. ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics
Engineering	B. Sc. in Architectural Engineering *	5	170	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying a foundation course in physics. ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics

College	Specializations and degrees offered	Years of Study	Total CrHrs	Certificate and percentage required for admission
	Bachelor of Interior Design *	4	134	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
Information Technology	B. Sc. in Computer Engineering *	4	140	Advanced Stream - MOE (70%) General Stream - MOE (90%) with minimum score of (90%) in Math, Science in Grade 12, with studying a foundation course in physics ADEC (70%) with minimum score of (70%) / Third Level in Math and Physics
	B. Sc. in Information Systems\ Project Management *	4	123	Advanced Stream - MOE (60%) / General Stream - MOE (65%) / ADEC (60%)
	B. Sc. in Information Systems\ E-Business Management *	4	123	Advanced Stream - MOE (60%) / General Stream - MOE (65%) / ADEC (60%)
	B. Sc. in Information Technology/ Networking and Security *	4	123	Advanced Stream - MOE (70%) General Stream - MOE (70%) with minimum score of (70%) in Math and Physics in Grade 12. ADEC (70%) with minimum score of (70%) in Math and Physics
	B. Sc. in Information Technology/ Databases and Web Systems *	4	123	Advanced Stream - MOE (70%) General Stream - MOE (70%) with minimum score of (70%) in Math and Physics in Grade 12. ADEC (70%) with minimum score of (70%) in Math and Physics
Business Administration	B. Sc. in Management *	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. Sc. in Marketing *	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. Sc. in Finance *	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. Sc. in Accounting *	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
Education & Basic Sciences	Bachelor of Education in Teacher Training in Arabic Language and Islamic Studies	4	132	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	Bachelor of Education in Teacher Training in Mathematics and Science	4	132	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	Bachelor of Education - Teaching English as a Foreign Language *	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
Mass Communication & Humanities	B. A. in Sociology and Social Work	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. A. in Mass Communication/ Public Relations and Advertising **	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. A. in Mass Communication/ Radio and Television **	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)

College	Specializations and degrees offered	Years of Study	Total CrHrs	Certificate and percentage required for admission
	B. A. in Mass Communication/ Print and Electronic Press **	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
	B. A. in Mass Communication/ Graphic Design **	4	126	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)
Law	Bachelor of Law	4	132	Advanced Stream - MOE / General Stream - MOE / ADEC (60%)

N. B.: Students who hold agricultural, industrial, technical, commercial, vocational & religious Secondary school certificates are eligible for admission to all degree programs offered to holders of Literary secondary school certificates.

Students with a minimum overall average of 80% in technical secondary school certificate may apply for to Electrical Engineering Major and Biomedical Engineering Major. He/She will be given conditional admission.

Students with a minimum overall average of 80% in technical secondary school certificate may apply for to Architecture Engineering Major. He / She will be given conditional admission.

The student should pass the following with grade “C”:

Introduction to Design;

Engineering Graphics;

Freehand Drawing;

Students with a minimum overall average of 80% in technical / commercial secondary school certificate may apply for to Interior Design Major. He / She will be given conditional admission.

The student should pass the following with grade “C”:

Introduction to Design;

Engineering Graphics;

Freehand Drawing;

Minor Programs offered by the Colleges

Eligible Students	Program	College
Biomedical Engineering	Electrical Engineering	Engineering
Computer Engineering		
Electrical Engineering	Biomedical Engineering	
Computer Engineering		
Any major within the University other than the College of Information Technology.	Information Systems	Information Technology
Any major within the University other than the College of Information Technology.	Web Development	
Any major within the University other than the College of Information Technology.	Information Technology	
Science and Engineering majors other than majors offered by the College of Information Technology	Computer Science	
Students of Electrical Engineering majors only.	Networking and Security	
College of Business Administration	Accounting	Business Administration
College of Information Technology		
College of Business Administration	Marketing	
College of Pharmacy		
College of Business Administration	Management	
College of Engineering		
College of Business Administration	Finance	

b. Graduate Programs

College	Degree	Total Credit Hours
Institute of Environment, Water, and Energy	M.Sc. in Ground Water Engineering and Management	36
Business Administration	MBA (Human Resource Management)	36
	MBA (Financial Management)	36
	MBA (Marketing)	36
Engineering	M.Sc. in Urban Design	36
Law	Master of Law (Private Law)	33
	Master of Law (Public Law)	33
Dentistry	M.Sc. in Restorative Dentistry	57
Pharmacy & Health Sciences	M.Sc. in Pharmacy (Clinical Pharmacy)	36
	M.Sc. in Pharmacy (Pharmaceutical Technology)	36
Education and Basic Sciences	Professional Diploma in Teaching	24

6 Admission and Registration

Applications for admission should be submitted Online at apply.ajman.ac.ae or to the Office of Admissions and Registration prior to the beginning of each semester. To be eligible for admission, a student must have a secondary school certificate issued in the UAE, or its equivalent as approved by the UAE Ministry of Education.

The AU Council of Academic and Scientific Affairs determines the number of students to be admitted to each degree program each semester, according to the university's available resources.

6.1. General Admission Conditions

a. Holders of UAE Secondary School Certificate:

Holders of a Secondary School Certificate (SSC), Science Section, or Advance Stream are eligible for admission in any College of the university if they satisfy the minimum score requirement for the degree program (see Table 1).

General Stream

- Holders of a Secondary School Certificate (SSC), General Stream (MOE), are eligible for admission in all colleges eligible for literary section with a minimum score of 60%.

- General Stream (MOE) are eligible for admission for the following majors if they obtain Average (90%) with minimum score of (90%) in Math and Science in Grade 12, with studying physics as a foundation course in AU:
  - B. Sc. in Electrical Engineering/ Electronics
  - B. Sc. in Electrical Engineering/ Communication
  - B. Sc. in Electrical Engineering/ Instrumentation and Control
  - B. Sc. in Biomedical Engineering
  - B. Sc. in Architectural Engineering
  - B. Sc. in Computer Engineering

- General Stream (MOE) are eligible for admission for the following majors if they obtain average (70%) with minimum score of (70%) in Math and Physics in Grade 12:
  - B. Sc. in Information Technology/ Networking and Security
  - B. Sc. in Information Technology/ Databases and Web Systems

Abu Dhabi Education Council (ADEC)

Holders of a Secondary School Certificate (SSC), ADEC, are eligible for admission in the following colleges:

- Dentistry - Average (80%) with minimum score of (80%) / Third Level in Chemistry, Biology and Physics
- Pharmacy – Average (70%) with minimum score of (70%) / Third Level in Chemistry, Biology
- Average (70%) with minimum score of (70%) / Third Level in Math and Physics, in the following Majors:
    - B. Sc. in Electrical Engineering/ Electronics
    - B. Sc. in Electrical Engineering/ Communication
    - B. Sc. in Electrical Engineering/ Instrumentation and Control
    - B. Sc. in Biomedical Engineering
    - B. Sc. in Architectural Engineering
    - B. Sc. in Computer Engineering

- Average (70%) with minimum score of (70%) in Math and Physics , for the following majors:
    - B. Sc. in Information Technology/ Networking and Security
    - B. Sc. in Information Technology/ Databases and Web Systems

    - Average (60%) , for the following colleges/majors:
    - College of Business Administration
    - College of Education & Basic Sciences
    - College of Mass Communication & Humanities
    - College of Law
    - Bachelor of Interior Design
    - B. Sc. in Information Systems\ Project Management
    - B. Sc. in Information Systems\ E-Business Management

Holders of the Secondary School Certificate, Literary Section, with a minimum score of 60 percent, are eligible for admission to all degree programs in the following colleges:

- Business Administration
- Law
- Mass Communication and Humanities

They are also eligible for admission to the following programs offered by other colleges:

- Bachelor of Education/Teacher Training Program in Arabic and Islamic Studies
- Bachelor of Education in Teaching English as a Foreign Language
- B.Sc. in Information Systems/Project Management (65%)
- B.Sc. in Information Systems/E-Business Managnent (65%)
- Bachelor of Interior Design

The decision to admit a student is made on a competitive basis, taking into account the number of available places as determined by the individual college and the applicant's final secondary school examination score.

Applications made by holders of foreign secondary school certificates will be considered according to Circular No. 200, 2004, and Circular No. 123, 2005, issued by His Excellency the Minister of Education/Higher Education Affairs, UAE, as listed below:

b. Holders of Foreign Secondary School Certificates other than British System Certificates

In general, holders of the National High-school Certificate of a foreign country are eligible for admission if:

- The certificate is considered for admission in public universities of the country where it is obtained
- The certificate is awarded after at least 12 years of schooling
- The certificate includes at least six subjects covering the following four areas:
  - Mathematics
  - Sciences
  - Languages
  - Social Sciences/Humanities or Arts

Holders of High-school certificates from countries having two-level high-school certificates, must submit the certificate of the higher level.

Examples of Acceptable Foreign Certificates:

- Iranian: the Pre-University Certificate
- Indian Board(s): Senior Secondary School Certificate
- Pakistani Board(s): Higher Secondary School Certificate (Part II)
- French Baccalaureate: completion of Part II
- International Baccalaureate: completion of six subjects, with three at the higher level
- American High-school Diploma.
- West African Senior School Certificate

c. Holders of British System Certificates (IGCSE, GCSE, GCE)

A holder of a British system certificate is eligible for admission if:

- the applicant has passed seven subjects at the ordinary level of IGCSE or GCSE, with a minimum grade of C. If a subject is taken at the AS Level or A Level the required minimum score is reduced to D and E respectively
- the seven subjects must cover the following four areas: Mathematics, Science, Languages, and Humanities or Arts
- the applicant must prove that he/she has completed at least 11 years of schooling by providing the grade transcript of Grade 11 and that of Grade 12, when available
- the applicant submits his/her school leaving certificate

6.2 English Language Proficiency

Full admission to programs where the medium of instruction is English is given only to applicants with a score of at least 500 in the TOEFL (paper-based test), 61 in TOEFL (iBT), EmSAT Achieve English 1100, Band 5 in IELTS

(Academic), 41 in (Cambridge English: Advanced Test of English Language), IESOL B1 or 36 in (Pearson Test of English Academic). English Proficiency scores are accepted only if they were obtained less than two years from the admission date. Institutional TOEFL score is considered only when the test is taken at an AMIDEAST centre.

Students who do not satisfy the above-mentioned minimum English proficiency requirement may begin their studies with conditional admission.

During their first semester, holders of TOEFL, with a score between 450 and 499 or equivalent, will be required to enroll in the Intensive English Program (IEP) offered by the Unit of General Studies, until they obtain at least 500 in the TOEFL, or its equivalent.

Admitted students with a score below 450 (TOEFL) or equivalent are required to enroll in an English preparation course (lower level) at the on-campus Continuing Education Centre. However, colleges will reserve a seat for them, for one semester only, if they obtain a score of at least 450 in TOEFL or its equivalent test score at the end of the first semester of registration.

6.3 Admission on Probation

Applicants holding a high-school score below the required minimum admission score, not less than 60%, of an academic program may be admitted on probation in a program. They must sign an undertaking stating that they are aware that they will be dismissed from the program at the end of the probation period if they do not satisfy the condition(s) set by the College, such as obtaining a Grade C in a given course, or a GPA greater than or equal to 2, etc.

6.4 Re-Admission

1. New students who have missed two consecutive semesters of enrollment (excluding the summer semester) at the university may apply for re-admission by completing the re-enrollment form which is available from the Office of Admissions and Registration, and must satisfy admission requirements in effect at the time of re-admission.

A new university ID will be issued and the student should pay the non-refundable fee for the application.

2. Former students who have missed more than two consecutive semesters of enrollment at the university may apply for re-admission provided that they achieve the following:

The required average in secondary school certificate.

A valid English Proficiency Certificate with the required score.

Availability of vacant seats in the major.

Approval of the College Dean & Registrar.

Repayment of all debts.

A new university ID will be issued, and the student should pay the non-refundable fee for the application. If the Dean of the previous college & the Registrar accept the student to continue in the same major, the previous courses which the student has studied will be considered if they are included in the new study plan.

N.B.:-

If the student was warned, he/she must transfer to another program providing that his/her CGPA for the courses to be transferred is 2.0 or higher.

If the student can graduate within the time allowed for completion of a degree program, re-enrollment of the student with the same ID & in the same program will be considered after the payment of the required fees.

6.5 Transfer Students from Accredited Institutions

Students from accredited institutions of higher education may apply for admission in an AU program in the same field of study if they have been of good academic standing, i.e., their Cumulative Grade Point Average (CGPA) is a least 2.0 on a scale of 4.0, or the equivalent, and if they are eligible to return to their current or formal institution (they have not been the subject of disciplinary dismissal). However, those students who have not been of good academic standing (i.e. those with a CGPA of less than 2.0 on a scale of 4.0) will be allowed to transfer only to programs in a different field from the one in which they were enrolled at the institution they previously attended.

Any transferred student is required to meet the English Language Proficiency condition (see Section 4.2).

The transfer of credited courses is considered for students who are transferring to a similar program to the one studied previously if:

- their cumulative grade point average is at least 2.0 on a scale of 4.0, or the equivalent
- the number of credit hours for the course is not less than that of the AU equivalent course
- the grade obtained on the previous course must have been at least C (2.0 on a 4.0 scale) irrespective of the course status (Satisfactory, Good,ets.....) , or the grade that corresponds to "Merit/Good" for institutions using a different grading scale
- the course content at the institution previously attended should be similar to that of the corresponding course offered at AU

If the transfer of a student with a CGPA less than 2.0 is accepted in a program within a different field of study, the transfer of credited General Education courses may be considered if points 2-4 listed above are fulfilled.

If a student meets these transfer conditions, but is unable to submit the course content that was covered previously, he/she may sit an examination set by the College after payment of a fee. The examination result will be used to determine whether the course will be transferred or not.

Only grades obtained from courses taken at AU will be taken into account in the calculation of a student's CGPA, i.e.: grades obtained from transferred courses at the previous institution will not be taken into account in the computation of the CGPA at AU.

It is important to note that AU does not grant transfer students a degree unless they successfully complete at least 50 percent of the credit hours of the program, including the majority of the final year courses at AU.

Documents Required for Admission

- Application form, which may be obtained from the Office of Admissions and Registration, to be filled in by the applicant
- Equivalency certificate issued by the ministry of education UAE for the holders of non UAE high school certificate
- UAE Secondary School Certificate, or its equivalent, and grade transcript. Certified copies are acceptable
- Photocopy of valid passport & residency visa (if applicable).
- Photocopy of a valid Emirates ID Card (UAE residents only)
- Birth certificate.
- Health certificate.
- Status of UAE National Service for male students.

- Valid certificate of good conduct, issued by an official body
- Six passport-sized photographs with the applicant's full name on the back of each
- A signed "declaration" by the applicant stating that he/she will observe university rules and regulations.
- If available, a certificate of proficiency in English language, e.g. TOEFL with a minimum score of 500, IELTS with a score of at least 5 or its equivalent. TOEFL with a minimum score of 450 or its equivalent for the college of Mass Communication and Humanities, except for Sociology and Social Work program.

Applications will be processed by the Office of Admissions and Registration only after the payment of application and registration fees.

6.7 Certification of Documents

Newly-admitted students are requested to have their documents certified before the end of the first semester of study; otherwise their registration will be suspended.

- Secondary school certificates obtained in the UAE must be certificated by the UAE Ministry of Education.
- Secondary certificates obtained abroad must be certificated by the Ministry of Education, and by either the Ministry of Foreign Affairs of the country of origin and the UAE embassy in that country, or by the embassy of the country which issued the certificate, and by the UAE Ministry of Foreign Affairs.

6.8 Seat Reservation

Students admitted to Dentistry, Pharmacy, Architectural Engineering, Interior Design, and Law programs are required to pay a seat reservation deposit. This deposit is non-refundable and non-transferable and must be paid before the deadline stated on the letter of admission. This deposit is deductible from the student's fee once the applicant joins Ajman University. If the student asks to defer admission to the following semester and the request is approved, the deposit will be applied to the following semester.

6.9 Course Registration for New Students

Newly-admitted students who have a TOEFL score of at least 500 or its equivalent will be allowed to register for between nine and 18 credit hours according to their study plan.

Newly-admitted students who have a TOEFL score of between 480 and 499, or its equivalent, will be allowed to register up to nine credit hours according to their study plan, subject to concurrent registration in the Advanced Level of the Intensive English Program (nine hours per week), which is offered by the Unit of General Studies.

Newly-admitted students who have a TOEFL score of between 450 and 479 or its equivalent will be allowed to register for up to six credit hours according to their study plan subject to concurrent registration in the Intermediate Level of the Intensive English Program (15 hours per week) which is offered by the Unit of General Studies.

Newly-admitted students who have a TOEFL score less than 450 or its equivalent, will be allowed to register for a three-credit hours course according to their study plan subject to concurrent registration in the Lower Level of the English Program (15 hours per week) which is offered by AU Continuing Education Centre.

Load of New Students according to their TOEFL Score or its equivalent

Number of University Credit Hours Permitted	Number of IEP Hours Required	Pearson Test of English Academic	Cambridge English: Advanced Test of English Language	CBT	IELTS (Academi)	TOEFL (iBT)	TOEFL (Paper-Based)	EmSAT Achieve English
9-18	None	36	41	173	5	61	500 or more	1100
Not more than 9	9				4.5	54-60	480-499	950
Not more than 6	15				4	45-53	450-479	825
3	15				Below 4	Below 45	Below 450	Below 825

Important: Students are allowed to complete at most 15 credit hours before fulfillment of English Language Proficiency. If they complete 15 credit hours without achieving 500 in TOEFL or its equivalent, they will only be allowed to register in the appropriate IEP program the following semester.

If the student does not achieve the 500 TOEFL score in the two semesters after his/her admission, the College Council may consider dismissal of the student from his/her program. In this case, the student may be allowed to transfer to a program taught in Arabic if he/she satisfies its admission conditions.

Once a student's selected courses have been approved by the academic advisor, and on payment of the tuition fees, the student will be given a timetable which states the name of the courses, the schedule of classes, the name of the lecturer and the number of the classroom or the laboratory in which the course is held.

6.10 Course Registration for Continuing Students

Colleges encourage non-warned students (see Section 8.4 for an explanation of the academic warning system) to use the early registration period to select courses in consultation with their academic advisors. The early registration period is specified in the academic calendar. Warned students and students who did not benefit from the early registration phase can register during the registration week. See the academic calendar.

Registered AU students may take some courses outside AU provided that they obtain the prior approval of the Dean of the College. Acceptance of the transfer of external courses is conducted according to the criteria outlined in Section 4.4.

6.11 Adding and Dropping Courses

Students may add/drop courses only with the approval of their academic advisors. Students who add and drop courses during the approved period will not lose the fees paid for dropped courses. When adding/dropping courses, students should bear in mind that the minimum number of credit hours for which they may register is nine.

The academic calendar specifies the period allocated for dropping courses without affecting the student's academic record, but without refund of fees. The academic calendar also specifies the last date for withdrawal from

a course with a "W" grade without refund of fees. In this case, the course appears in the transcript with the letter "W" with no effect on the computation of the semester Grade Point Average or the CGPA.

6.12 Study Load

A student's "study load" is the number of credit hours for which he or she is registered during the semester. For the fall and spring semesters, the study load varies from 9 to 18 credit hours, where one credit hour refers to one lecture hour or two hours of practical study per week, lasting for fifteen weeks. For summer semesters, the study load varies from three to six credit hours.

Students may increase their study load to up to twenty-one credit hours in the fall and spring semesters in the following cases:

- Dentistry students
- The student's CGPA was at least 3.6 in the preceding semester
- The student is expected to graduate at the end of the semester and his/her CGPA is at least 2.0

A student's study load is up to six credit hours in a summer semester.

However, independently of their academic standing, students will not be allowed to sign up for more than 12 credit hours during the two summer semesters of the academic year.

The study load of academically warned students is given in Section 11.

6.13 Time Allowed for Completion of a Degree Program

The maximum time allowed for a student in which he/she may complete a degree program is a maximum of double the regular number of required semesters. In other words, a four-year bachelor degree must be completed in a maximum of 16 regular semesters of enrolment in the program. The minimum time allowed to complete a degree for non-transfer students is a minimum of six regular semesters for four-year programs and eight regular semesters for five-year programs.

The maximum and minimum number of semesters of enrolment for transfer students is determined after the deduction of the number of earned/transferred semesters (15 credits correspond to one semester) from the above limits. Suspended semesters are not counted in the time allowed for students to complete their degree.

6.14 Suspension of Registration

Newly-admitted students can suspened their study only in their first semester, and they should register courses in the next semester. Otherwise, he/she should apply for new admission.

The total number of semesters for former students that can be suspended is four. However, suspension of registration for more than two consecutive semesters is not allowed. In all cases, the Office of Admissions and Registration should be notified in writing.

6.15 Right to Cancel Registration

The University reserves the right to cancel an offer of admission if the applicant fails to satisfy all requirements, or if it is found that admission was obtained through the use of incomplete, falsified, altered or embellished information. In the case of withdrawal of registration from a matriculated student, credits earned at AU will be withheld and no transcript will be issued to the student.

7 Orientation Program for New Students

AU gives special attention and assistance to new students to ease the transition between life at high-school and the university. For this purpose, a special program has been designed:

a. Orientation Session

At the beginning of each semester, AU organizes an orientation session for new students which enables them to meet the Vice-Chancellor, Deans of the Colleges, Admission & Registration personnel and Students Affairs staff. This orientation also provides them with essential information about course registration, academic advising, important deadlines and other related matters.

b. Orientation Course

All new students must register in the orientation course during their first semester. It is a non-credit course which aims to provide them with information about AU rules and regulations, services and essential skills such as time-management and exam preparation.

8 Academic Advising

Introduction

As part of its dedication to academic success, AU is committed to offering high quality academic advising in order to help students in the development and pursuit of academic objectives consistent with their life goals. Academic advising is an ongoing process that connects students to the university. We believe it is important to empower each student with knowledge, resources and skills that will lead to academic success and lifelong desire to learn inside and outside the classroom.

AU Advising Policy

AU advising policy postulates that:

a) All students shall be informed of the advising policy and advising process during the initial orientation and be directed to an appropriate advisor;
b) All students shall be assigned advisors;
c) All students on probation must be given regular advising each semester;
d) All students expected to graduate must be advised at least twice every semester of their final year;
e) Career counseling and student counseling shall be made available to all students;
f) Advising by faculty members for all new and continuing students shall be provided every semester;
g) Assessment of department advising shall be carried out every semester as a part of the whole program assessment;
h) Academic department advising shall be assessed and reviewed every year;
i) Funding and resources shall be made available to all units to ensure effective and efficient advising at all levels;
j) Training shall be provided for all advisors and peer mentors;
k) Accurate information shall be posted and maintained on the University website.

The Goals of Academic Advising

The objectives of academic advising are:

1. to help students take the right decisions in choosing an appropriate course of study that is aligned with their interests, abilities and that meets their academic and life objectives;
2. to answer questions raised by students;
3. to ensure students are aware of the consequences of their choices;
4. to ensure that all students are aware of resources, services and educational opportunities at AU that may be pertinent to the student's educational goals;
5. to provide information on university policies and procedures;
6. to facilitate the resolution of academic problems, conflicts and concerns, as appropriate;
7. to refer students, as necessary, to other resources/departments/personnel;
8. to encourage students to be creative in their academic choices;
9. to provide a forum for interaction and guidance about life and academic matters;

10. to collect data about students' needs, expectations and aspirations.

Implementation of the AU Advising Policy

University Responsibilities

a) Provide resources for continuous training of advisors and peer advisors;
b) Gather and disseminate appropriate academic advising materials to assist colleges;
c) Act as a reference service and respond to questions from colleges and departments, as well as from faculty and students;
d) Take a positive role in solving advising problems;
e) Design advising programs for new faculty;
f) Publish relevant and accurate information on academic advising in the student handbook, on the university website and other relevant publications.

Colleges and Departments Responsibilities

Faculty members shoulder the responsibility of academic advising which should be part and parcel of the education process.

Departments, colleges, and the Office of Student Affairs have to:

1. Provide students with advising whenever they need it throughout the academic year;
2. Make all relevant information known to students.

The list below shows the relevant information that should be given to students:

a. University rules, regulations, and procedures;
b. Support resources available on campus;
c. A copy of students' advising responsibilities;
d. Necessary forms and academic calendar;
e. Study plan;
f. Internship opportunities;
g. Projected course offerings by the department;
h. A standardized template for students' individual study plans; and
i. University catalogs.

3. Provide training to advisors and peer advisors in the following areas:

I. Learning principles applicable to advising including -
a. University rules, regulations, and procedures;
b. Support resources available on campus;
c. A copy of students' advising responsibilities;
d. Necessary forms and academic calendar;
e. Graduate programs at AU;
f. Training opportunity;
g. Major /program requirements;
h. Projected course offerings by the department;

II. Appropriate personal and occupational choices for their advisees
III. Academic advisors need to have up-to-date knowledge of current affairs outside AU if they are to give meaningful advice to students;
IV. Advisors must be trained to relate students' abilities to requirements of their module/course selections;
V. Technical requirements for the university requirements general education and major courses;
VI. Resources available on campus.

Advisor Responsibilities

Advisors are required to:

1. Maintain the primary advising file for each advisee. At a minimum, these files shall contain:
   a. A written record of advising session;
   b. A copy of the advisee study plan;
   c. Copies of advisee transcripts;
   d. Copies of advisee current semester timetable;
   e. A semester-by-semester graduation study plan for each advisee.
2. Listen to advisee concerns and respect their individual values and choices.
3. Understand and effectively communicate all university and college academic policies and procedures.
4. Refer advisee to appropriate resources for both academic and non-academic concerns
5. Cooperatively evaluate and assess your academic performance and areas of strength while assisting in selecting courses.
6. Encourage advisees participation in co-curricular activities.
7. Ensure that advisees are aware of opportunities and benefits available at AU.
8. Maintain confidentiality.
9. A graduation progress check sheet for each advisee.

Peer Advisor Responsibilities

AU peer advisors are continuing senior students who work primarily with students on probation. They are chosen from a select group of students and complete an interview and training process.

Peer advisors are entrusted with:

I. assisting students in choosing courses;
II. familiarizing students with academic policies and regulations;
III. showing students the resouces on campus;
IV. offering advising based on their own experience.

Peer advisors serve six purposes, as they:

I. Help new students and students in probation at AU;
II. Help advisees master basic academic processes;
III. Teach students skills for success (i.e. time management, study skills, etc);
IV. Act as referral source;
V. Offer an alternative point of view to staff/faculty advisors;
VI. Set examples of successful students.

Student Responsibilities

The advising process depends on the thoughtful participation of students. Students must assume the following responsibilities:

1. Become familiar with their advisors and advisor offices by initiating contact and seeking assistance on a regular basis through email, phone, and individual appointment.
2. Become familiar with academic policies, dates, and deadlines.
3. Come prepared and on time to meetings with their advisor.
4. Ask for clarification if the advisor fails to explain an issue or concern in a way that makes sense to the student.
5. Read all email communication from the advisor and other AU departments.
6. Inform their advisor of problems and concerns which may impact their academic performance as soon as possible.
7. Familiarize themselves with requirements for graduation and other requirements, published through different media.
8. Maintain their own advising folders and take them to every advising session. For undergraduate students, the folder should include:
   - Copies of prior university transcripts;
   - Transcripts;
   - Current semester timetable;
   - An individual study plan;
   - Previous advising notes.
9. Seek academic advising whenever it is needed.
10. Develop an individual study plan. The individual study plan must be approved by the student's appropriate advisor.
11. Be responsible for choosing their own classes on the basis of their decisions as well as the academic advice that has been given.
12. Feel free to evaluate the academic advising program and their academic advisors by filling in a feedback form.
13. Meet with their advisor on a regular basis if they are on academic warning or probation.

Peer Mentoring of Students on Probation

Students with CGPA below 2.0 are considered on probation. The advisor shall advise the student to repeat courses with low performance grades (i.e. "F" , "D", and "D^+") in order to improve the CGPA. Each advisor will provide mentoring for a group of students on probation within his/her department. Mentoring includes peer mentoring, monitoring and progress reporting. The plan for helping students on probation includes:

At the beginning of each semester, a list of students on probation is requested by the Deans of Colleges from the Registrar's Office. The Deans will advise Heads of Department to draw corrective actions.

This plan is executed at the departmental level and would include:

1. Holding regular individual meetings with students on probation.
2. Advising students on probation to repeat courses with grades below "C" prior to registering for any further courses.
3. Request students on probation to visit instructors frequently during office hours.
4. Provide students on probation with peer mentoring from senior students.
5. Request students on probation to meet their peer mentor on a regular basis.

The Head of Department will request a feedback report on the performance record of each student on probation from course instructor(s). Each student's progress is monitored through special forms maintained in the Department. The Department Council will discuss the progress of students on probation in each of its regular meetings. Progress reports will be sent to the Dean.

9 Change of Major

9.1 New Students

First-semester students may apply to transfer from one major to another within the university during the add/drop period. The application is processed through the Office of Admissions and Registration provided that:

a. The applicant meets the admission requirements of the degree program to which he/she is applying
b. There is availability of seats
c. Approval of the deans of both colleges concerned is obtained, along with approval from the registrar.

9.2 Transfer between Programs

Students may transfer from one program to another within the university provided that they satisfy items b and c of section 9.1 above. In addition, they must satisfy the following:

1. The preceding semester's Grade Point Average should be equivalent to that required by the new program;
2. The application for transfer should be submitted within the period specified in the academic calendar.

10 Academic Evaluation and Assessment

10.1. Course Assessment

In each registered course, a student's performance is assessed according to a procedure established by the college concerned, and explained in the course plan. The overall score is normally distributed as follows:

a. Semester tests and activities 40 percent
b. Mid-Semester examination 20 percent
c. Final examination 40 percent

The score for semester tests and activities includes marks for tests, quizzes, assignments, research and laboratory work. The pass mark in each course is sixty percent.

10.2. Grading System

The university adopts the following grading system:

Merit	Grade		Mark
	Point	Letter	
Excellent	4.0	A	From 90 to 100
Very Good (High)	3.5	B+	From 85 to 89
Very Good	3.0	B	From 80 to 84
Good (High)	2.5	C+	From 75 to 79
Good	2.0	C	From 70 to 74
Pass (High)	1.5	D+	From 65 to 69
Pass	1.0	D	From 60 to 64
Fail	0	F	Less than 60

10.3. Semester Grade Point Average

The semester GPA indicates student performance during the semester, and is calculated as follows: the total of the grade point of each course taken in the semester multiplied by its credit hours, divided by the total number of credit hours registered in the semester.

For example, if a student obtains the results as set out in the table given below, his/her semester grade point average will be computed as follows: GPA = 54/18 = 3

Subject	Credit Hours	Points	Product of Credit Hours by Point Grade
Mathematics 1	3	3	9
Statistics	3	2	6
Physics I	3	3	9
Islamic Culture	3	4	12
Arabic Language	3	4	12
Psychology	3	2	6
Total	18		54 points

10.4. Cumulative Grade Point Average

The CGPA indicates the student's average performance over all semesters up to the final or current semester. It is calculated as follows: the total of the point grade of each course taken to date, multiplied by its credit hours, divided by the total number of credit hours taken.

If a student repeats a course in which he/she obtained an "F" grade, or does so in order to improve his/her CGPA, the last grade obtained will be considered in the calculation of the CGPA regardless of whether the last grade is higher than the original one or not. However, the original grade will continue to appear in the academic record without affecting the calculation of the CGPA.

The CGPA is also used for academic probation as follows: starting from the end of the second semester of study, if the student's CGPA is less than 2.0, he/she will be regarded as an "academically-warned" student and will be requested to improve his/her academic performance to raise the CGPA to 2.0 or higher. (See Section 11 for the policy regulating the study load of warned students).

A student will not be allowed to graduate unless his/her CGPA is at least 2.0, even if he/she has passed all required courses of the program of study. In this case, and in consultation with the academic advisor, the student must repeat a number of courses of the study plan in order to raise his/her CGPA to 2.0 as a minimum.

10.5. Incomplete Grade

Attendance at the final examinations is compulsory. Failure to attend will result in the student failing the course. However, if a student does not attend the final examination due to an emergency and he/she scored at least 60% of the total mark (a total of 36 out of 60) in coursework (tests and midterm examination) the course may be considered as "incomplete." Acceptable evidence for failure to attend a final examination due to an emergency consists of the following:

a. illness certified in a medical report approved by the University Clinic;
b. death certificate of a first or second degree relative;
c. arrest or summons before a court or other legal body;
d. other excuses accepted by the College Council.

In these cases the student must complete and submit a request form within the specified period in the acacdemic calendar. He/she also must present the relevant documents to the Office of Admissions and Registration.

Applications will be processed only if the student has no financial obligation to the university and has paid the fee for an "incomplete request." Applications submitted by students with a 25 percent absence warning will not be accepted.

A student whose course result is "incomplete" must take the final examination before the end of the first week of the following semester in which he/she registers, as shown in the academic calendar.

10.6. Examination Re-sits

If a student passes all but one of the courses required for graduation, and if this course is from the last semester, he/she will be allowed to re-register for that course. In this case, there is a charge of 50 percent of the course fees and the student must re-take the final examination before the beginning of the following semester.

10.7. Complaints about Grades

Complaints regarding final examination results must be lodged within a period of 15 days following the announcement of examination results. Students should complete and submit a Complaint Form to the Office of Admissions and Registration after the payment of the required fees. The form will be transferred to the College concerned where an appropriate decision will be made. The Office of Admissions and Registration notifies students, in due course, of the outcome of their application.

11 Supervised Credit-Earning

Colleges may approve supervised credit-earning on selected courses designed for advanced undergraduates that have completed 50 percent of the required credits for graduation. The purpose of such courses is to make it possible to study all the units of a course under the supervision of a faculty member on a meeting session basis. The schedule of these meetings should not be less than 15 contact hours per semester.

The supervised work should cover all the content of the course and meet its objectives. The supervisor must ensure that the course is devoted to advancing students' knowledge and skills as required in the course outline.

Reasons why a student may wish to take a supervised study course include:

a. To adjust his/her study plan by completing a specific course which is not offered in that semester
b. To complete a course which is not offered but it is required for graduation during the final semester
c. To gain additional knowledge and practical experience in designing, conducting, analyzing and documenting coursework

A maximum of nine credit-hours of supervised study can be taken during a student's undergraduate degree program. A student may not register for more than three credit hours of supervised study per semester.

The assessment of the course will be conducted as follows:

a. Students will be required to sit for a written exam to be evaluated by the supervisor. This exam will be weighted at 20% of the final course mark;
b. At the end of the semester, students will submit a written report to the supervisor detailing the work carried out. This report will be weighted at 40% of the final course mark;
c. Students will present their work to an internal examiner who will not be the supervisor. The oral presentation will be weighted at 40% of the final course mark;

The student's final grade for the supervised study course will be determined by the student's supervisor and the internal examiner after evaluation of the student's work, written report, oral presentation and response to questions.

12 Attendance Policy

Attending classes is compulsory for all courses. A student will not be allowed to take the final examination if he/she has missed 25 percent of the classes in a given semester. Absence warning policies are set out below:

- If a student is absent for 10 percent of theoretical and practical class hours, the lecturer will issue a 10 percent absence warning.
- If a student is absent for 20 percent of theoretical and practical class hours, the lecturer will issue a 20 percent absence warning.
- If a student is absent for 25 percent of theoretical and practical class hours, the lecturer will issue a 25 percent absence warning and the student will receive the grade of "F."

The Council of Academic and Scientific Affairs may consider a student's withdrawal from the course if sufficient and convincing reason for the absence is submitted to it by the Office of Admissions and Registration.

13 Academic Probation

If a student's CGPA falls below 2.0 in any regular semester, starting from his/her second semester at the university, he/she will receive an academic warning. The Academic Advisor will notify students to submit a letter of undertaking to raise his/her CGPA to at least 2.0 in the following semester.

A student on probation must raise his/her CGPA to at least 2.0 within two semesters, not including the summer session.

The study load of warned students will be reduced, as follows:

a. First warning: a maximum of 15 credit hours of which three or six credit hours are repeated (the priority is to repeat all the courses with grade F, D or D+ then register for new courses) depending on the CGPA and the previous semester's GPA.

b. If, following the first warning, the student has still failed to raise his/her CGPA to 2.0 or higher at the end of the following semester (excluding the summer semester), the second warning will be issued.

c. Second warning: a maximum of 12 credit hours of which six or nine credit hours are repeated (the priority is to repeat all the courses with grade F, D or D+ then register the new courses) depending

on the CGPA and the previous semester's GPA. Student load can be raised by 2 credits at the request of the Dean.

If, following the second warning, the student has still failed to raise his/her CGPA to 2.0 or higher at the end of the following semester (excluding the summer semester), the third warning will be issued.

Third warning: this case will be reviewed by the College Council. The Council may take one of the following actions:

a. Transfer the student to another program provided that his/her CGPA for the courses to be transferred is 2.0 or higher
b. Allow the student to study outside the university for one academic year (This option is open only for students who can raise CGPA to 2.0). After he/she raises CGPA to 2.0 or above, the student can continue in the same major at the university.
c. Dismiss the student from the university .

14 Graduation Requirements

A student will be awarded a degree subject to fulfilling the following requirements:

d. Completion of all courses of the academic program
e. Completion of practical training as specified in the study plan
f. A CGPA of at least 2.0

The merit of the degree is determined according to the following scale:

Scaling System for Graduation

Cumulative GPA	Merit
From 3.8 to 4.0	Excellent with Honor
From 3.6 to less than 3.8	Excellent
From 3.0 to less than 3.6	Very Good
From 2.5 to less than 3.0	Good
From 2.0 to less than 2.5	Satisfactory

15 Double Major

AU students choose their primary program of study or major at the time of their admission. They are eligible to enroll for second major provided they fulfill its admission requirements. Also, their application for double major must be submitted prior to the specified deadline, which is the last day of the 12th week of the semester preceding their expected graduation semester. The approvals of both the Dean of the college offering the primary major and the Dean of the college where student is seeking second major are required for the admission of student to second major. If approved, the student will have an advisor in each of the two majors. The students enrolled in double major must satisfy all the degree completion requirements for the two majors. However, some courses completed in the primary major, such as General Education courses and courses common between the two majors, may also be counted toward the fulfillment of the second major. It is important that prior to starting the second major, the student must obtain a list of required courses approved by the Dean of the college where the student intends to take the second major. These courses shall include at least 30 credit hours of unique subject-area courses in the second major.

The student's transcript and degree certificate will indicate both majors completed at the time of graduation. For graduation, the student must obtain a cumulative GPA of at least 2.0 in each major.

The cumulative GPA of the primary major shall be calculated based on all courses in the approved study plan. The cumulative GPA of second major shall be determined based on the list of courses approved by the Dean for the second major. Both GPAs shall be mentioned in the transcript. Furthermore, the degree certificate shall mention the corresponding merit (Excellent, Very Good, Good, …) for both majors. 2

16 Minor

AU students are eligible to enroll for a minor while they are pursuing their major provided they fulfill the admission requirements of the minor. Also, their application for major/minor must be submitted prior to the specified deadline, which is the last day of the 12th week of the semester preceding their expected graduation semester. The approvals of both the Dean of the college offering the major and the Dean of the college where student is seeking minor are required for admission of student to the requested minor. The primary academic advisor of the student will continue to serve as advisor for both major and minor. However, the academic advisor may seek assistance and cooperation from the department or college offering the selected minor.

The completion requirements for the minor, including the prerequisites required to take the specified courses, are well defined for all minors offered by Ajman University. Students enrolled in major/minor must satisfy all the degree completion requirements of the major as well as all stated completion requirements of the minor.

The student's transcript and degree certificate will indicate both major and minor completed at the time of graduation. For graduation, the student must obtain a cumulative GPA of at least 2.0 in all subjects related to the major, as per the approved study plan, as well as a cumulative GPA of 2.0 in subjects required for the selected Minor.
The cumulative GPA of the major shall be calculated based on all courses in the approved study plan. The cumulative GPA of minor shall be determined based on the list of courses specified for successful completion of the minor. Both GPAs shall be mentioned in the transcript. Furthermore, the degree certificate shall mention the corresponding merit (Excellent, Very Good, Good, …) for major as well as minor.

17 Double Concentration and Second Bacholar's Degree

17.1 Double Concentration

AU students enrolled in a program with two or more concentrations are eligible to enroll for second concentration. Their application for double concentration must be submitted prior to the specified deadline, which is the last day of the 12th week of the semester preceding their expected graduation semester. The Dean of the college where student is enrolled shall make a decision on his/her admission to second concentration. The primary academic advisor of the student will continue to serve as advisor for both concentrations.

The student must satisfy the requirements of both concentrations. However, courses that are common in both concentrations will be completed only once. It is important that prior to starting the second concentration, the student must obtain a list of required courses for successful completion of second concentration as approved by the Dean of the college where he/she is enrolled.

The student's transcript and degree certificate will indicate both concentrations completed at the time of graduation. For graduation, the student must obtain a cumulative GPA of at least 2.0 in all subjects related to the major with first concentration as well as a cumulative GPA of 2.0 in subjects required for the second concentration.

The cumulative GPA of the major with primary concentration shall be calculated based on all courses in the approved study plan of major for primary concentration. The cumulative GPA of second concentration shall be determined based on the list of courses approved by the Dean for successful completion of the second concentration. Both GPAs shall be mentioned in the transcript. Furthermore, the degree certificate shall mention the corresponding merit (Excellent, Very Good, Good, …) for major with primary concentration as well as for second concentration.

17.2 Second Bacholar's Degree

Applicants who have earned a Bachelor's degree from Ajman University or another accredited institution, recognized by the Commission of Academic Accreditation at UAE Ministry of Education – Higher Education Affairs, may be admitted to a second Bachelor's degree provided they fulfill all admission requirements of the second Bachelor's degree. The second program must have at least 30 credit hours of unique subject-area courses. The admitted students must satisfy all degree completion requirements of the second Bachelor's degree. However, General Education courses completed during their first Bachelor's degree may be counted toward the second Bachelor's degree provided they are the same or substantially equivalent to those required in the second degree. Similarly, students may not be required to repeat those courses in the second degree program that have nearly the same contents as in some equivalent courses in the first degree program. However, prior to starting their second degree, the student must obtain a list of required courses approved by the Dean of the college where the student is admitted for second degree.

The cumulative GPA of student shall be determined based on the list of courses approved by the Dean for successful completion of the second degree program. A cumulative GPA of 2.0 is required for graduation.

18 Student Records

Student records are kept at the Office of Admissions & Registration and contain the following documents:

a. all the documents that were submitted for admission
b. any letters of undertaking signed by the student during his/her studies
c. a copy of the updated transcript at the end of each semester
d. any requests for suspension of studies (if any)
e. clearance forms for graduates or students who have withdrawn from the University
f. The transcript delivered by any other institution from which courses were transferred along with the course description, and the approval of the College for the transfer of the course. The authentication certificate of the transcript, which was issued by the former University, is also kept on file.
g. The decision of completion of graduation requirements signed by the Dean of the College when the student completes his/her studies.

Confidentiality of the Records

a. AU considers that all personal and academic information is confidential and therefore cannot be given to individuals other than the parents of the student.
b. The Office of Admissions and Registration will assist institutions when they request information on the authenticity of a copy of the transcript or a graduation certificate.
c. Transcripts and official documents will not be issued to any person other than the student unless they have a letter of authoirsation signed by the student and accompanied by a copy of the student's ID.

Student Rights

Students have the right to:

a. Inspect and review information contained in their education records.
b. Request change or update of their personal data.

19 Information Technology and Learning Resources

19.1 Information Technology

Introduction

Ajman University (AU) provides computing, networking, information and telecommunication resources to the university community to support teaching, research, and efficient administrative processes. Access to Information Technology resources is granted to members of the university community who are enrolled students, employees, or academic staff members. The authorized Office for running these resources is the Office of IT.

Mission

Providing efficient and current IT services to all university users (faculty, students, and staff) in order to fully support their teaching, research, and administrative activities.

Objectives

The objectives of the Office of IT are to:

a. Provide robust IT physical and logical infrastructure, maintain WAN and LAN nodes, and perform administrative operations to keep IT services available 24/7 to users.
b. Provide prompt and accurate technical assistance from knowledgeable staff, and to listen carefully to users' requests and feedback.
c. Develop database systems, maintain university-wide database applications, and give full support to the Application users.
d. Create, maintain and enhance University and related websites, and to develop integrated application to enhance users' web browsing experience.
e. Perform RND to recommend new technologies.
f. Protect AU IT assets.
g. Ensure that the use of IT resources is primarily for university purposes and university-related activities.
h. Maintain the integrity and security of the university's computing facilities.

Services

- Help Desk
- Network Account
- Email
- Internet
- WiFi
- Online Registration
- E-Learning Management System

- Maintenance and Replacement of Computing and Network Resources for Educational Facilities and to AU Staff.

AU IT Facilities

IT facilities at AU are maintained by the Office of Information Technology, located on the ground floor, Block A, Jurf 2. It is the responsibility of all users of the computer system to notify the Office of IT of violations of laws and university policies in connection with the use of computers, as well as of potential loopholes in the security of the computer system. Any concerns, complaints, or reports of misconduct with regard to the computer system should be reported to the director of IT on 7056500 or email helpdesk@ajman.ac.ae.

Network Accounts

Accounts are intended to be personal. The individual to whom the account has been created is responsible for ensuring that his/her username and password remain confidential. No one is allowed to use another person's username and password.

User Account :

All freshmen students should receive an identification letter by email with their password/user account details and how to use it after two (2) working days before the Registration starting date or one (1) working day from the admission approval, in the case of students who have been admitted during the registration period.

All registered students should have passwords/user accounts.

The password/user account will remain active for the duration of a student's course. The email account will remain active for life.

Students who, for a reason or another, lose their passwords will be required to pay AED 15 for a password reset.

Students can use their user account to access all the below AU web services:

Computer labs.

WiFi

Email

E-Learning Management System (Moodle)

Online Registration System (ORS)

Electronic Communications:

Email

AU has established e-mail as a primary vehicle for official communication with students. All university communications via email will be sent to this address. Faculty members will use the official university e-mail address to communicate with a student registered in their classes and administrative units will correspond with students via this address. The University expects that students will receive and read e-mail in a timely manner. Students are expected to maintain their accounts and check their e-mail. A student is obliged to check university e-mail and act upon content.

E-Learning Management System:

AU adopts an E-Learning Management System (Moodle) to enhance the teaching and learning process. It is a web-based application that allow instructors to deliver content and resources to students and manage their delivery. It provides easy ways for instructors to create and deliver their course content, communicate with students, and assess student performance.

Students will be enrolled in all their courses automatically as the moodle system is integrated with the registration system.

Improper use of the computer system is prohibited:

The Office of Information Technology (IT) is neither an investigative nor a disciplinary entity in its primary responsibilities. However, in cases where university resources and privileges are abused or otherwise threatened, the Office may be asked to take appropriate action. Immediate revocation of access and subsequent prosecution by the authorities, for example, might be directed. Such revocation may be appealed to the IT committee.

To summarize, access to University computing and communications equipment and facilities may be revoked for reasons including, but not limited to:

a. Attacking the security of the system;
b. Modifying or divulging private information such as file or mail contents of other users without their consent;
c. Misusing or abusing Internet/Network by using Internet tools or software that may affect the performance of the Internet/Network
d. Modifying or destroying university data.
e. Using the networks/Internet in a manner contrary to the established guidelines;

Finally, users may not read sensitive information simply because it is accessible to them - because of accidental exposure and/or through the malice of others who have broken into a system or are misusing their access privileges. When sensitive information is recognized as such, it should not be examined further, but reported to the keeper of the materials, if known, or otherwise reported to management.

Computer Labs

Computer labs operated by the Office of IT are a shared University resource available on a first-come, first-served basis. Food and beverages are prohibited in these labs. Labs may be reserved for exclusive use by a class or group. Some labs are provided by Colleges, not the Office of IT; contact those Colleges for their additional usage guidelines.

Terms and Conditions of using IT services

a. The Office of IT considers all temporary and permanent connections via the University network, to be subject to the provisions of this policy.
b. Computing resources not owned or approved by AU may not be connected to the University's network.
c. The Office of IT has the right to monitor the traffic of all transmissions on networks maintained by the Office at all times.
d. Operating systems currently supported (for the desktop) include Windows OS (Windows 8 and above) and Apple OS (7 and above). There are special requirements for Unix workstations in the College of Engineering and the College of IT. Upgrading will take place in a controlled manner.

e. Software and hardware to be installed should be requested by the Dean or Director and it may not be installed or connected to the university systems without the approval of the IT Committee. This includes the data and telephone networks.
f. All university affiliates (faculty, staff & students) are permitted to use the university network and selected computing resources at all times while the network is available.
g. IDF/MDF rooms are under the authority and responsibility of the Office of IT. Everyone within the AU Network community who uses university computing and communications facilities has the responsibility to use them in an ethical, professional and legal manner.
h. Violations of information technology Policies & Procedures typically result in university disciplinary action, which may have serious consequences, and in some cases, may result in legal action.

Data Backup

It is the responsibility of students to have a backup of their data and coursework on a personal data storage medium (such as External Hard Disks, USB flash drives or CD/DVD disks). Students may also backup on the cloud using the provided storage with the email service (50 GB on OneDrive).

Internet Services.

Students may access the Internet through computers in university computer labs and through personal laptops connected to the university's Wi-Fi provided in designated locations.

Student access to the Internet conforms to the laws of the United Arab Emirates, including the monitoring and filtering of Internet content. Any attempt to circumvent or disable Internet access controls set by the University or the government of the UAE is a violation of university policy and will result in disciplinary action.

19.2 Library & Learning Resources Center

The literature relating to library and information science states that the effectiveness of the organization and its various activities cannot be determined without a statement of goals and objectives because, by definition, effectiveness is the degree to which a library accomplishes its stated objectives. The Association of College and Research Libraries (ACRL) Standards, published in June 2004, anticipates that the mission, goals and objectives of a college library should support the mission of the parent institution and should be spelled out clearly so as to serve as a framework for its activities. Outcome assessment measures take into consideration the library's dependence on technology, its increasing use of online services, its provision of information literacy skills and the budgetary split between print and electronic resources. The ACRL Standards require goals to be compatible and consistent with those developed by the institution. Assessment of the quality and effectiveness of the library should be linked closely with the specific mission and goals of the institution. The Information Resources Center should be involved in the overall planning process. These planning methods require input from a broad spectrum of the institution's community. Strategic planning that includes evaluation, updating, and refinement, provides an overall direction that helps to guide day-to-day activities and decisions.

Mission

The mission of the AU Library and Learning Resources Center is to support the University mission in identifying, organizing, preserving and offering accessible resources which serve the needs of college members, students and the community at large. In addition, the library seeks to locate, acquire, organize and select the most appropriate

material and make it accessible to users. It is also the mission of the library to build a comprehensive, balanced library collection and provide a good environment for reading, learning and research.

The upgrading and preserving of the library's information technology infrastructure to ensure prompt access to information and information services are also among the AU library mission priorities.

Goals and Objectives

The goals and objectives of AU library and LRC are to:

a. Provide current library materials and databases that support the academic curriculum
b. Provide access to information resources, regardless of location
c. Collect library materials in all formats, broaden and update all collections to meet the needs of AU programs and support the various aspects of the institution: teaching, training, research and services
d. Educate and assist faculty, students and staff in the identification and effective use of information resources
e. Continue to strengthen and update all collections to meet the needs of AU programs
f. Preserve AU collections and materials, and maintain and upgrade physical and technological infrastructure to enhance the quality of services
g. Recognize that a minimum acceptable standard is one resource per topic per student
h. Meet accreditation standards
i. Provide access to library resources and servers via web pages and online resources
j. Ensure that resources available are current, appropriate and accessible 24/7
k. Work closely with users; know their needs and interests
l. Put into practice the motto that building library resources is a continuous process
m. Enhance information literacy, especially in the student community, by developing effective plans aiming at improving student ability to:
    1. Access information effectively and efficiently
    2. Evaluate information and its sources critically
    3. Understand economic, legal and social issues when using information
    4. Access and use information critically and legally

20 Health Clinics

Mission

The University Health Clinics seek to complement the academic mission of AU and are dedicated to providing educational, supportive, consultative healthcare services to students, staff, faculty and eligible dependants. In doing so, the Health Clinics strive to make the campus a healthy and safe place to study, work and live.

Objectives

The objectives of the University Health Clinics are to:

1. Provide primary healthcare to students, college, staff and eligible dependants
2. Provide emergency healthcare to Residential Hall and campus residents after working hours and at weekends and on holidays
3. Support the integration of university services and provide a healthy atmosphere to accomplish the university objective of a disease-free community
4. Provide high quality integrated health services in a timely manner to generate complete customer satisfaction

Services

The Medical Services Administration provides the following primary healthcare, within available capabilities, through its clinics:

a. Round-the-clock services for males and females
b. General Clinics: primary healthcare, treatment, preventative medicine and health education on common diseases through the general practitioners to the university community
c. Nursing: comprehensive nursing care and services, including routine and emergency cases, recording patient details and providing treatment
d. Reception: receiving patients, preparing the patient files and records, recording personal data, preparing daily, monthly and annual statistics
e. Medical Lab: carrying out medical tests and running tests referred from university physicians for nominal fees
f. Referral System: referring urgent cases to hospital specialists
g. Following up chronic cases and coordinating referrals to hospital specialists if necessary
h. Carrying out medical checkups for new students

21 Safety

The university has taken measures to ensure the safety of all present on its campus. Although it has appointed a Safety Officer and Safety Coordinators throughout its units and Offices and has established a policy on safety and health hazards, it expects all its personnel and students to act in a safe and proper manner to minimize risks.

All students are asked to:

- observe all relevant safety rules and instructions issued by the University;
- follow all the instructions and rules related to the safe use of space, such as labs, classes, workshops, sport facilities, hall of residence, etc;
- familiarize themselves with procedures, emergency exits, and emergency contacts;
- avoid any improper action or behavior which could be hazardous;
- report any accident or a near accident experienced on campus;
- report any significant hazard you discover on campus.

Safety notices, contact emergency numbers and first aid boxes are located in appropriate locations. Notices are also displayed for emergency exit routes and assembly points in the event of fire. Students are required not to tamper with these.

In case of fire or emergency evacuation, everyone is expected to act responsibly and not to endanger the lives of others. All should adhere to announced procedures.

Any person who, for whatever reason, because of impairment (for example requiring assistance to evacuate a building during an emergency situation) should inform the relevant safety personnel or the Office of Student Affairs of his/her needs at the beginning of his/her enrolment.

Safety Procedures for Labs

Students are expected to manipulate instruments, equipment and materials that are potentially hazardous. Students are required to read safety lab manuals (associated with all labs). Students shall not be allowed to participate in a lab unless they have demonstrated a clear understanding of the safety procedures involved. Students should not work alone in a lab in case of an accident or medical emergency. Inattention or disruptive behavior will not be tolerated in any lab. Repeated cases will be referred for disciplinary action. Equipment, tools and materials must be handled in a manner that is safe for the student as well as for other students and the instructor.

Safety arrangements are reviewed on a regular basis. Suggestions for improving these procedures are welcome. Students should contact the following numbers in an emergency.

Jerf1 067056204

Jerf2 067056530

22 Deanship of Student Affairs

The Deanship of Student Affairs (DSA) is responsible for those aspects of student life which extend beyond the classroom. The DSA is committed to encouraging the personal development and growth of students through the organization of a variety of co- and extra-curricular activities, which include cultural, social, sporting and entertainment programs. In addition, the DSA is responsible for the provision of a variety of services.

The DSA comprises two divisions:

22.1 Student Counseling Unit

Student Counseling is dedicated to helping students address personal or emotional problems that hinder them in achieving a fully beneficial experience at AU and realizing their full academic and personal potential. Student Counseling Services utilize a service system that emphasizes trust, respect, confidentiality, and compassion. Its overall goal is to maximize student success by attending to any emotional or personal needs which may impede learning. Through personal counseling, students learn to take charge of their lives, acquire skills necessary for adjusting to the demands of university life, and overcome difficulties that may prevent them from meeting their academic and career goals.

Student Counseling Policy

Purpose:

The purpose of this policy is to establish guidelines for student counseling.

Policy:

AU offers quality services to students. To maintain high standards and fully address the personal growth, psychological needs, and emotional wellbeing of students, AU provides student counseling services. The Student Counselor makes assessment and provides individuals, and groups, experiencing personal problems with support and guidance and assists them in overcoming obstacles to their educational success.

Personal Counseling:

a. Refers to one-on-one counseling with each student on a regularly basis. Students are seen for a multitude of issues that range from typical developmental challenges to more serious adjustment and mental health issues.

b. Listening to student complaints, working to find solutions, and informing parents about the academic status of their sons and daughters

Group Counseling

Group interventions entail working with a small number of students who share similar concerns and treatment goals. Group counseling addresses either general or specific issues. This form of counseling facilitates the healthy exchange of experiences, provision of sympathy and support and the development of skills necessary for effective coping and problem solving.

Procedures

Eligibility

Counseling services are available to all currently enrolled, graduate, and undergraduate students. There is no fee required from students to utilize this one-to-one counseling service provided by the Student Counseling Service.

Confidentiality

Any communication between a student and a counselor is considered confidential. The confidentiality of the counseling sessions is protected. No student records are released to others (even within the university community) without the written consent of the student. If it becomes clear in the counseling session that there is a real danger to oneself or to others, the counselor is required to inform the Dean of Student Affairs, to a parent or someone close to the student. The confidentiality rule does not apply in this case, but should go no further than the persons mentioned.

Access

Students are encouraged to make an appointment with a personal counselor to discuss their concerns. A personal counselor is available on campus.

Referrals

The Student Counselor provides referrals to qualified psychologists, psychiatrists and therapists equipped to aid students with psychological problems, learning disabilities, and/or other serious issues. If the referred student would like to maintain the involvement of the personal counselor, the counselor may request a copy of the report of the external visit and may follow up with the therapist regarding the student's treatment.

22.2 Student Activities Unit

Under the sponsorship of the DSA, this unit organizes many activities that span a wide range of interests, covering social issues, culture, art and sport. It also acts as the central support for the numerous student societies. This Unit provides and organizes the following social, cultural, art and athletics activities:

1. Social Activities

These activities aim at widening and promoting the social aspects of the students' personality, thus activating and developing their role in building society and its social institutions. These activities also aim at training students in group and voluntary work. Moreover, there are several other social services and activities offered by the social division throughout the academic year such as:

a. Receiving new students and their parents and finding solutions for the difficulties students may face at the beginning of their academic life

b. Arranging and supervising meetings at which students are able to get to know each other, thus breaking down the psychological barriers between senior and new students and familiarizing them with the university setting
c. Promoting social awareness among students is done through a number of activities which include raising money for a variety of charitable causes and visiting institutions - for example, orphanages
d. Organizing activities during the holy month of Ramadan, which include Iftar, conferences, religious lectures, competitions, financial donations and other charitable deeds. Competitions in the recitation and memorization of the Holy Quran are also arranged
e. Arranging social and educational activities, for example visits to cultural landmarks, scientific exhibitions and entertainment centers, and exchanging visits with scientific, teaching and social institutions
f. Cooperating with UAE institutions and authorities in health-awareness campaigns on subjects such as illegal drugs and smoking
g. Organizing blood donation campaigns in cooperation with the Ministry of Health, and taking part in campaigns and celebrations organized by formal authorities, such as the Civil Defense and Traffic Week Festivals
h. Running training courses, such as first-aid and personality development
i. Supporting social activities that aim to develop students' personalities and consolidate their relationship with local values and morals

2. Cultural Activities

The DSA organizes a series of intellectual and cultural activities throughout the academic year. These activities aim at stimulating and enriching both intellectual and cultural aspects of students' personalities. They also contribute positively to building a solid intellectual and cultural background, and help students distinguish between constructive and destructive thinking in their campus life.

Cultural activities organized by this division include the following:

a. Organizing intellectual and cultural lectures and conferences featuring experts from within and outside the university
b. Running cultural, intellectual, literary and scientific competitions, and awarding prizes and certificates for distinguished projects such as short stories, literary articles, scientific research and poetry competitions, with the aim of promoting student creativity
c. Organizing poetry readings, seminars, discussion forums and exhibitions of student work
d. Encouraging students to write articles for publication in the University Magazine
e. Participating in cultural, intellectual and scientific competitions organized by educational, literary and scientific institutions in the UAE

3. Art Activities

The DSA is keen in promote the aesthetic and artistic aspects of student life and seeks to further develop these. Throughout the year this division arranges participation in the following activities:

a. Presentation of student work, such as drawings, sculpture, calligraphy, art, zincography and photography, in magazines. Exhibitions of student artwork, which provides excellent motivation for talented students
b. Art competitions among talented students in a variety of fields
c. Art competitions held in the UAE

d. The design of wall magazines featuring students' written and artistic work, exhibited in university halls and corridors

4. Sport Activities

Sport activities play an important role in promoting the physical and intellectual development of students.

Sport enables participants to build their physical wellbeing through exercise and is an important element in the development of personal and psychological balance. As an important part of the strategy and vision of AU, the university has a wide range of sporting facilities. These include playing fields for football, handball, basketball and volleyball. In addition, the gymnasium is equipped for a variety of sports and there are further facilities for chess, billiards, tennis, etc.

The division also organizes sporting events and participates in many indoor and outdoor athletic championships, such as:

a. Inter-college teams
b. Forming university sports teams and regular training sessions
c. Participating with universities and colleges from across the UAE in championships and sporting competitions organized by the Higher Education Sports Federation
d. Promoting health and fitness through body-fitness programs and courses in track and field sports, games and swimming
e. Ensuring that the university sports facilities and equipment are updated
f. Ensuring that safety standards are upheld

22.3 Students Role in Institutional Decision Making

Ajman University considers its students to be an important element of its operations and events and values their opinions and suggestions. Students can submit their written concerns/suggestions to the Dean of Student Affairs, the Vice-Chancellor or to the Chancellor via the appropriate channels.

22.4 Student Council

Student Councils represents the voice of the students and provide leadership in assisting and organizing activities for all students. There are opportunities for any student to serve as a member of the Council. Those interested in being considered for membership on the Student Council, should apply to the Deanship of Students Affairs.

AU recognizes two single-gender student councils for male and female students. Each student council consists of 15 members, where (10) members are nominated by schools and colleges while the rest (5) members are chosen through campus-wide elections. The Student Council mission is to represent the students and give them the opportunity to communicate their views and concerns. It provides resources for the various student organizations and clubs, offering guidance and support in an attempt to build a generation that is established on the notions of teamwork, dedication and responsibility.

Council Election

Article 1: One-third of Student Council members (i.e. five members) shall be elected through a direct general election by means of a secret ballot.

Article 2: Any candidate running for Student Council (SC) membership shall satisfy the following conditions:

1. Be a regular student of AU;
2. Be not younger than 18 years of age;
3. Be of good conduct and sound reputation;
4. Must not have been convicted of any felony or misdemeanor involving moral turpitude or dishonesty, unless he/she has been rehabilitated.

Article 3: The DSA Student Council Elections Committee shall be formed and charged with the following responsibilities:

1. Setting a timeframe for submitting candidatures;
2. Receiving candidatures form interested students;
3. Reviewing candidatures to ensure that all conditions are satisfied;
4. Considering and adjudicating appeals filed by or against any candidates;
5. Publicizing the list of candidates and post it on the announcement boards of each college;
6. Receiving and adjudicating objections lodged against any candidates;
7. Establishing rules and procedures for constituting the electorate;
8. Fixing the election date and announce the method of voting;
9. Overseeing the election process.

Article 4: - The Student Council Campaigns and Elections are held electronically. The Voter needs to visit the e-vote link on the day of the election to select the nominee of her/his choice. The results are then generated also electronically and announced by DSA Officials on the second day. After that, two Councils are formed (male and female) of 15 members each. A meeting to decide the distribution of roles within the Council in conducted in the presence of DSA representatives.

Article 5: Candidates shall have the right to conduct pre-election campaigns in accordance with such regulations as are promulgated by the Committee.

Article 6: The rules and procedures of Student Council election shall be as follows:

1. Voting shall start at 8:00 a.m. on the day of election;
2. Voters shall use their usernames and passwords to sign into e-vote where they can cast one votes only.

Article 7: Supplementary elections shall be held on the second day in case of parity of votes between two or more candidates, which raises the number of winners above five.

Article 8: In all cases, if the supplementary elections result in another tied vote, the Committee shall resort to a drawing of lots among the tied candidates to fill in the required seats.

Article 9: - In case any of the nominated candidate is unable to join the SC, priority will be given to the nominated candidate over five according to the rank.

Article 10: The Committee shall receive election appeals within 48 hours of the announcement of results. The Committee shall consider and adjudicate such appeals within a period that shall not exceed 48 hours from the date of receipt of each appeal, and the Committee's decision on this matter shall be final.

Article 11: In its first session, the Student Council shall elect by an absolute majority of its members the Council Chairman and Vice-Chairman from among the members of the Council who are nationals of the United Arab Emirates. The session shall be chaired by the oldest member of the Council.

22.5 Student Societies

A student society is a body elected by AU students; society activities are supported by the DSA. There are also academic societies in each college. The goals of these societies are to:

a. Encourage student participation in a variety of activities
b. Promote the spirit of cooperation among students, and encourage them to take on responsibility
c. Provide support to new students by advising them and helping them in their new academic life
d. Obtain student input regarding needs and wishes, and pass the information obtained to the DSA
e. Act as a liaison between students and DSA supervisors
f. Meet with DSA members on a regular basis
g. Arrange for "acquaintance" meetings among students in order to break down the barrier between new students and the new academic society
h. Promote study ethics among students and encourage them to abide by the rules and regulations of the university
i. Urge students to abide by the morals, principles and doctrines required by Islam

In line with the vision and philosophy of the AU, the DSA arranges a series of developmental, educational and cultural courses for student leaders, with the aim of improving their performance and developing their leadership skills.

Student societies supported by the DSA

1. Social Society : The Social Society is concerned with the social and human aspects of student life. It seeks to develop the relationship between students, the university and the community. The Social Society supports morality and promotes welfare work. The society also participates in social activities organized by the DSA.

2. Cultural Society: The Cultural Society is concerned with the intellectual, cultural, and literary life of students. It aims to promote students' talents through performances, exhibitions and participation in cultural activities, for example reading intellectual and literary publications and writing.

3. Arts Society: This society seeks to develop the talents of students who are artistically inclined (e.g., in drawing, photography, art, etc.). It also arranges art exhibitions and conducts training courses in drawing and other forms of creative activities. Members of the society also participate in external exhibitions.

4. Athletic Society: This society seeks to improve students' athletic skills. It participates in organizing competitions, encourages students to take part in athletic activities and conducts training courses to improve stamina. The society also supports the DSA in athletic activities.

22.6 Student Media

The university has varied media channels which reflect its noble mission and ensure effective communication with its population. Also these channels are used for training its students in a professional and credible manner. This is actually done under the supervision of highly qualified faculty who are members of the college of Mass Communication and Humanities. Among these important channels are the following.

1. Television: The university possesses a cutting-edge and well-equipped television studio for training the media students in the different stages of television journalism. At the same time, it is used for internal transmission within the university.

2. Radio: This channel is also available to AU students through which they transmit its programs via the Internet under the supervision of the college of Mass Communication and Humanities.

3. Publications: AU students issue a number of publications such as the university magazine, the newspaper, Afaq in addition to news bulletins related to the university colleges. Some of these are periodic and others to celebrate certain events.

4. Social Media : The university webpage is very informative on matters related to the university and students. Moreover, the university has a device related homepage and dynamic pages on social media: Facebook, Twitter, Utube. Colleges have their own homepages.

23 Student Services

The DSA is responsible for monitoring the student services offered by AU and service providers working within it – for example accommodation, transportation and health care services. It seeks feedback from students regarding the effectiveness of these services and uses it to inform decisions regarding the improvement of these services.

1. Accommodation

In line with its vision, AU is eager to ensure the success of the education it provides. Student accommodation is therefore given high priority, as it plays a key role in student wellbeing and can have a positive impact on academic performance. For this reason, an independent organization has been founded which is concerned with every aspect of life in the student accommodation, for example matters of comfort, the provision of three meals daily, the mini-market, health club, internet, etc. These services are offered at very low prices.

In addition, the organization offers additional free facilities, for example electricity and water, study rooms, libraries and newspapers.

a. Well-designed rooms equipped with appropriate facilities such as furniture, refrigerators, AC, etc.
b. Continuous supervision (day and night) by qualified supervisors (both male and female)
c. Comfortable transportation between the accommodation and the university. Transportation is also provided for shopping trips and visits

Student conduct in Residential Halls is subject to certain regulations

d. Security - all residential halls are protected by security staff patrols
e. Curfew - staff monitor attendance records regularly for absences. Repeated violation of attendance regulations may result in dismissal from the residential hall for one or more semesters.
f. Smoking - male students are allowed to smoke out of doors and in their rooms. However, smoking in common areas is strictly prohibited
g. Littering - all students are expected to maintain cleanliness inside the halls. Rooms are inspected periodically for cleanliness.
h. Alcohol/Illegal Drugs – the use of alcohol or illegal drugs is strictly prohibited on campus. Students found in violation of this regulation will face severe disciplinary consequences
i. Housekeeping – student rooms are cleaned at least once a week, and all common areas are cleaned daily
j. Dorm Leave - all resident students are expected to sleep in their residential hall every night, except during official dorm closing periods or upon verification with residential hall staff by parents/guardians

To conclude, the DSA is eager to promote the quality of life in the residential halls. The Director pays regular visits, meeting students and listening to their suggestions and complaints. The DSA also receives regular reports from advisors concerning conditions in the halls and takes action as necessary.

2. Transportation

The transportation Unit is responsible for ferrying students between the residential halls and the university. The Unit has many buses which make more than fifty trips daily.

This Unit also provides students with transport to activities outside the university, for example visits to scientific and entertainment venues, lectures or conferences. Two buses are kept on standby round the clock to cover emergency requirements.

The transportation Unit has defined the regulations governing the use of its buses and the fees student pay in order to ensure the systematic and good quality services. These regulations are distributed to student who opt for making use of this facility.

The DSA's role in student transportation is to:

k. Coordinate the transportation of students to participate in various activities
l. Elicit student views concerning the transportation services offered
m. Solve student problems with the cooperation of advisors, who keep the DSA informed of recent developments
n. Improve the organizational performance in order to achieve high standards of services

3. SMART Superstore

Retail outlets on all campuses meet student needs for stationery, books in Arabic and other languages, software facilities, photocopying, printing and binding. Students may also purchase prescribed textbooks for all fields of specialization at low prices. The DSA monitors the services and coordinates with the supervisors of SMART Superstore to solve any problems that may arise. The Unit makes every effort to ensure that books are delivered promptly.

4. Other Services

The Office of University Facilities is responsible for examining the standard of other student services, for example restaurants, mosques, maintenance, cleanliness and security on campuses. With regards to restaurants, the DSA ensures that they are operating in accordance with required health standards. Mosques are kept clean and safe. The Office of University Facilities also checks the cleanliness and maintenance of lecture halls and deals with any problems that may arise. It also coordinates with the university's security staff to ensure appropriate handling of any problems. Finally, the Office of University Facilities designs questionnaires to assess the standard of services provided and recommends improvements

23.1 Cafeterias & Restaurants

The university provides cafeterias and restaurants on each campus, offering a variety of meals and beverages. Separate areas are provided for men and women students. Women students living in university hostels have a private cafeteria in the hostel building. Prices are set according to the choice of meals and are kept at a reasonable level.

23.2 Bookshops

A bookshop on each campus sells books and stationery and provides photocopying services.

23.3 Mosques

The university has conveniently-located mosques and prayer rooms with facilities for men and women students on each campus.

23.4 Shops

There are shops on each campus and in student hostels to supply everyday items. Weekday and weekend opening hours are displayed on the shop fronts.

24 The Career Counseling Center

Mission

The Career Counseling Center endeavors to serve AU students and alumni by educating them to successfully identify, plan and pursue their career goals. The center supports the mission of the university in its three dimensions - education, information and investment - by providing quality services which will enhance clients' employment potential, and by liaising with prospective employers. To achieve its mission, the Center is assisted by AU Alumni Association, a non-profit organization which aims to enhance interaction between alumni, students, the university and the community.

Objectives

The Career Counseling Center aims to:

1. Help new students to select courses appropriate to their career interests and aspirations
2. Help students and graduates in decision-making, goal setting and planning for their careers
3. Offer guidance to students and graduates regarding the skills necessary to meet evolving job requirements
4. Help students and graduates acquire effective job search skills
5. Signpost students and graduates to job search resources
6. Provide AU with job-market information to aid academic planning
7. Seek recruitment, internship and voluntary or part-time opportunities for students and graduates through liaison with businesses, governmental bodies and organizations
8. Establish a plan for assessing the performance of career services and activities
9. Establish and foster lifelong professional and personal relationships between the university and its alumni
10. Promote communication between alumni, and between alumni and the university
11. Promote the Alumni Association within the university and engender goodwill, understanding and support for the university in the wider community
12. Offer alumni opportunity to contribute to and participate in the university's decision-making processes
13. Establish fundraising mechanisms for the Alumni Association

Services

The work of the Career Counseling Center includes: Organizing:

- Career days
- Social and cultural events
- Alumni clubs and forums

Providing services

- Career guidance
- Group and individual counseling
- Employability skills development
- Psychometric tests
- Informing:
- Posting job advertisements electronically and on campus notice boards
- Employer portal
- Job seeker portal
- Classified jobs

Registration Process: students must register with the CCC in order to receive job notifications and event invitations.

25 Training Center

Mission

The Training Center seeks to support the strategic vision of the university by bridging the gap between the academic realm, the community and the employment market. It strives to achieve this aim through three strategies: student training, staff training and community training. In doing so the center applies scientific criteria in the selection of trainers, programs and performance assessment.

Objectives

The Training Center's short-term objectives:

14. Student Training: to seek suitable credited-hour training opportunities for students in various public and private organizations, as part of their study plan

The Training Center's long-term objectives

a. Continuing learning, training and rehabilitation: to lead training development programs for college members and staff in areas such as teaching and learning methodology, computer skills, research methods, languages, management and technical skills
b. Community training: to play an active role in developing community programs through symposia and seminars on rehabilitation, development and the upgrade of worker skills and capacities
c. Promoting training and learning through the use of modern technology

Continuing Education Center

The Continuing Education Center (CEC) was founded in response to the market's mounting need for excellence. We specialize in preparing both men and women for rewarding careers in various businesses and environments. We are well aware that students come to CEC with a variety of academic experiences and backgrounds; hence, every effort is made by the administration and staff to integrate these experiences with the requirements of the work requisite. The long-term growth and success of our Center relies heavily on its aptitude to attract and retain qualified and keen staff and to maintain being a zenith in what it does best: continuing education.

The CEC also prepares students to work effectively by developing essential competencies in a reflective, learner-centered teaching milieu. This method is implemented through an academic curriculum that incorporates field-based practice, reflection and application.

a. Courses offered TOEFL Courses TOEIC Courses ICDL Courses CCNA Courses
b. Business English Courses, English Level I Courses, English Level II Courses, Management Courses, etc.
c. IT Courses
d. Web Design and Graphics Courses
e. Soft Skills Courses (Customer Service, Leadership, Business Etiquette, Communication Skills)

26 Student ID Card

Students will receive a university ID card containing their photograph, name, date of birth and AU ID number. The ID card should be carried at all times. It provides access to certain academic buildings and hostels. In addition, the card is required for admission to sports facilities, to sit university exams and to make use of computer facilities.

The loss of an ID card should be reported immediately to the Office of Admissions and Registration. Fraudulent use of an ID card shall result in disciplinary action.

27 AU Rules and Policies

27.1. Student Rights and Responsibilities

27.1.1. Student Rights

Every student enjoys all rights and freedoms recognized within the University by the Laws of the United Arab Emirates as long as this does not violate the Code of Student Conduct.

Every student has the right to fair equal treatment by the University. A student has a right to be free from discrimination based on ethnicity, color, religion, gender, marital status, nationality, language, or personal handicap. However, a distinction, exclusion, or preference based on relevant academic or physical aptitudes required and made in good faith is considered to be non-discriminatory.

All students have the right to have an environment supportive of the University's mission and their own educational goals.

Students can function in their daily activities safely and easily.

The university is committed to ensuring that adequate measures are taken to protect the security of students on the university campus.

AU respects the student's right to privacy of personal information. This implies that information disclosed by the student and for the student is considered to be personal; this information will not be disclosed to third parties without your consent. A permanent record for each student enrolled in the University is maintained by the Office of Admissions and Registration. The written consent of the

student is officially required to disclose his/her academic record. Exceptions are made for parents, sponsors, authorized AU officials and in compliance with a judicial order.

AU shall make sure that students know their rights and responsibilities, as well as applicable University policies and procedures. The university's obligation under this section is fulfilled when the university makes copies (hard or on the university website) of the Student Handbook available to every student upon being admitted to and entering the university.

Students have access to help them in managing their own affairs, increasing self awarness, career planning and personal decision making;

Students have access to established grievance procedures.

Students have access to various activities beyond the classroom, which support intellectual and personal development.

Students have access to excellent faculty, academic technology, classrooms, libraries, presentations and other resources necessary for the learning process.

Students have the right to get prompt and appropriate responses from the university's academic and administrative Offices.

Every student has the right to quality education.

Every student has the right to a fair and impartial assessment of his/her performance as a student.

AU shall furnish students with relevant course information to enable them to make informed course selection.

A student who is accused of a disciplinary offence has the right to present an appropriate defence.

27.1.2. Student Responsibilities:

Students must behave in a manner that is civil and compatible with the university's function as an educational institution. Students are required to obey the rules and regulations of AU as laid out in the Student Handbook and University Catalog. In particular, students are expected to abide by all rules and regulations expressed in the Code of Student Conduct. Students are expected to familiarize themselves with these codes and their obligations and responsibilities toward the university, its faculty and staff, other students and visitors to the university. In AU's community of learning, disruption of the educational process, destruction of property, and interference with the orderly process of the university, or with the rights of other members of the community, cannot be accepted. In order to achieve its objetives and function properly, AU has the authority mandate to maintain law and order and to discipline those who are disruptive of the educational process.

27.2. Student Behavior Code

All members of AU are expected to conduct themselves in accordance with the regulations of the university, and the laws of the UAE. In particular, AU students are requested to play an exemplary and positive role in enhancing the reputation of the university by:

a. Demonstrating a clear commitment to their own learning

b. Conforming themselves to all specified time requirements for registration, class schedules, examinations and completion of assignments
c. Ensuring that work presented is their own personal work
d. Ensuring that all information presented to faculty members and administrative staff is accurate and true
e. Conducting themselves in a courteous and proper manner in their dealings with faculty members, employees or other students
f. Meeting their academic advisors regularly
g. Respecting the property of others and of the university
h. Reporting grievances to their academic advisor or the Dean of the College
i. Not engaging in cheating, plagiarism, disruptive behavior or improper conduct which could damage the reputation of the university
j. Not using AU facilities for other than learning purposes without prior authorization
k. Not falsifying documents or using falsified documents for any purpose related to the university
l. Not distributing leaflets or collecting signatures on university premises or in hostels without prior authorization
m. Abiding by AU rules and regulations, and the directives of the academic and administrative staff
n. Acting in a way that will not cause offence to the culture of the UAE

27.3 Student Academic Integrity Policy

1. PLAGIARISM

1. The rich learning resources are available at AU are expected to be used to support student research
2. Students are requested to submit their own work to be used for evaluating the level of achievement of a specific learning outcome.
3. Each faculty should explain to his/her students that he/she is interested in evaluating their own work and not the work of others.
4. It is not forbidden to reproduce an idea or sentences from a book or an article as long as the student uses quotation marks and give its source.
5. There is no usage in reproducing sentences if the student does not refer to them in his/her sentences. Every submitted project is expected to contain a reference section in which the student lists all the materials that he/she consulted or used in the project.
6. Plagiarism is strictly forbidden at AU which has acquired specialized software that detects plagiarism.
7. If plagiarism is proven, a zero mark may be given to the project which subsequently induces a failure in the course.

Examples of Academic Integrity Violations

The following list includes, but is not limited to, examples of violations under the Academic Integrity policy.

Plagiarism	Test and Exam Rules	Other violations
Failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks.	Attempting to read other students' exam papers.	Co-operation or collaboration on an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis.
Submitting any work written, in whole or in part, by someone else.	Speaking to another student (even if the subject matter is irrelevant to the test).	Disruption of classroom activities or periods of instruction.
Submitting a computer program developed in whole or in part by someone else, with or without modifications, as one's own.	Leaving answer papers exposed to view.	Improper access to confidential information such as exams or test questions.
Using ideas or material without appropriate acknowledgment in any academic assignment.	Writing an examination or part of it, or consulting any person or materials outside the confines of the examination room without permission to do so.	Misrepresentation of facts for any academic purpose.
Using another's data or research findings.	Using material not authorized by the examiner.	

Procedures Regulating Irregular Behaviors during Sit-in Exams

All cases of cheating or trying to cheat, disturbing the peace and calm of the examination room, disrespecting one of the invigilators, impersonating an examinee or engaging someone else to take the exam by-proxy shall be reported to the College Examination Committee by all the invigilators.

1. The invigilator shall notify the student who is caught cheating or trying to cheat to see the Chair of the College Examination Committee by means of a form designed by the Central Examination Committee and by which he/she will be informed of the place and time of his/her appearance before the Central Examination Committee.
2. The College Examination Committee shall refer the report to the Dean who in turn submits it to the University Disciplinary Committee.
3. The University Disciplinary Committee shall conduct the investigation with the cheater (or trying to cheat) and report all available witnesses within no more than 48 hours, then a report shall be submitted. In case the student does not attend in the assigned time, he/she will be subject to an investigation that will be conducted in absentia.

4. The the University Disciplinary Committee shall be entitled to take the decision to keep the report in case the infraction is not supported by any evidence; the decision is deemed definite and the student may be allowed to re-sit the examinations.
5. The Chair of the Central Examination Committee shall refer the report to the University Disciplinary Committee to take the appropriate decision with regard to the infraction the examinee is accused of.
6. Once asked by the invigilator, the examinee who is caught cheating or trying to cheat shall quit the examination room.

Disciplinary Penalties

The examinee who is proven to have cheated or tried to cheat at the end of semester exams shall be deemed to have failed the course.

The examinee who is caught cheating shall be deemed to have failed all the courses of the end semester exams.

The examinee who shall be considered to have failed all courses he/she registered in the semester and suspended from registration in the following semester is he/she who:

1. cheats a second time in the final semester exams.
2. is caught cheating or trying to cheat in the final semester exams and proven to have disrespected the invigilators, deliberately tried to disturb the peace or calm of the examination room, or call examinees to rebel.
3. The registration fees shall not be reimbursable in the above mentioned cases.

Any student who plagiarizes a research paper or any assessed academic activity shall be deemed to have failed the course and shall not be reimbursed.

In case a student from the university is caught impersonating an examinee or engaging someone else to take the exam by proxy, they shall both be subject to expulsion for no less than two successive semesters.

If a person from outside the university is caught impersonating an examinee, the university shall be entitled to bring legal action against him/her, and the student shall be subject to irrevocable expulsion.

The decisions shall be considered definite after approval by the Chancellor.

27.4 Exam Policies

Article 1 : Only students who fulfill the following conditions will be allowed to sit for the university examinations:

1. Students who arrive at the examination room in good time. If they are more than 30 minutes late they will not be admitted. Going out the examination room shall be allowed only 60 minutes after the timed start.
2. If students are not suspended from classes.
3. Students should introduce the University Card and the No Liabilities Certificate.

Article 2 : The examination regulations and procedures shall apply to the student during the period of exams, in examination rooms. The possession of mobile phones or other electronic means of communication is strictly prohibited and will be confiscated by invigilators, if any.

Article 3:

1. In case the student is absent from an examination with a valid excuse, they will be allowed to have the complete exam within no more than two weeks from the start of the following semester. The student is deemed informed of the date of the complete exam.
2. Any excuse shall be introduced in no more than one week from the exam provided that this excuse is ratified by the authorized parties in the university.
3. The acceptable excuse shall be one of the following:
4. A medical report that is approved by the University Doctor in the same campus.
5. Death certificate of one of the first and second degree relatives.
6. Suspension or appearance before the court.
7. A perfectly valid excuse.
8. The student shall pay the fees of the incomplete.

Article 4: The student who is absent from an examination without a valid excuse shall be deemed to have failed the examination.

Article 5

1. An excuse shall be deemed valid if the examination timetable allows the student to take more than two exams at the same day.
2. The student shall be given an additional time if he/she has to take more than one exam at the same time.

Article 6

Cheating

Any student who is caught in possession of written information relevant to the course, messages by mobile phone, or transmitting written or verbal information to his/her classmates shall be considered a cheater. This includes also the following:

1. Using a book, magazine, research, computer or Internet file.
2. Using scraps, slips or copies.
3. Using signs to convey information.
4. Sending or receiving information through mobile phone.
5. Writing on wall, ground, chair, clothes or body.
6. Using every other means of information not allowed by the university regulations.

Trying to cheat

Any student who is caught in possession of written information, messages sent by mobile phones, or transmitting written or verbal information to his/her classmates shall be considered trying to cheat. This also includes what follows:

1. Looking at the answer sheet of another student.
2. Talking with classmates in the examination room.
3. Possessing a mobile phone.

4. Possessing papers or any other means that comprises information relevant to the subject of exam, but not shown up.

Article 7

1. The examinee shall be entitled the right for grievance with regard to the score he obtained in the exam within no more than two weeks from the announcement of results.
2. The Dean shall designate an ad-hoc committee to study the grievance cases on the exam results; the decision of this committee shall be final.
3. The grievance cases shall be subject to fees estimated in accordance with the University Bylaws and Policies.
4. The request for grievance shall be processed before the end of the first week of the following academic semester.
5. Any grievance request shall be identical to the form provided by the Office of Admissions and Registration.

27.5 Disciplinary Penalties

Article 8

1. The examinee who is proven to have cheated or tried to cheat at the end of semester exams shall be deemed to have failed the course.
2. The examinee who is caught cheating or trying to cheat shall be deemed to have failed all the courses of the end semester exams.

Article 9

The examinee who shall be considered to have failed all courses he/she registered in the semester and suspended from registration in the following semester is he/she who:

1. cheats a second time in the final semester exams.
2. is caught cheating or trying to cheat in the final semester exams and proven to have disrespected the invigilators, deliberately tried to disturb the peace or calm of the examination room, or call examinees to rebel.
3. The registration fees shall not be reimbursable in the above mentioned cases.

Article 10

1. In case a student from the university is caught impersonating an examinee or engaging someone else to take the exam by proxy, they shall be both subject to expulsion for no less than two successive semesters; the penalty may be aggravated to the final semester if the Disciplinary Committee justifies the feasibility of such a decision.
2. If a person from outside the University is caught impersonating an examinee, the university shall be entitled to bring legal action against him/her, and the student shall be subject to irrevocable expulsion.

27.6 Policy on Smoking

Smoking is not permitted in all campus buildings at AU. All students and staff members of AU are responsible for abiding by this policy.

27.7 Policy on Drug and Alcohol Abuse

AU prohibits the possession, use, sale or distribution of illegal drugs and alcohol by students and employees on its property and at any university activity. Any violation of these policies will result in appropriate disciplinary actions including dismissal in the case of students and termination of contract in the case of employees, even if it is a first offense.

27.8 Policy on Dress Code

Students, faculty, and staff of AU are expected to dress appropriately and to respect the cultural and religious foundations of the United Arab Emirates. Inappropriate dress for both males and females is prohibited. This means dressing in respectful and modest way. Furthermore, obscene or offensive pictures or slogans should not be displayed on clothing.

Dress code violations should be reported to the Dean of Student Affairs. Students who do not abide by the AU dress code are subject to disciplinary action.

27.9 Policy on Use of Email as Official Communication

AU communicates with its students via email. All entities at AU use email to convey important messages including time-sensetive ones. Students are allocated email addresses and they should check their email every day. Students shall not be excused for not being aware of announcement or deadlines whatever the reason may be.

27.10 Policy on Disruptive Conduct

Purpose: To ensure students maintain good conduct and refrain from disturbing AU community members.

Prohibitions:

1. Intentional obstruction or disruption of teaching, research, administration, disciplinary proceedings or other university activities, including public service functions and other authorized activities on university premises.
2. This also includes making or causing noise, regardless of the means that disturbs authorized university activities or functions.
3. Cursing in a public setting, using unacceptable language or making an offensive speech that includes, but is not limited to name-calling, insulting, profanity, vulgarity or in a way violating the UAE code of mutual respect.
4. Persistent serious acts of disobedience.

27.11 Policy on Theft, Property Damage and Vandalism

Purpose: To protect AU community property and prevent misbehavior.

Prohibitions:

a. Theft or unauthorized taking of university property or property of an AU student, faculty member, staff member or visitor on university premises. This includes knowingly possessing such stolen property.
b. Vandalism, willful wanton or reckless damage to university premises or property.

27.12 Policy on Classroom Misbehavior

Purpose: To ensure that the rights of instructors teaching students are protected in the labs, offices and other campus learning environments.

Prohibitions:

a. Persistent speaking without permission; engaging in activities that are not related to the class; inappropriate use of electronic devices, cell phones or laptops; sleeping in class; habitually class late or leaving early; eating/drinking in class without permission; showing disrespect for and arguing with faculty and their studyfollows in class.

b. Threatening; verbal abuse, including but not limited to, using obscene language denoting the instructor or being argumentative; using admonitory or mocking gestures; defaming; harassment; physical altercations; destruction of property; or any action that might jeopardize the security of a faculty or a student.

27.13 Policy on Use of Mobile Phones

Students are expected to respect their fellow students and faculty with regard to the use of mobile phones. Students should turn off their mobile phones when they are in class, or attending a university function, lecture, or meeting.

27.14 Policy on student media

Ajman University welcomes participation through our social media channels and often encourages interaction. This creates a platform for constructive interaction among AU community members. However, posts that violate the community ethics such as personal insults, profane behavior, illegal materials, etc. are strictly prohibited. AU shall exercise its right to remove posts that are displayed for commercial purposes or any other posts that do not adhere to its rules and regulations. Needless to say that the content of posts displayed by AU is its property an is subject to copyright laws.

27.15 Disciplinary Policy

Any violation of university regulations or directives, or improper behavior (as set out in Section 17), is considered as misconduct and will render the student liable to disciplinary action which may range from a verbal warning to dismissal from the university.

In addition, if a student violates any rule or instruction during an examination, or is caught cheating, he/she will be asked to leave the examination room. In this event, the campus examination committee will interview the student on the day following that in which the incident occurred and will as a result submit a detailed report to the Chancellor of the University, in which the level of punishment is recommended. The level of punishment may range from the giving of an "F" grade for the course concerned, or failure in all courses for which the student is registered that semester.

A copy of the decision of the Chancellor will be kept in the student's file, and the Office of Admissions and Registration will also inform the sponsor as appropriate.

27.16 Student Grievance and Appeal Policy

POLICY STATEMENT

On occasions, a student may disagree with the academic decision of a faculty member. The university provides an appeal process for the student to request reconsideration of an academic decision. Academic Appeal is a petition to change a decision basis for a student appeal matter. The decision may be either that the academic judgment was unfair in the view of the student or that the department academic decision is applied incorrectly in the view of the student.

PURPOSE OF THE POLICY

The student appeal policy guides the student through steps of filing an appeal for reconsidering or changing an academic grade or decision.

DETAILED POLICY STATEMENT

The Dean of Student Affairs forwards the student grievance to the Chairman of the Student Grievance Committee who will arrange a meeting to hear both parties and witnesses, as appropriate. The committee will then deliberate upon its findings and make a recommendation to the Chancellor who will take the final decision, to be communicated to both parties.

Preliminary Steps:

To initiate or pursue a grievance, the following steps must be observed no later than three weeks following the occurrence of the faculty member decision.

Step 1. The student should first discuss the matter with the person or persons directly involved, in an attempt to resolve the issue through informal discussion.

Step 2. If there is no resolution in step 1, the student should discuss the matter with the Head of Department to whom those directly involved report (or if the Head of Department is directly involved, with the College Dean. If the College Dean is directly involved, with a senior management staff who shall attempt to mediate an informal resolution).

Step 3. If reconciliation has still not been achieved, the student shall submit a written statement of his grievance to the Appeal Committee through the Dean of Student Affairs. The statement shall contain:

- a brief narrative of the condition giving rise to the issue;
- a designation of the parties involved; and
- a statement of remedy requested.

Formation of the Student Appeal Committee

At the beginning of each academic year the University Chancellor shall appoint five faculty members to form the Student Appeal Committee. The Chancellor also appoints the Head of the committee.

Committee Action

Upon receipt of a written statement of an academic grievance request, the Head of Student Appeal Committee (SAC):

- Determines prior to considering the case whether discussions between the persons directly involved, Head of Department, and College Dean have been exhAUed in attempting to resolve the issue.
- Notifies the parties named in the statement of receipt of a complaint naming them, and sends a copy of the statement to the named parties and to all committee members.
- Meets within two weeks after receiving the written statement to review the written statement and renders a decision as to whether sufficient ground is present to warrant a hearing.
- Notifies the griefant and the named parties of its decision in writing.
- If a hearing will be held, the SAC notifies in writing all parties involved, including witnesses, of the date, time and place of the hearing at least one week prior to the date set.
- Informs the parties that the providing of proof rests with the grievant.
- Requests in writing from all parties involved any pertained material deemed necessary for review by the committee prior to the hearing. These materials, plus any additional materials either party chooses to submit must be made available to the committee no later than four days prior to the hearing. Any person named in the grievance may submit a written statement to the committee outlining issues from their perspective.
- All communication among the committee, the grievant(s) and person(s) named in the statement of complaint will be confidential.

Hearing Process:

All hearing conducted by the Student Appeal Committee shall be conducted confidentially in the following manner:

- The Grievant(s) and respondent must be present during the information gathering portion of the hearing. Witnesses will be available, and called when needed. The committee reserves the right to allow the presence of a secretary.
- All statements during the information exchange phase of the hearing will be written.
- Any committee member may question any of the participants at the hearing, at any time during the proceedings.
- The grievant will present his/her statements and/or witnesses to the committee.
- The respondent will have the opportunity to question the grievant(s) and witnesses about their statements.
- After all information is exchanged, all persons, other than the committee members and the secretary will leave the committee room. The grievant(s), respondent(s) and witnesses will continue to be available to the committee should further information be needed.

Decision

The Chancellor shall approve or reject the committee recommendation(s) within two weeks after it is received, unless the Chancellor feels that more information is necessary, In this event the case will be referred back to the committee for further findings prior to decision. If the decision of the Chancellor is not in accordance with the committee's recommendation(s), he shall state the reason for that decision, in writing, to the committee. The Chancellor shall then take the appropriate action to implement his decision. The grievant(s) and respondent(s) will be informed in writing of the Chancellor's decision.

Appeal:

- The grievant(s) or respondent(s) may petition a grievance within two weeks of the Chancellor's decision.
- The Chancellor or the Student Appeal Committee will determine the Appeal viability based upon evidence not available at the original hearing.

- If an appeal is deemed viable, the Chancellor will ask for rehearing.
- The Chancellor may deny the request of an appeal and affirm the earlier decision.

A rehearing will be conducted on the appeal. A decision rendered by the Chancellor will be final.

28 Tuition Fees and Financial Regulations

Ajman University (AU) operates on a fully credit-based fee structure in addition to other fees.

The university may reserve the right to increase the tuition and other fees, up to 10% per academic year when deemed necessary.

All students who register for courses incur a financial obligation to AU. Students are responsible for all charges incurred at AU. Failure to attend classes does not constitute withdrawal from the institution or a class.

Students will only be permitted to register for a subsequent semester if they have paid all their financial obligations.

28.1 Application and Registration Fees

The application and registration fee for undergraduate programs and Professional Diploma in Teaching is AED 1,300. The fee should be paid in cash in one installment upon registration, and is not part of the tuition. The application and registration fee is non-refundable, except when the application is rejected in which case an amount of AED 1,000 will be refunded to the student.

A student who wishes to apply for transfer from another accredited institution will pay a non-refundable fee of AED 500. This fee shall be considered part of the application and registration fees if the student is admitted in Ajman University.

Students admitted to the Dentistry, Pharmacy, Architectural Engineering, Interior Design, and Law undergraduate programs are required to pay a seat reservation deposit as stated in the table below. This deposit is non-refundable and non-transferable and must be paid before the deadline stated on the letter of admission. This deposit is deductible from the student's tuition once the applicant joins the university. If the student asks to defer admission to the following semester and the request is approved, the deposit will be applied to the following semester.

Program	Deposit (AED)
Doctor of Dental Surgery	21,000
Bachelor of Pharmacy	12,000
B.Sc. in Architectural Engineering	8,000
Bachelor in Interior Design	4,000
Bachelor of Law	4,000

The application and registration fee for graduate programs is AED 2,000. The fee should be paid in cash in one installment upon registration, and is not part of the tuition. The application and registration fee is non-refundable, except when the application is rejected in which case an amount of AED 1,700 will be refunded to the student.

28.2 Tuition Fees

a. Credit Hours for Bachelor's Programs

- Tuition fees for the Bachelor's programs offered at the university are as follows:

College		Fee per one credit hour
College of Dentistry		AED 2,000
College of Pharmacy and Health Sciences		AED 1,500
College of Mass Communication and Humanities		AED 1,025
College of Law		AED 1,100
College of Information Technology		AED 950
College of Engineering	B.Sc. in Biomedical Engineering	AED 1,300
	B.Sc. in Electrical Eng. (Electronics)	AED 1,300
	B.Sc. in Electrical Eng. (Communication)	AED 1,300
	B.Sc. in Electrical Eng. (Instrumentation & Control)	AED 1,300
	B.Sc. In Architectural Engineering	AED 1,500
	Bachelor in Interior Design	AED 1,300
College of Education and Basic Sciences		AED 950
College of Business Administration		AED 950
Unit of General Studies		AED 1,150

b. Credit Hours for Graduate Programs

- Tuition fees for the Graduate programs offered at the university are as follows:

College/Institute	Major	Fee per one credit hour
Institute of Environment, Water and Energy	M.Sc. in Groundwater Engineering & Management	AED 2,000
College of Engineering	M.Sc. Urban Design	AED 2,500
College of Business Administration	MBA: Human Resources Management	AED 2,000
	MBA: Financial Management	
	MBA: Marketing	
College of Information Technology	M.Sc. in Information Systems	AED 2,000
College of Law	Master of Law (Public Law)	AED 2,200
	Master of Law (Private Law)	

College of Education and Basic Sciences	Professional Diploma in Teaching	AED 1,000
College of Pharmacy and Health Sciences	M.Sc. in Pharmacy (Clinical Pharmacy)	AED 3,125
	M.Sc. in Pharmacy (Pharmaceutical Technology)	
College of Dentistry *	M.Sc. in Restorative Dentistry	AED 420,000 per program (3 years)

* The average annual tuition cost for M.Sc. in Restorative Dentistry is AED 140,000 per academic year.

c. Laboratory, Clinic and Studio Fees

Students registered in the programs offered by the College of Dentistry and College of Pharmacy & Health Sciences pay a flat semester fee for specialized laboratory sessions and clinics as shown in the table below:

College	Dentistry			Pharmacy
	1st -3rd year	4th & 5th year		
Fees	AED 4,000	Clinics	Productive Lab	
		AED 6,000	AED 3,000	AED 2,600

This fee does not include the lab fees of courses of the proposed sequence of study (study plan) offered by other colleges.

Students registered in the programs of Architectural Engineering and Interior Design will pay a studio fee of AED 1,500 per semester.

Students registered in the program of Bachelor of Arts in Mass Communication will pay a studio fee of AED 1,025 per semester for each registered course having Radio/TV session.

d. Orientation Course Fee

New students pay a fee of AED 1,150 for the Orientation Course, which is taken during the first semester of enrolment.

28.3. Additional Fees

- Additional lab fee for each registered course having lab sessions offered by colleges other than College of Dentistry and College of Pharmacy: AED 650
- Additional fee for courses having a tutorial sessions: AED 550
- Additional fee for graduation project courses at the College of Information Technology AED 600
- Additional fee for graduation project courses at the College of Engineering: AED 60
- Additional fee for internship courses: AED 800
- Student service fee per semester: AED 300
- Application fee for an incomplete course: AED 500
- Reference letter: AED 30
- Extra copy of the academic transcript: AED 100

- Grade grievance application: AED 100
- ID card, per academic year: AED 25
- Additional fee of AED 500 per each registered course taken as independent studies.

The university may and reserves the right to increase the tuition and other fees up to 10% per an academic year when deemed necessary.

28.4. Payment Terms

A student should pay AED 4,000 in advance as a deposit in order to register in fall/spring semesters (AED 2,000 in summer session).

Upon registration, the student should pay the tuition fees in full within two weeks from the end of the add/drop period. The Office of Finance has the right to take the necessary action against any student who has not settled their due balance of tuition fees, including suspension of registration and ineligibility to attend exam sessions.

The student has an option to settle tuition fees in (3) three monthly installments by providing postdated cheques. To get this privilege, the student should obtain the Office of Finance's approval after filling out the required form. This option is valid for spring/fall semesters only.

Tuition for summer semester should be paid in one installment within (2) two weeks from the end of the add/drop period.

Graduate students registering for Master Thesis will pay 50% of the applicable fee upon registration and 50% in the following semester.

Payments to AU are accepted in the following forms:

- Cash: Denomination of UAE Dirhams, GCC currencies & USD
- Cheque: Current & Post Dated, UAE Dirhams cheques drawn on UAE Bank*
- Postdated cheques are subject to Office of Finance's approval.
- Credit Cards: Visa, Master, American Express & Diners Club.
- Direct deposit and bank transfer to:

- Bank : Mashreq Bank psc,
- Branch : Riqa Branch - Dubai
- Account Name : Ajman University
- IBAN : AE170330000010493141592
- SWIFT : BOMLAEAD

Or,

- Bank : Ajman Bank
- Branch : Khalifa Branch - Ajman
- Account Name : Ajman University of Science & Technology
- IBAN : AE720570000017482222011
- SWIFT : AJMANAEAJ

The student's name and University ID number (if available) must be mentioned in all deposits and transfers.

Please scan the deposit slip or transfer confirmation and e-mail them to:

finance@ajman.ac.ae or fax them to: +971 6 74 34 647.

For further finance-related inquiries, please contact the Student Accounts on +971 6 705 6041 or drop an e-mail to finance@ajman.ac.ae

* Each bounced cheque will be subject to a penalty of AED 300.

28.5. Refund Policy

a. Add/Drop Period

During the add/drop period students may add or drop courses without incurring charges. If a student adds one or more course(s) during the add/drop period, he/she must pay additional fees for the added course(s) at the time of submitting the application, otherwise the application will be rejected.

If a student withdraws from one or more courses during the add/drop period, the fees of the dropped course(s) will be credited to the student account for the following semester.

A student may withdraw from one or more course(s) after the end of the add/drop period, provided he/she remains registered in at least three courses during that semester (nine credit hours). In this case, the student does not have the right to claim any refund for the fees of the withdrawn courses.

b. Suspension of Registration

During the add/drop period a student may submit an application for suspension of registration for one or a maximum of two consecutive semesters. The application should be submitted to the Office of Admissions and Registration. In this case, the full amount of any fees paid shall be credited in full to the student's account for the following semester, or refunded two weeks after the submission of the refund application to the Student Account Officer (at Office of Finance).

If the student submits an application for suspension of registration for one or two semesters during the two weeks following the end of add/drop period, he/she shall be entitled to only 50 percent of the tuition fees of the semester in which he/she submits the application for suspension.

If the student submits an application for suspension of registration after the end of the two weeks following the add/drop period, he/she will not be entitled to claim a refund of any part of the tuition fees of the semester in which he/she submits the application for suspension.

If a student wishes to reclaim any amount from a credit balance – in case of suspension only, he/she must fill in an Application for Refund Form and submit it to the Student Account Officer (at Office of Finance) after the end of the add/drop period. A cheque payment will be prepared within two weeks from receiving the application. If the student fails to do this, the amount will be credited to the student balance for the following semester.

c. Withdrawal from the University

During the add/drop period, the student may submit an application for suspension of registration and withdrawal from the university. The application should be submitted to the Office of Admissions and Registration. In this case, the student is entitled to a full refund of tuition fees paid for the semester in which he/she submits the

application for withdrawal. The refund will be made one week after the submission of the application for refund to the Student Account Officer (at Office of Finance).

If the student makes an application for suspension of registration and withdrawal from the university within the two weeks following the end of the add/drop period, he/she is entitled to a refund of only 50 percent of the tuition fees for the semester in which he/she submits the application.

The student shall not be entitled to claim a refund of any part of the tuition fees if the application for suspension of registration and withdrawal from the university is made more than two weeks after the end of the add/drop period.

d. Disciplinary Dismissal

A student who is dismissed from the university for disciplinary reasons is not entitled to any refund of tuition fees of the semester of dismissal.

28.6. Tuition Fee Waiver and Scholarships

a. New students

New students are entitled to a waiver of 20 percent of their tuition in the first semester of their study, after fulfillment of the English proficiency requirement, if:

1. The student obtains a minimum grade of 95 percent in secondary school final examinations (for the College of Dentistry and College of Pharmacy and Health Sciences programs)
2. The student obtains a minimum grade of 90 percent in secondary school final examinations (for all other colleges)

b. Continuing Students

Continuing students are entitled to a reduction of 20 percent of their tuition in a regular semester if they have obtained a GPA of 3.8 or higher out of 4.0, and completed successfully at least 15 credit hours during the previous semester.

Continuing students are entitled to a reduction of 10 percent of their tuition in a regular semester if they have obtained a GPA of (3.6 to 3.79) out of 4.0, and completed successfully at least 15 credit hours during the previous semester.

The university reserves the right to amend the secondary school grade or semester GPA required by students to be entitled to tuition fee reduction.

c. Sibling Fee Waiver

All sibling students and first degree relatives (parents and full siblings) registered in any undergraduate program are eligible for a fee waiver from 5% to 20% according to their order of registration in the same semester (excluding the summer session), after submitting a request with copies of their passports to the Office of Scholarship and Financial Aid. This fee reduction is not subject to the AGPA condition. It is applicable as follows:

Sibling	Waiver Rate
First	5%
Second	10%
Third	15%

Fourth and above	20%

d. Performance Fee Waiver

Exemptions from tuition fees shall be granted to the top three academically outstanding students in each college during each regular semester, in accordance with the following regulations:

- A student holding first place at College level: 100 percent fee exemption.
- A student holding second place at College level: 75 percent fee exemption.
- A student holding third place at College level: 50 percent fee exemption.

The following requirements should be met to be eligible for the discount:

1. To have completed 60 credit hours at Ajman University.
2. If two eligible students have the same CGPA, preference is given to the student who has completed more credit hours.
3. In the event of two eligible students having the same CGPA and completed the same number of credit hours, preference is given to the student with the highest CGPA in the last semester.
4. The number of credit hours completed should commensurate with the number of academic years spent by the candidates at Ajman University.
5. The list of colleges' top achievers is approved by the Office of Admissions & Registration and the Vice Chancellor for Academic Affairs.

e. Top Secondary School Students Waiver

The top three students from secondary schools within the Emirate of Ajman are entitled to a fee waiver in the first semester of their study only, as follows:

- 50% for the first top student
- 40% for the second top student
- 30% for the third top student

f. Scholarships of Ajman Government

Ajman University grants a number of scholarships and discounts to Ajman-based Emirati students as well as local and federal government employees in accordance with the terms and conditions specified in the Policy of Scholarships and Financial Aid.

g. Scholarships for Ajman University

Ajman University grants a number of scholarships and discounts to outstanding, disadvantaged and special needs students, in accordance with the terms and conditions specified in the Policy of Scholarships and Financial Aid.

h. General provisions

- Scholarships and discounts apply only to tuition and lab fees. Fees relating to registration, training, accommodation, transportation, textbooks, summer sessions and other administrative fees are not included.
- Scholarships and discounts do not apply to graduate studies.
- Scholarships/discounts apply only to fall and spring semesters. The summer session is not included.

- Scholarships/discounts do not cover the fees for failed courses or courses dropped beyond the add & drop deadline.
- Unless the student benefits from an external sponsorship as well as an AU discount, he/she may not combine two types of discounts at the same time.The highest discount is applied.
- The student may change his/her major within the same college. He/she shall bear the cost of all courses, which cannot be equated.
- The student is entitled to the discount only after submitting the English proficiency certificate and before the end of the Add & Drop period in the semester in which the scholarship/discount is granted after joining the University. The scholarship/discount may not be deferred to the following semester.
- If the student's CGPA falls below 2.0, the scholarship/discount shall be suspended. The student is given one single chance to improve his/her CGPA and recover his/her scholarship/discount. In the event the student's CGPA drops below 2.0 for a second time, the scholarship/discount shall be irremediably discontinued.
- In the event the student suspends his/her studies for more than two consecutive semesters or more than four non-consecutive semesters, the scholarship/discount shall be irremediably discontinued. In this case, he/she shall bear the fees for courses he/she failed, or added or dropped beyond the Add & Drop period.

i. Financial aids

In May 2013, Ajman University established Thamer Salman Fund for Educational Solidarity as a community initiative to help financially challenged students pursue their university studies.

Thamer Fund provides assistance to the following categories of students:

- Students who completed their graduation requirements and did not receive their certificates for failing to meet the university's financial obligations.
- Students who suspended their studies because of pending financial dues.
- Full-time students who have completed a minimum of 30 credit hours of study at Ajman University and whose academic progress is challenged by pending financial dues.
- Students who are the children of AU employees whose job grade is 6 or lower.

Eligibility

To be eligible for the Fund's support, the applicant:

- Should be enrolled at AU and should be eligible for financial support.
- Should have completed a minimum of 30 credit hours.
- Should have a minimum CGPA of 2.5.
- Should not have been subject to a disciplinary penalty by AU Student Disciplinary Committee, except for verbal or written warnings.
- Should not be beneficiating from an external aid or internal scholarship, except for discounts described in AU's relevant regulations.

How to apply

1. Submit an initial application through Thamer Fund website at **https://thamerfund.ajman.ac.ae** to get an Application Number.

2. Provide the required information authenticated by the relevant AU offices.
3. Fill out the Thamer Fund Form.
4. Provide the applicant's financial and academic records for data validation.
5. Provide the following duly attested and valid documents:
    - Passport copies of family members.
    - Tenancy contract with electricity and water bills.
    - Salary certificate of the breadwinner.
    - Breadwinner's bank statement for the last 6 months.
    - Other tuition bills, if any.
    - Medical certificates, if any.
    - Death certificate of the breadwinner, if any.
    - All relevant supporting documents.
6. Incomplete applications are not considered.
7. The Office of Scholarships and Financial Aid reviews the applications and supporting documents and submits them to the Executive Committee to take decisions thereon.
8. The Executive Committee submits recommendations to the Fund's Council regarding each application.
9. Applicants are notified of the Council's decision by SMS and email.

N.B.:

- Tuition waiver is applied to undergraduate programs only. In addition, it is applied to tuition & lab fees during fall/spring semesters only. Summer semester is excluded.
- If a student meets more than one of the above, i.e. conditions of fee waiver or scholarship, she/he will not be entitled to benefit from more than one fee waiver at the same time. In this case, the student will be granted the higher fee waiver. All fee reductions will be granted on the condition that the student satisfies the English proficiency requirement before the end of the Add & Drop period in the first semester of their enrollment.
- All above-mentioned tuition fee reductions are subject to general eligibility conditions as specified in the University Policies & Regulations. For more details, please contact the Office of Scholarship and Financial Aid.

28.7 Books

The university will supply course textbooks to students at reasonable prices. It should be noted, however, that a student in receipt of a fee exemption as listed above will pay the full prices for the books.

Unit of General Studies

The Unit of General Studies was established in order to cater for the General Education Program, which is an absolutely vital component of tertiary education. Having such a unit will render both the required and elective courses relevant, enriching, and appropriate. In addition, they will feature both originality and modernity.

Ajman University as tailored the General Education Program based on its strategic vision and educational philosophy in its three dimensions: education, information and investment. It aims at providing students with a

variety of competencies associated with a range of University requirements intended to lay the ground for their future progress and development, academically as well as professionally.

The main purpose of the General Education Program (GEP) is to enable all students to attain the fundamental broad base of knowledge, skills and competences that all university educated adults must have whatever their specific area of their specialization.

General education courses are designed to establish strong, intellectual foundation for all specializations. They develop skill acquisition in oral and written communication, information technology, innovation, quantitative analysis, critical thinking as well as certain aspects in the humanities/ arts, and the natural sciences.

Also, the General Education Program seeks to develop in the students' specific competences pertinent to enjoying autonomy and responsibility for their learning, interaction with others, pursuing self – development and deploying what they have acquired in real life situations.

General Education Program Learning Outcomes

On successful completion of the general education program the graduate will be able to:

Knowledge

Understand key concepts and issues in languages, religion, history, society, environmental issues, and natural resources.

Demonstrate knowledge of basic principles in statistics, information technology, critical thinking and innovation, together with their applications.

Skill

Communicate effectively orally and in writing and deploy a range of presentation techniques.

Select and deploy a range of relevant information search/retrieval techniques, and appropriate tools.

Competence

Interpret and present quantitative data effectively.

Demonstrate the ability to comprehend multiple perspectives and formulate effective actions.

Take responsibility for his own future learning needs.

Offered General Education Courses

Every AU student is required to complete 30 credit hours in General Education covering the following areas: Mathematics, Science, Information Technology, Languages, and Social Sciences & Humanities. After a review of all offered programs at AU, the Academic Council of Academic Affairs & Scientific Affairs identified 24 out of the 30 credit hours of General Education that could be taken by all AU students independently of their specialization. In fact, the Unit of General Studies is responsible for offering 15 credit hours, (see below), that are compulsory to all students and 9 credit hours of university electives to be chosen from a large number of courses covering the different areas of General Education.

List of required Courses (15 credit hours)

Course Code	Course Name	Credit hours
1010001	Orientation	0
1021100	Islamic Culture (for Arabs)	3
1021101	Islamic Culture (for non-Arabs)	3
1021300	Islamic civilization (Arabic)	3
1021301	Islamic civilization (English)	3
1021400	Communication Skills in Arabic Language (For Arabs)	3
1021401	Communication Skills in Arabic Language (For Non-Arabs)	3
1021402	Communication Skills in Arabic Language - E	3
1041100	Computer Applications (English)	3
1041101	Computer Application (Arabic)	3
1041200	IT Fundamentals	3
1041201	IT Fundamentals	3
1041202	IT Fundamentals	3
1041203	IT Fundamentals (Arabic)	3
1031100	Statistics (Arabic)	3
1031101	Statistics (Science)	3
1031102	Statistics (Arts)	3
1031330	Statistics (Arabic)	3
1031331	Statistics (Sciences)	3
1031332	Statistics (Health Sciences)	3
1031333	Statistics (Business)	3
1141301	Innovation and Entrepreneurship (Arabic)	3
1141300	Innovation and Entrepreneurship (English)	3

Elective courses

University electives general education courses are categorized into three groups. Students are required to choose an elective from the social or behavioral sciences group, another elective from the humanities or arts group and the third from the natural, applied sciences, information technology, or mathematics group:

Humanities /arts;

Natural, applied sciences, information technology, or mathematics;

Social or behavioral sciences.

Colleges can remove some electives to avoid overlapping with major courses.

List of elective courses (9 credit hours)

Field	Course Code	Course Name	Credit hours
Social or Behavior Science (3 Cr. Hrs.)	115130	General Psychology	3
	115160	Emirates Society	3
	114110	Economic Concepts	3
	119120	Introduction to communication Sociology	3
	119130	Information Society	3
	114120	Entrepreneurship Development	3
	119110	English Communication Skills	3
	107110	Critical Thinking	3
	104130	Information Literacy	3
	119140	Media Culture	3
	107150	Family System	3
Humanities or Arts (3 Cr. Hrs.)	115150	The Art of Written Expression	3
	112110	Principles of Architecture & Art	3
	118110	Principles of Ethics	3
	109110	Introduction to Aesthetics	3
	112140	Introduction to Art	3
	107130	Introduction to Digital Photography	3
	109120	French Language	3
	1201150	Legal Culture	3

Natural Sciences Applied Sciences, Mathematics **(3 Cr. Hrs.)**	115110	History of Science in Islam	3
	115120	Scientific Pioneering	3
	112130	Modern Technology and Society	3
	115170	Educational Technology	3
	118120	General Biology	3
	118130	Oral Health	3
	117110	General Chemistry	3
	117120	Fundamentals of Human Nutrition	3
	117130	First Aid	3
	103130	Research Methodology	3
	117150	Applications of Remote sensing & GIS	3
	107120	Technical Writing	3
	113110	Internet Concepts	3
	113120	Introduction to Information System	3
	108120	Physics	3

Laboratories

The Unit of General Studies has well-equipped laboratories to provide practical hands-on experience to students of all specializations. These laboratories are as follows:

Information Technology laboratories.

Statistics laboratories.

English Language laboratories.

The faculty of the college is also using the E-Learning system and MOODLE to enhance the learning process by giving students the opportunity, of accessing the teaching materials while they are away from the University through the use of the Internet.

Intensive English Program

The Intensive English Program, IEP has two strands: TOEFL and IELTS. The student is free to choose either. Each of which has two levels: Advanced and Intermediate.

Students whose score is between 480 and 499 on TOEFL or Band 4.5 on IELTS are eligible to register in the Advanced Level. Students whose score is between 450 and 479 on TOEFL, or Band 4 on IELTS are eligible to register in the Intermediate Level. The table below summarizes this information.

Level	TOEFL		IELTS
	Paper-Based	Internet-Based	
Advanced (AD)	480-499	54-60	Band 4.5
Intermediate (INT)	450-479	45-53	Band 4

The student who starts in the Intermediate Level can register in the Advanced Level when he gets the required score as shown in the table

IEP Organizations

Level	Organization	Other Courses
Advanced	Contact teaching hours: 6 + 3 for Independent Learning in the English Lab.	Up to 3 additional courses from the Unit of General Studies
Intermediate	Contact teaching hours: 12 + 3 Independent learning in the English Lab	2 additional courses from the the Unit of General Studies

IEP Structure

The Advanced Level Program is a program that consists of 9 contact hours per week during 15 weeks. It is suitable to students whose English Proficiency is close to the minimum required Level to be admitted in a Program taught in English. It covers the following components:

1. Listening

The central object of the listening components is to enhance and develop student competence to enable him/her to understand the English language in both academic and social settings. At the beginning of the listening component, emphasis is given to skills such as understanding conversation, identifying main and detailed ideas, and interacting with other students and lecturers in social settings. Later, more emphasis will be placed on comprehending conversations and talks, taking lecture notes and being aware of the structure of a lecture.

2. Speaking

The objective of the speaking component is to enable students to communicate in English appropriately, fluently and successfully in both academic and social settings where they are required to ask and answer questions, agree and disagree, express their opinions clearly with supporting evidence, give presentations and take part in short debates and discussions.

3. Reading

The main objective of the reading component is to enable students to become good readers, by developing in them reading skills such as text comprehension, appropriate speed, reading with a purpose, skimming, scanning, etc. In order to achieve these aims, students will be exposed to a diverse range of text forms and genres.

4. Writing

Since writing is viewed as a process, it is imperative that students acquire and develop the different steps of the writing process: generating ideas; organizing ideas; editing; revising, etc. Emphasis is also given to grammatical accuracy, lexical appropriateness, fluency and coherence.

5. Vocabulary

Rather than being developed in isolation, vocabulary is integrated into all skills. The main aim of the vocabulary component is to expand and enrich the student vocabulary repertoire and enable them to acquire academic vocabulary pertinent to their university studies.

6. Grammar

Like vocabulary, grammar is not developed in isolation, and is also integrated into the four skills of listening, speaking, reading and writing. The ultimate aim of this component is to enable students to acquire both the rules of usage (accuracy) and at the same time to acquire the rules of use (appropriateness) in both spoken and written discourse.

7. Test-taking strategies

In addition to the components listed above, test-taking strategies are an essential element and are incorporated into the program.

Courses of the TOEFL programs

Course Code	Seq.	Course Name	Weekly Hours
105000	2	TOEFL AD/ Independent Learning	3
105101	2	TOEFL AD/ Listening, Speaking & Reading	3
105102	2	TOEFL AD/ Grammar & Test Practice	3
105200	2	TOEFL INT/ Independent Learning	3
105201	2	TOEFL INT/ Listening & Speaking	3
105202	2	TOEFL INT/ Reading	3
105203	2	TOEFL INT/ Grammar	3
105204	2	TOEFL INT/ Test Practice	3

Courses of the IELTS programs

Course	SEQ.	Course Name	Weekly Hours
105000	3	IELTS AD/ Independent Learning	3
105101	3	IELTS AD/ Listening & Speaking	3
105102	3	IELTS AD/ Reading & Writing	3
105200	3	IELTS INT/ Independent Learning	3
105201	3	IELTS INT/ Listening	3
105202	3	IELTS INT/ Speaking	3
105203	3	IELTS INT/ Reading	3
105204	3	IELTS INT/ Writing	3

Students exit the IEP successfully if they achieve one of the following:

TOEFL			IELTS
Paper-Based	Computer-Based	Internet-Based	Band
500	173	61	5

Course Descriptions

Islamic Culture (in English Language): 1021101 (3 Cr. Hrs.)

This course aims to develop the student's understanding of the Islamic Culture and Thought. It familiarizes students with the Islamic vocabulary, concepts and values as well with a clear and detailed background on the religion of Islam. This course discusses the concept of culture, introduction to Islam, Islamic faith and beliefs, sources of legislation and characteristics of Islam, and also deals with some contemporary topics such as: the concept of human rights in Islam, woman status, globalization and environment.

Communication Skills in Arabic Language: 1021401 (3 Cr. Hrs.)

The course discusses fundamentals of communication in Arabic with regard to its significance, components and goals. The course aims at developing the skills of listening; speaking, reading and writing which students need for their professional and social life. Throughout the course, participants discuss and analyze a variety of literary and scientific texts.

Statistics (Science): 1031101(3 Cr. Hrs.)

This course is designed for students who need to gain skills in statistics knowledge. It covers the essential statistical topics that students are expected to know. It is a general education course where essential material in statistics is covered. The first part of the course deals with descriptive statistics, (Topics include introduction to statistics, methods of sampling, tables, graphs, measures of central tendency, measures of variation). The second part covers probability and probability distributions. The third part covers the relationship between groups of data

The fourth part includes some inferential statistical methods: such as estimation and confidence intervals and hypothesis testing of parameters of one population.

Statistics (Business): 1031102 (3 Cr. Hrs.)

This course is designed for students who need to gain skills in statistics knowledge. It covers the essential statistical topics that students in business subjects are expected to know. It is a general education course where essential material in statistics is covered. The first part of the course deals with descriptive statistics, (Topics include introduction to statistics, methods of sampling, tables, graphs, measures of central tendency, measures of variation). The second part covers probability and probability distributions. The third part covers the relationship between groups of data and its applications in time series and forecasting.

Environmental Sciences: 1031200 (3 Cr. Hrs.)

This course introduces students to the basic elements of environment; atmosphere, hydrosphere and lithosphere, their interaction and impact of human activities. Topics such as Air quality, water resources, fossil and renewable energy, environmental pollution and environmental protection are highlighted. Special emphases are given to the United Arab Emirates and Arabian Gulf Region.

Information Technology Fundamental (Dentistry and Pharmacy): 1041200 (3 Cr. Hrs.)

Computer literacy is becoming a prerequisite in whatever career a student undertakes. The goal of this course is to provide students with the basic for building the necessary skill to succeed in the 21st century. It also endeavors to instill an appreciation for the effect of information technology on people, privacy, ethics, and our environment. Several features are specifically designed to engage and demonstrate the relevance of Health information technology in hospitals, in dentistry and pharmaceutical fields. These elements are combined with a thorough coverage of the concepts and sound pedagogical devices.

Information Technology Fundamental (Engineering and IT): 1041201 (3 Cr. Hrs.)

Computer literacy is becoming a prerequisite in whatever career a student undertakes. The goal of this course is to provide students with the basic for building the necessary skill to succeed in the 21st century. It also endeavors to instill an appreciation for the effect of information technology on people, privacy, ethics,

and our environment. Several features are specifically designed to engage and demonstrate the relevance of technology to support Information Technology students and engineering students. These elements are combined with a thorough coverage of the concepts and sound pedagogical devices.

Information Technology Fundamental (Business) 10412020 (3 Cr. Hrs.)

Computer literacy is becoming a prerequisite in whatever career a student undertakes. The goal of this course is to provide students with the basic for building the necessary skill to succeed in the 21st century. It also endeavors to instill an appreciation for the effect of information technology on people, privacy, ethics, and our environment. Several features are specifically designed to engage and demonstrate the relevance of technology to support education, business, and engineering. These elements are combined with a thorough coverage of the concepts and sound pedagogical devices.

Computer Applications: 1041100 (3 Cr. Hrs.)

With the explosion of computer technology, knowledge of computing applications as tools for all disciplines has become a necessary asset. This course is an introduction to the most common software applications and includes hands-on use of microcomputers and some of the major commercial software. These software packages include typical feature such as word processing, spreadsheets, presentations, and other features found in current software packages. On course completion, students will exhibit proficiency with software applications and demonstrate knowledge of computer concepts and components.

Innovation & Entrepreneurship: 1141300 (3 Cr. Hrs.)

This course is developed for the UAE based on decades of practices and experiences of teaching innovation and entrepreneurship at Stanford University that has fueled innovation and high growth in Silicon Valley. The goal of the course is to equip the next generation of leaders in the UAE with an innovative and entrepreneurial mindset and its related core skills. The course is composed of three modules designed to be taught over a 15-week semester.

ORIENTATION 101000 (0 Cr. Hrs.)

This course will inform new students about academic policies and procedures, help with the academic and social transition to higher education, prepare students to make reasoned and well-informed choices, and enable them to become competent members of the university community. The course presents an overview of the foundation and objectives of the university and provides information on career and academic issues, policies and procedures about the registration rules. Also, it gives them brief advice in the social, personal and career orientation, study and time management and achieving success at university.

Islamic Culture 102110 (3 Cr. Hrs.)

This course aims at providing students with knowledge about culture, Islamic faith and beliefs, sources of legislation and characteristics of Islam. It will also deal with some contemporary issues from an Islamic perspective such as human rights, women status, globalization and environment.

The Miraculousness of the Holy Koran & Sunna 1021201 (3 Cr. Hrs.)

The course deals with the concepts of the Miraculousness of the Holy Kuran; its types and necessity; and the principles pertinent to it with special emphasis on its scientific dimension. It also covers the miraculousness in the Sunah to illustrate aspects of miraculousness based also on principles agreed upon by Muslim scholars.

Communication Skills in Arabic Language 102140 (3 Cr. Hrs.)

This course aims at providing students with communication skills in the Arabic language, such as: listening, reading, writing, and speaking. These skills are taught and achieved through the use of selected texts from

traditional poetry, modern poetry and prose. There is also an emphasis on students' academic and cultural surroundings in which they live and interact with.

Communication Skills in Arabic Language (Non-Arabs) (3 Cr. Hrs.)

This course aims at providing non-Arab students with Communication Skills in the Arabic language. It focuses on the following skills: reading, writing, speaking and listening. It also aims at encouraging students to communicate in Arabic in their environment, university and society

Statistics for Science 103110 (3 Cr. Hrs.)

This course is designed for students who need to gain skills in the basic statistics knowledge. It covers the essential statistical topics that students in the science section are expected to know. It is a basic course where essential material in statistics is covered. The first part of the course deals with data tabulation and calculation of descriptive measures. The second part covers basic concepts of probability, probability laws of addition and multiplication and bays' law. The third part covers some discrete distributions namely (Binomial and Poisson) and continuous distribution, where the emphasis is on Standard Normal Distribution. The fourth part covers the linear regression analysis and correlation.

Statistics for Arts 103110 (3 Cr. Hrs.)

This course is designed for students who need to gain skills in basis statistics knowledge, so it covers the essential statistical material and topics that students are expected to know. The first part of the course deals with data tabulation and calculation of descriptive measures. The second part covers basic concepts of probability such as population, sample, sample space and probability laws of addition and multiplication. The third part covers the discrete and continuous distribution, where the emphasis on Standard Normal Distribution. The fourth part covers the linear regression analysis and correlation.

Environmental Sciences 103120 (3 Cr. Hrs.)

This course is designed for students who need to gain knowledge in environmental sciences in general. Special emphasis is given to water and energy resources because of their importance in the Arab Region and the world. The course includes three basic modules: environment, water and energy. The environment module covers population dynamics, natural resources, pollution, remote sensing and GIS applications, environmental protection and sustainable development. The water module discusses the hydrologic cycle, basics of hydrogeology and water quality as well as water-related problems in the Gulf Region. The third module covers the conventional and non-conventional energy resources, energy production and use, also energy management and sustainability.

Research Methodology 103130 (3 Cr. Hrs.)

The course provides students with some basic tools of research methods in different fields. It covers the research process including: formulating research questions, sampling and surveying, measurement (scaling), data organization, data analysis, methods of extracting knowledge from the readable materials, searching for relevant references, and writing research reports.

Computer Applications 104110 (3 Cr. Hrs.)

This course is an introduction to the most common software applications such as word processing, spreadsheets, presentations, and other features found in current software packages. Students will also acquire knowledge related to basic computer concepts and components.

Information Literacy 104130 (3 Cr. Hrs.)

This course will introduce students to the organization, retrieval and evaluation of electronic and print information. Students will be provided with an overview of college library systems, networked information systems, traditional scholarly resources, evolving delivery systems, and the concepts underlying the research process. Students will gain an understanding of the importance of the Internet as a research tool and the changing nature of information resources. Students will utilize electronic databases, the World

Wide Web, and print resources. Students will be able to apply principles learned in this course to research assigned in other courses. Students will practice thinking critically when formulating research queries and evaluating information resources.

TOEFL INTERMEDIATE 105201 (15 Hours)

The course gives students intensive practice in language skills: listening, reading and writing. It also focuses on vocabulary and grammar together with test-taking strategies in order to develop proficiency in the English language and perform efficiently in the TOEFL exam. Learning takes place in a user-friendly and anxiety-free environment.

IELTS INTERMEDIATE 105201 (15 Hours)

IELTS requires proficiency in the four language skills: listening, speaking, reading and writing. Students are exposed to intensive practice so as to develop their communicative competence. They learn in a user-friendly and anxiety-free environment, making use of the different resources such as the English lab, MOODLE and the Internet.

Critical Thinking 107110 (3 Cr. Hrs.)

Critical Thinking studies a process which is indispensable to all educated persons--the process by which we develop and support our beliefs and evaluate the strength of arguments made by others in real-life situations. It includes practice in inductive and deductive reasoning, argument structure and identification, validity and strength of arguments, presentation of arguments in oral and written form, and analysis of the use of language to influence thought. The course also applies the reasoning process to other fields such as business, science, law, social science, ethics, and the arts.

Technical Writing 107120 (3 Cr. Hrs.)

This course is intended to develop Students' proficiency and communicative competence in technical/professional writing and oral presentation skills. Also, the course is practically oriented in order to apply what students have acquired rather than focus on theory, which may rapidly fade away without application. It is worth pointing out that the various activities and interactions are designed in a way to be major-specific so that students perceive the relevance of what they have acquired. Hence, both their intrinsic and extrinsic motivation is enhanced

Introduction to Digital Photography 107130 (3 Cr. Hrs.)

Introduction to the history of fine art photography; Correct Color; scan and prepare images for printing; adjust contrast, tonality. Review of all relevant tools found in Adobe Photoshop software. Understand managing image files... saving, opening, uploading, posting, etc., Electronic images… their scaling and use: imaging for the Internet. Gain proficiency with image editing for maximum image impact. File size and print size... how to use layers, adjustment layers and resize images.

THE PRINCIPES OF ARCHITECTURE & ART 112110 (3 Cr. Hrs)

The course introduces the student to the world of architecture and art through a series of lectures which highlight this subject by exploring visual presentations, videos, and slideshows. In addition, the course gives the student the chance to practice what he has visualized by creating drawings, pictures, and other media outcomes as required.

Principles of Interior Design 112120 (3 Cr. Hrs)

The aim of this course is to introduce students to elements and principles of interior design and expose them to contemporary designs. Students will be able to understand the principles of interior design and appreciate its impact on their surroundings.

Introduction to Aesthetics 109110 (3 Cr. Hrs)

The aim of the course is to allow students to research and study the philosophy of aesthetics, discussing the problem of aesthetics concerns, the theory of beauty and the theory of arts. This course will enable students to develop knowledge for human life and culture, which would help them to utilize these aspects of aesthetics value in their professional practices and communication behavior.

Introduction to Art 112140 (3 Cr. Hrs)

This course provides an introduction to art from prehistoric times to the present. It will provide an introduction to the understanding and enjoyment of art. While examining the role that the visual arts have played in the development of the world's cultures, the student is exposed to a wide variety of artistic media through the study of painting, architecture, design, photography and the decorative arts.

Modern Technology and Society 112130 (3 Cr. Hrs)

The course starts with defining key terms such as: science, engineering and technology then it deals with the history of technological developments that changed society, philosophical theories of interaction, ethical and legal issues pertinent to the use of modern technology and entrepreneurship in modern technology.

In addition, the course describes the roles modern technology play in shaping the lifestyle of individuals and society, and tin politics, the economy and health. Other issues such as: the impact of modern technology on the environment, how individuals interact with technology and immerging and future technology with its possible effects are also discussed.

Internet Concepts 113110 (3 Cr. Hrs)

This course is designed as an introduction to the Internet and World Wide Web. It starts by introducing the history of the Internet and includes the use of Internet applications and the basics of web page and web site production, and continues with matters such as Internet security, cookies, viruses, etc.

Introduction to Information Systems 113120 (3 Cr. Hrs)

The purpose of this course is to introduce the topic of information systems (IS) and how organizations use it to support a variety of tasks ranging from basic day to day activities to creating competitive edge in the market place. It will focus on topics such as business process reengineering, collaborative computing, electronic commerce, the impacts of IS upon organizations and society, ethical use of information systems, types of information systems, and how to analyze and design information systems.

Economic Concepts 114110 (3 Cr. Hrs)

This course is an integrated introduction to the analysis of individual firms and markets, as well as aggregate economic variables. These include inflation, unemployment and economic growth, with a focus on the state's role in attempts to regulate the economy. Thus, efforts will be focused on learning how societies use scarce resources to produce and distribute commodities among its various people.

Entrepreneurship Development 114120 (3 Cr. Hrs)

Based on the economic and social dimensions, the entrepreneurship development concept has become an imminent part of life. This course aims to highlight the economics of entrepreneurship, its role in venture creation and facilitation of capital resource. The course also aims at describing the management strategies for starting up businesses which necessarily includes the business plan. The course focuses on all the basic tenets of entrepreneurship development.

History of science in Islam 115110 (3 Cr. Hrs)

The course consists of four units. In the first unit, we elaborate on introductory aspects related to history of science in general and the science in the context of Islamic Culture in particular. This unit includes: nature of human knowledge, the term science and scientific method, significance of the recent concern of studying history of science, scientific achievements of ancient nations and the cultural context of the scientific accomplishments of the intellectuals of the Islamic Culture. The second unit is devoted to the achievements of the scientists of this culture in medical sciences and prominent figures in these fields. In the third unit, we concentrate on the field of natural sciences, mathematics and prominent figures in these fields in the context of the Islamic Culture. Last, we discuss, in the fourth unit, agricultural endeavors in the Islamic culture in addition to the impact of this culture on the scientific progress in Europe.

Scientific Pioneering 115120 (3 Cr. Hrs)

The course consists of four distinct units. The first unit deals with human knowledge, introduction to epistemology, science and the scientific method and the nature of scientific explanation of observed

phenomena. In the second unit, we study the societal influence on science, first by illustrating the theoretical basis of this influence, then by illustrating this influence via real societal examples extracted from ancient and recent history. The third unit is devoted to studying the salient features of modern science and technology, including particularly: science and natural resources and intellectual property and patents. In the last unit we discuss the scientific impact on human behavior and thought.

General Psychology 115130 (3 Cr. Hrs)

The course aims to provide students with basic concepts, methods, techniques and theories of psychology as applied to the field and practice of several academic discipline specialties. The course also introduces areas of psychology dealing with biology, learning, motivation, human development, personality, society, maladjustment and other topics.

Principles of Mathematics 115140 (3 Cr. Hrs)

This course deals with algebraic equations of degree 1 and 2, the elementary ideas of plane geometry; Cartesian coordinates system, equations of line, circles, linear inequalities and systems of inequalities are introduced. Also, basic notions of real functions such as limits, continuity, and differentiability are studied along with simple applications. In addition, basic knowledge about matrices and their algebra is provided.

The Art of Written Expression 115150 (3 Cr. Hrs)

The course analyzes writing practices within and across disciplines, recognizing the role writing plays in consolidating knowledge in a retrievable form which is easily accessible within each academic specialization. This course highlights the processes, practices and application of written expression in various academic fields. Students have the opportunity to develop a critical understanding of important discourses within their particular area of study.

Emirates Society 115160 (3 Cr. Hrs)

This course covers topics related to the nature of UAE society before and after the discovery of oil, and its effect on the political, geographical, cultural, social and educational aspects of national life.

Educational Technology 115170 (3 Cr. Hrs)

This introductory course surveys the field of educational technology through the historical development of Educational Technology, an overview of modern classroom applications, and an examination of trends and issues surrounding the use of technology for teaching and learning.

Chemistry of Life 117110 (3 Cr. Hrs)

The course aims to provide students with the basic knowledge of chemical principles needed for the daily life. It deals with the development of life on Earth from its origins (Chemistry of life, Cells) and the characteristics of living things.

Fundamentals of Human Nutrition 117120 (3 Cr. Hrs.)

This course discusses the fundamental principles of human nutrition and their application to food selection. Emphasis is placed upon the Essential Nutrients and their vital importance as well as the recommended dietary allowances and other dietary guidelines, which promote health maintenance and disease prevention. Moreover, it answers the questions of what Nutrition is, why it is important for our life, and how to easily adjust the life style based on what is learned will be highlighted.

First Aid 117130 (3 Cr. Hrs.)

This course aims to teach the skills and knowledge critical to saving life and minimizing the severity of injury or sudden illness. Safety awareness and accident prevention are emphasized.

Remote Sensing and GIS Applications 117150 (3 Cr. Hrs.)

This course introduces students to the basic elements of spatial sciences, including Global Positioning System (GPS), Remote Sensing (RS) and Geographic Information System (GIS). Students are taught how to locate themselves and determine their direction with a GPS. Students will study data collection, acquisition and processing in a much wider way than the visible spectrum, including IR, UV and microwave

zone of the electromagnetic spectrum in the RS. Finally, students will learn how to capture, store, retrieve, display and interpret data through GIS; identify the art of image interpretation and enhancement.

Academic and Technological Ethics 118110 (3 Cr. Hrs.)

The course is concerned about ethical issues related to the misuse of scientific and technological advances, miscommunication of scientific research results, the ethical aspects related to the actual practice of scientists in their scientific endeavors and the lack of ethics in all facets of academic character at all levels of educational standing. The course starts with clarifying the relevance of discussing ethical issues in the present age. Then it discuss examples of misbehaving by students and instructors in educational institutes at all levels, further we discuss examples of the random growth of modern technology without paying attention to ethical standards and finally we shed some light on the miscommunication and fraud in research results among scientists. Stress is made on case studies related to aspects mentioned above.

General Biology 118120 (3 Cr. Hrs)

This course provides students with general knowledge in biology. The students are provided with a basic knowledge of chemistry of living materials, the cell structure, types and functions. The students are also provided with good knowledge concerning cell division, general embryology and genetics. A basic knowledge about the morphological features of the tissues and recognize their roles in forming organs and organisms integrates the above information. The students are also provided with brief knowledge concerning human health and common diseases.

Oral Health 118130 (3 Cr. Hrs)

This course defines the responsibilities of the individual within community dental health education with emphasis on the etiology of dental disease, methods for prevention, and principles of nutrition in relation to oral health and preventive dentistry.

English Communication Skills 119110 (3 Cr. Hrs)

This course aims to satisfy students' immediate needs in the communication field in both their academic environment and their future needs as professionals. It covers, among other things: the concept of human communication and its problems; communication and culture; telephoning; interview skills; conducting and participating in meetings; note-taking; presentation skills; knowing your audience; developing a positive public image; writing for the web. The course is practically oriented to ensure interactivity by the students playing a very active and constructive role.

Introduction to communication sociology 119120 (3 Cr. Hrs)

This course focuses on the inevitable social role of communication in society. The course clarifies some of the effects, functions and dysfunctions of mass communication in society. The course concentrates on the role of communication in different social fields and analyzes its role in public service sectors and non-governmental organizations (NGOs)

The course is also intended to make students aware of sensitive topics to avoid using words that might offend or upset people.

Information Society 119130 (3 Cr. Hrs)

The course focuses on the information revolution in all fields around the world. It concentrates on the characteristics of the information society, its consequences, challenges and future implications on Arab society under the information revolution and the international information market map.

Media Culture 119140 (3 Cr. Hrs)

This course aims to enable students to acquire the competencies of using the mass media in a smart way. This can be realized by introducing the students to the mass media available in contemporary societies, the

criteria and ethics of information industry and the different influences of information on the society namely the social; cognitive, affective and behavioral influences.

Legal Culture 120115 (3 Cr. Hrs)

The course addresses itself to general legal concepts at a macro level of generality such as the rule of practice and its characteristics, sources of obligation with reference to the rules of malpractices. It also deals with: the trader, commercial business and documents; labor law, rights and duties of workers, termination of contracts and penal law illustrated by common crimes such as robbery, fraud etc. In addition, matters related to administrative decisions are covered such as the employee rights and duties, the marriage contract and the wife's rights and duties.

List of Faculty Members

Ajman Campus					
Name	Rank	Specialization	Degree	Date	University
Said Lezzar	Lecturer Head of Dept	Information Technology	Master	1982	American University, U.S.A
Dr. Mohammed Salahat	Lecturer	Information Technology	Master	1996	Arab Academy, Jordan
Nadia Ouakli	Lecturer	Statistics	Doct 3rd cycle	1986	Paris VI University – France
Mr. Laith Aljumaily	Lecturer	Statistics	Master	1978	Mississipi State University
Hanine Bou Antoun	Lecturer	Statistics	Master	2010	Beirut University, Lebanon
Ahmed Abdulsattar	Lecturer	Laser Physics	PhD	1995	Swansea University, UK
Alaa Al Amiry	Lecturer	Emergency Help Science	Master	2010	UMBC University, U.S.A
Ahmed Yacoob Head of Dept	Lecturer	Islamic	Master	2000	Dar Al Hadith Alhassaniya College, Morocco
Sahar Zahran	Lecturer	علم الاجتماع	Master	2002	Jordan University, Jordan
Ayat Ahmed Hassan	Lecturer	Text Linguistics	Master	2010	Sharjah University, UAE
Osama Samaneh	Lecturer	Leadership and Education	PhD	1993	State University of New Mexico, USA
Eman Kadhem	Lecturer	Islamic Studies	Master	2009	Sharjah University, UAE

Nouf Nuaimi	Lecturer	Translation and Interpreting	Master	2011	American University of Sharjah, UAE
Siddiq Ismail Abd Elmonim	Lecturer Head of Dept	English	Master	1982	Manchester University, U.K.
Hanaa Mansour	Lecturer	English	Master	2000	Cardiff University, U.K
William Vize	Lecturer	English	Master	1999	Bath University, U.K.
Nida Hadi	Lecturer	English	Master	1986	Bangor University, U.K

College of Business Administration

College of Business Administration (CBA) is one of the most credible business colleges in the region that is committed to the development and enhancement of knowledge and business skills of its students to enable them to understand the modern business world, to achieve the highest levels of success in their professional careers, and to play effective leadership roles regionally as well as globally.

College of Business Administration (CBA) is committed to providing high-quality business education. The remarkable growth in economic and business activity in the world in general and Arabian Gulf region in particular, over the past decade, has greatly stimulated the demand for skilled and competent business graduates. Our competitive degree programs are, therefore, developed to offer both local and global perspectives as well encourage our students to think out of the box and innovatively so as to not only be equipped with the knowledge, skills and attitudes they need to effectively address the challenges and opportunities of today's internationalized and fast evolving business environment but also emerge as business leaders of tomorrow.

We strive to provide the best and most modern methods of instructions to our students. Our diligent and highly qualified faculty members ensure that our curriculum is consistently updated in order to reflect and keep up with the ever evolving trends and techniques of the contemporary business world.

Please browse our webpages to see the range of degree programs and courses that are offered at CBA.

Mission

The college adheres to the fulfillment of AU's overall mission, which seeks to meet the educational needs of local, regional and international students. As such the college philosophy is grounded in finding practical and scientific solutions to contemporary organizational and business problems through the BSc degree programs offered in four areas of specialization: Management, Accounting, Marketing, and Finance and the Master of Business Administration degree program in three areas of specialization: HR Management, Financial Management and Marketing.

Stemming from this underlying philosophy, the college's strategic focus is to enhance the intellectual, professional and behavioral development of its students to meet the managerial challenges of the 21st century.

Academic Programs

The college offers four bachelor programs and three MBA tracks, providing students with the theoretical and practical backgrounds that form an excellent foundation for satisfying career requirements or for subsequent graduate degree. The department's undergraduate programs have been reaccredited by the UAE Ministry of Higher Education and Scientific Research, and the MBA programs are also accredited.

The four bachelor degree programs, Management, Accounting, Marketing and Finance each require four years of study. The Master of Business Administration program has three tracks, each of which takes two years of study: HR Management, Financial Management and Marketing.

CBA Undergraduate Programs

- Bachelor of Science in Accounting
- Bachelor of Science in Finance
- Bachelor of Science in Management
- Bachelor of Science in Marketing

CBA Graduate Programs

- MBA in Human Resources Management
- MBA in Financial Management
- MBA in Marketing

CBA Minors within the College of Business

- Minor in Accounting
- Minor in Finance
- Minor in Management
- Minor in Marketing

CBA Minors for Other Colleges

- Minor in Management to the College of Engineering
- Minor in Accounting to the College of Information Systems
- Minor in Marketing to the College of Pharmacy

Departments

CBA Departments

- Department of Accounting
- Department of Finance
- Department of Management
- Department of Marketing

Facilities

The college's current physical facilities, which include offices, labs and teaching rooms, sports grounds, health club and swimming pool are fully equipped to adequately meet its needs and are regularly upgraded. The library is regularly updated with the latest books in multiple fields and disciplines for the benefit of students and college members. IT facilities include:

- wireless internet connection, available in the university campus
- Internet labs available 14 hours per day
- multimedia facilities provided in all labs
- more than 12 business programs installed in the labs
- college computers connected through local and wide area networks

DEPARTMENT OF MANAGEMENT

The Department of Management offers a comprehensive and dynamic program leading to the Bachelor of Science in Management, which integrates multidisciplinary approaches to teaching and learning, utilizes the latest business and economic theories along with providing practical exposure to its students through real-life case studies and analysis of actual business data and presentations. The department focuses on building and enhancing students' essential skills, like, critical thinking, effective communication skills, business acumen and understanding of strategic models that are used in modern business world, in order to facilitate their entry into the global business arena as exceptional and professional managers and entrepreneurs.

Bachelor of Science in Management

Mission

The mission of the Management Department is derived mainly from the grand vision and philosophy of the University and the College of Business Administration. The department therefore, aims at providing students with excellent education and professional practice in various areas of management via a rigorous academic program that promotes critical thinking, interpersonal skills, technical competence and above all ethical and moral principles and practices.

Goals:

1. To equip students with in-depth knowledge of contemporary management theories, concepts, principles, and practices relevant to the business and management careers in the twenty-first century.
2. To develop students' creative and critical thinking and problem-solving skills necessary for the identification, analysis, and resolution of a wide range of business and management problems.
3. To develop students' ability to apply information technologies that is necessary to facilitate business and management decision-making processes.
4. To equip students with appropriate communication, teamwork, motivation, leadership, and research skills suitable in the business and management environments.
5. To enable students to identify and utilize decision-making techniques and skills that meet professional, ethical, and socially- responsible standards.

Learning Outcomes:

Knowledge

Upon successful completion of the BSc in Management program, graduates will be able to:

1. Deal effectively and efficiently with managerial responsibilities, tasks and challenges in changing and complex business environments.
2. Display problem solving and decision making skills in a variety of contexts
3. Articulate issues and disseminate solutions to a variety of stakeholders.
4. Demonstrate broad managerial ccompetencies adapted to a globalized world.
5. Conduct research and pursue post-graduate studies.

Skills

1. Understand key theories in leadership and management

2. Explain the organizational objectives of specialization, coordination, adaptation and alignment to benefit the community and the business milieu
3. Identify the differences between the conduct of quantitative and qualitative research
4. Understand the requirements for managerial ethical, moral, and the principle of "what is measurable is manageable."
5. Understand the global multidimensional managerial challenges as they pertain to the various functions of the global corporation.
6. Develop awareness of the importance of strategic change and development
7. Explain the role of quality standards in an applied business strategy.
8. Apply creative thinking to the solution of complex organizational challenges.
9. Acquire the requisite knowledge and skills to conduct research and to pursue postgraduate studies.

Competence (Autonomy and Responsibility)

1. Conduct research projects independently or in a group setting.
2. Conduct graduation projects according to the College of Business Administration guidelines that are stipulated by the College of Business Administration.
3. Orally present and defend graduation projects.

Self-development

1. Engage in a life-long learning cycle and respond in a positive and responsible manner to constructive criticism.
2. Enroll in an approved training course at the conclusion of the senior year.

Role in Context

1. Demonstrate professionalism and respect for fellow students and faculty members.
2. Maintain high ethical standards in the conduct of all activities in CBA

At the conclusion of the BSc in Management program, students will be able to:

Knowledge	
K1	Deal effectively and efficiently with managerial responsibilities, tasks and challenges in changing and complex business environments.
K 2	Display problem solving and decision making skills in a variety of contexts
K 3	Identify the differences between the conduct of quantitative and qualitative research
K4	Demonstrate broad managerial ccompetencies adapted to a globalized world.

K5	Conduct research and pursue post-graduate studies.
Skills	
S1	Understand key theories in leadership and management
S2	Explain the organizational objectives of specialization, coordination, adaptation and alignment to benefit the community and the business milieu
S3	Identify the differences between the conduct of quantitative and qualitative research
S4	Understand the requirements for managerial ethical, moral, and the principle of "what is measurable is manageable."
S5	Understand the global multidimensional managerial challenges as they pertain to the various functions of the global corporation.
S6	Develop awareness of the importance of strategic change and development
S7	Explain the role of quality standards in an applied business strategy.
S8	Apply creative thinking to the solution of complex organizational challenges.
S9	Acquire the requisite knowledge and skills to conduct research and to pursue postgraduate studies.
Competencies	
Autonomy and Responsibility	
CA1	Conduct research projects independently or in a group setting.
CA2	Conduct graduation projects according to the College of Business Administration guidelines.
CA3	Orally present and defend graduation projects
Role in Context	
CR1	Demonstrate professionalism and respect for fellow students and faculty members.
CR2	Maintain high ethical standards in the conduct of all activities in CBA
Self-development	
CS1	Engage in a life-long learning cycle and respond in a positive and responsible manner to constructive criticism.
CS2	Enroll in an approved training course at the conclusion of the senior year.

Admission Requirements

The normal admission requirement for an applicant is the UAE Secondary School Certificate (both sections), or an equivalent qualification, with a minimum average grade of 60 percent, & TOEFL certificate with a minimum score of 500.

Career Opportunities

(Management is the art of getting things done by others. Hence, the need for future managers never stops, particularly for those who are equipped with the latest managerial knowledge skills and the ability to think analytically.

The Bachelor of Science in Management program has been carefully crafted to meet market demands qualitatively. The program is intended to produce graduates who will be efficient and effective managers able to achieve organizational objectives. AU management graduates have been well received in the job markets of the UAE and other Arabian Gulf countries for their outstanding teamwork, and creative and management leadership skills.)

Graduation Requirements

Students will be awarded the Bachelor of Science in Management degree upon fulfillment of the following requirements:

- Successful completion of 126 credit hours, which normally takes eight semesters.
- 8 weeks of industrial internship (after the completion of 96 credit hours including seven management core courses), which is equivalent to three credit hours.
- A minimum Cumulative Grade Point Average of 2.0.

Degree Requirements

The BSc in Management degree requires the completion of 126 credit hours distributed according to the following plan:

Type of Courses	Credit Hours
1**. University General Education Requirements**	**24**
(a) University Required Courses	15
(b) University Elective Courses	9
2**. College Requirements**	**66**
(a) College Required Courses	54
(b) College Elective Courses	12
3**. Major Requirements**	**36**
(a) Major Required Courses	30
(b) Major Electives Courses	6
Total Credit Hours	**126**

(A) UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a)University Compulsory Courses (15 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1010000	Orientation	0	-
1021400	Communication Skills in Arabic Language (For Arabs)	3	-
1021401	Communication Skills in Arabic Language (For Non Arabs)	3	-
1021402	Communication Skills in Arabic- E	3	
1021300	Islamic Civilization (Arabic)	3	
1021301	Islamic Civilization (English)	3	
1021100	Islamic Culture (For Arabs)	3	-
1021101	Islamic Culture (For Non Arabs)	3	
1141300	Innovation and Entrepreneurship	3	60 hrs
1141202	IT Fundamentals	3	
1031333	Statistics (Business)	3	

(b)University Elective Courses (9 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1151500	The Art of Written Expression (Arabic)	3	-
1201150	Legal Culture	3	-
1121400	Introduction to Art (English)	3	-
1071300	Introduction to Digital Photography	3	-
1091100	Introduction to Aesthetics (English)	3	-
1091200	French Language	3	-
1021500	Introduction to Hadeeth and Sunna	3	-
1191700	Academic Writing (English)	3	-
1191500	The Art of Public Speaking (English)	3	-
1161200	Astronomy	3	-
1081200	Physics	3	-
1031200	Environmental Science (English)	3	-
1031300	Research Methodology (English)	3	-
1151100	History of Science in Islam	3	-
1151200	Scientific Pioneering	3	-
1171100	General Chemistry	3	-
1171200	Fundamental of Human Nutrition	3	-

1171300	First Aid	3	-
1181200	General Biology	3	-
1191100	English Communication Skills	3	-
1151300	General Psychology	3	-
1191600	Communication between Cultures	3	-
1071100	Critical Thinking (English)	3	-
1151600	Emirates Society (English)	3	-
1131400	Library Information System	3	-

(B) COLLEGE REQUIREMENTS (66 Credit Hours)

Obligatory Courses (54 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Statistics for Business	0102211	103110	3
2	Business Research Method	0400307	102211 & 400291	3
3	Principles of Accounting I	0400292	-	3
4	Principles of Accounting II	0400394	400292	3
5	Introduction to Management	0400291	-	3
6	Fundamentals of Finance	0400396	400292	3
7	Microeconomics	0400393	-	3
8	Business Communication	0400408	400291	3
9	Principles of Marketing	0400395	400291	3
10	Business Law	0400411	400291	3
11	Management Information Systems	0400615	400291 & 306460	3
12	Organizational Behavior	0400409	400291	3
13	Macroeconomics	0400410	400393	3
14	Data Base Management Systems	0306460	104110	3
15	Quantitative Analysis	0400513	102211 & 110140	3
16	Supervised Training	0400516	After 96 credit hours	3
17	IT in Business	0310202	104110	3
18	Math for Management	0110140	-	3

Elective Courses (12 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Business Ethics	400419	400291	3
2	Economic Development of GCC	400512	400410	3
3	Managerial Economics	400522	400393	3
4	Public Relations	400523	400408	3
5	Feasibility Studies	400524	400393 & 400396	3
6	Hospitality & Tourism	400525	400395	3
7	Social Media	400526	400395	3
8	Enterprise Resources Management	400527	400291& 400292	3
9	Business English	400528		3

(C) MAJOR REQUIREMENTS (36 Credit Hours)

Major Obligatory Courses (30 Cr. Hrs.)

	Course Title	Course Code	Prerequisites	Credit Hours
1.	Production and Operations Management	0410501	103110 & 400291	3
2.	Human Resource Management	0410602	400291	3
3.	International Business	0410603	400291 & 400410	3
4.	Management of Small Business	0410611	400291	3
5.	Purchasing and Material Management	0410704	410501	3
6.	Strategic Management	0410706	400396,400395	3
7.	Total Quality Management	0410712	410501	3
8.	Organizational Theory and Design	0410808	400409	3
9.	Selected Topics in Management	0410809	410706	3
10.	Graduation Project/Management	0410811	102 Credit Hours	3

Major Elective Courses (6 Cr. Hrs.)

No.	Course Title	Course Code	Prerequisites	Credit Hours
1	Project Management	0410820	400291	3
2	Electronic Business	0410830	400291 & 104110	3
3	Service Marketing	0430707	400395	3
4	Personal Finance	0440612	400396	3
5	Computer Applications in Management	0410705	104110 & 400291	3

Proposed Sequence of Study

Semester 1

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
101000	Orientation	1	0	0	0	-
1021100 1021101 1021300 1021301	Islamic Culture (Arabs), Islamic Culture (Non Arabs) Islamic Civilization (Arabic) Islamic Civilization (English) (Only for 20161 onwards)	3	0	0	3	-
1021400 1021401 1021402	Communication Skills in Arabic Language (Arabs) Communication Skills in Arabic Language (Non Arabs) Communication Skills in Arabic Language-E	2	2	0	3	-
400291	Introduction to Management	3	0	0	3	-
Xxxxxx	University Elective Course 1	3	0	0	3	-
Total		15	2	1	15	

Semester 2

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
104110	Computer Applications	2	2	0	3	-
1141300	Innovation and Entrepreneurship	3	0	0	3	-
102211	Statistics for Business	3	0	0	3	103110
Xxxxxxx	University Elective Course 2	3	0	0	3	-
Total		14	2	0	15	

Semester 3

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
311102	PC Applications/ Management	2	2	0	3	104110
400393	Microeconomics	3	0	0	3	-
400394	Principles of Accounting II	3	0	0	3	400292
400395	Principles of Marketing	3	0	0	3	400291
400396	Fundamentals of Finance	3	0	0	3	400291
xxxxxx	University Elective Course 3	3	0	0	3	-
Total		17	2	0	18	

Semester 4

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
110140	Mathematics for Management	3	0	2	3	-
310202	IT in Business	2	2	0	3	311102
306460	Database Management Systems	2	2	0	3	311102
400410	Macroeconomics	3	0	0	3	400393
400411	Business Law	3	0	0	3	-
xxxxxxx	College Elective Course 1	3	0	0	3	-
Total		16	4	2	18	

Semester 5

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
400408	Business Communications	3	0	0	3	400291
400409	Organizational Behavior	3	0	0	3	400291
410501	Production and Operations Management	3	0	0	3	103110, 400291
400513	Quantitative Analysis	3	0	0	3	102211, 110140
400615	Management Information Systems	3	0	0	3	400291, 306460
xxxxxxx	College Elective Course 2	3	0	0	3	-
Total		18	0	0	18	

Semester 6

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
410603	International Business	3	0	0	3	400291, 400410
410611	Management of Small Business	3	0	0	3	400291
410704	Purchasing and Materials Management	3	0	0	3	410501
410705	Computer Applications /Management	2	2	0	3	311102, 400291
410712	Total Quality Management	3	0	0	3	410501
xxxxxxx	College Elective Course 1	3	0	0	3	-
Total		17	2	0	18	

Semester 7

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
400516	Supervised Training	-	-	-	3	96 cr. hrs.
410602	Human Resource Management	3	0	0	3	400291
410706	Strategic Management	3	0	0	3	400409
xxxxxxx	Major Elective Course 1	3	0	0	3	-
Total		9	0	0	12	

Semester 8

Course No.	Course Title	Contact & Credit Hrs.				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
410808	Organizational Theory & Design	3	0	0	3	400409
410811	Graduation Project	-	-	-	3	102 cr. Hrs.
410909	Selected Topics in Management	3	0	0	3	410706
xxxxxxx	Major Elective Course 2	3	0	0	3	-
Total		9	0	0	12	

DEPARTMENT OF ACCOUNTING

Accounting, described as "The Language of Business", is the study of the concepts and techniques used in reporting on matters related to an entity's financial status and performance. Entities compete in both input and product markets that is why accounting information is essential for managers to plan and control business activities. Information generated through the accounting process helps in communication and analysis of financial reports that are required for business decision-making.

Bachelor of Science in Accounting

Mission

The mission of the Accounting Department is derived mainly from the grand vision and philosophy of the University and the Faculty. Accordingly, the department is in pursuit of excellence in accounting education and professional practice via a rigorous academic program that promotes critical thinking, interpersonal skills, technical competence and above all ethical practices.

Goals

1- Provide students with adequate accounting knowledge that enables them to acquire a position in accounting profession.
2- Enable students to prepare, analyze and communicate accounting information using information technology to facilitate the decision making process.
3- Develop ethical reasoning, critical thinking and problem-solving.
4- Prepare students to conduct research in accounting and related areas.

Learning Outcomes

Knowledge

Upon successful completion of the B.SC in Accounting, graduates will be able to:

K1. Understand the conceptual frame work of accounting and the mechanics of accounting cycle.
K2. Understand the core concepts of cost and management accounting and the uses of accounting information in the decision-making process.
K3. Understand the auditing standards, practice and rules of professional conduct.
K4. Understand the relevance and applicability of accounting models and theories.

Skills

S1. Ability to prepare financial statements for profit and non-profit organizations.
S2. Ability to use accounting analytical tools to develop skills and critical thinking.

Competence

Autonomy and Responsibility

CA1. Ability to combine and consolidate financial information.
CA 2. Prepare students to conduct research in accounting and related areas.
CA3. Develop ethical reasoning, critical thinking and problem-solving.

Self-development

CS. Enable students to prepare, analyze and communicate accounting information using manual and information technology to facilitate the decision making process.

Role in Context

CR. Develop an adequate accounting knowledge that enables them to acquire a position in accounting profession.

At the conclusion of the B.SC in Finance program, students will be able to

Knowledge	
K1	Understand the conceptual frame work of accounting and the mechanics of accounting cycle.
K 2	Understand the core concepts of cost and management accounting and the uses of accounting information in the decision-making process.
K 3	Understand the auditing standards, practice and rules of professional conduct.
K4	Understand the relevance and applicability of accounting models and theories.
Skills	
S1	Ability to prepare financial statements for profit and non-profit organizations
S2	Ability to use accounting analytical tools to develop skills and critical thinking.
Competencies	
Autonomy and Responsibility	
CA 1	Conduct research projects independently or in a group.
CA 2	Prepare students to conduct research in accounting and related areas.
CA3	Develop ethical reasoning, critical thinking and problem-solving.
Self-development	
CS.	Enable students to prepare, analyze and communicate accounting information using manual and information technology to facilitate the decision making process.
Role in Context	
CR.	Develop an adequate accounting knowledge that enables them to acquire a position in accounting profession

Admission Requirements

The normal entry requirement is the UAE Secondary School Certificate, or an equivalent qualification, with a minimum average grade of 60 percent, & TOEFL certificate with a minimum score of 500.

Career Opportunities

A career in accounting offers the potential of a larger number of job openings than in many other disciplines. A qualification in accounting today opens the door to careers in business, NGOs and government units, preparing graduates for work in any of the following areas: financial reporting, public practice, strategic business planning, cost and management accounting, information systems, insolvency and reconstruction, accounting and finance consulting, and business analysis and evaluation. In addition to employment our graduates are equipped to pursue postgraduate study in accounting and finance as well as professional certification, for example CPA, CMA, CFA, ACCA and CIA.

Graduation Requirements

Students will be awarded the Bachelor of Science in Accounting degree upon fulfillment of the following requirements:

- Successful completion of 126 credit hours, which normally takes eight semesters.
- 8 weeks of industrial internship (after the completion of 96 credit hours including seven Accounting compulsory courses
- A minimum Cumulative Grade Point Average of 2.0.

Degree Requirements

The BSc in Accounting degree requires the completion of 126 credit hours distributed according to the following plan:

Type of Courses	Credit Hours
1. University General Education Requirements	**24**
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Requirements	**66**
(a) College Compulsory Courses	54
(b) College Elective Courses	12
3. Major Requirements	**36**
(a) Major Compulsory Courses	33
(b) Major Electives Courses	3
Total Credit Hours	126

(A) UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Compulsory Courses (15 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1010000	Orientation	0	-
1021400	Communication Skills in Arabic Language (For Arabs)	3	-
1021401	Communication Skills in Arabic Language (For Non Arabs)	3	-
1021402	Communication Skills in Arabic- E	3	
1021300	Islamic Civilization (Arabic)	3	

1021301	Islamic Civilization (English)	3	
1021100	Islamic Culture (For Arabs)	3	-
1021101	Islamic Culture (For Non Arabs)	3	
1141300	Innovation and Entrepreneurship	3	60 hrs
1141202	IT Fundamentals	3	
1031333	Statistics (Business)	3	

(b)University Elective Courses (9 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1151500	The Art of Written Expression (Arabic)	3	-
1201150	Legal Culture	3	-
1121400	Introduction to Art (English)	3	-
1071300	Introduction to Digital Photography	3	-
1091100	Introduction to Aesthetics (English)	3	-
1091200	French Language	3	-
1021500	Introduction to Hadeeth and Sunna	3	-
1191700	Academic Writing (English)	3	-
1191500	The Art of Public Speaking (English)	3	-
1161200	Astronomy	3	-
1081200	Physics	3	-
1031200	Environmental Science (English)	3	-
1031300	Research Methodology (English)	3	-
1151100	History of Science in Islam	3	-
1151200	Scientific Pioneering	3	-
1171100	General Chemistry	3	-
1171200	Fundamental of Human Nutrition	3	-
1171300	First Aid	3	-
1181200	General Biology	3	-
1191100	English Communication Skills	3	-
1151300	General Psychology	3	-
1191600	Communication between Cultures	3	-
1071100	Critical Thinking (English)	3	-
1151600	Emirates Society (English)	3	-
1131400	Library Information System	3	-

(B) COLLEGE REQUIREMENTS (66 Credit Hours)

1. a. College Compulsory Courses (54 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Statistics for Business	0102211	103110	3
2	Business Research Method	0400307	102211 & 400291	3
3	Principles of Accounting I	0400292	-	3
4	Principles of Accounting II	0400394	400292	3
5	Introduction to Management	0400291	-	3
6	Fundamentals of Finance	0400396	400292	3
7	Microeconomics	0400393	-	3
8	Business Communication	0400408	400291	3
9	Principles of Marketing	0400395	400291	3
10	Business Law	0400411	400291	3
11	Management Information Systems	0400615	400291 & 306460	3
12	Organizational Behavior	0400409	400291	3
13	Macroeconomics	0400410	400393	3
14	Data Base Management Systems	0306460	104110	3
15	Quantitative Analysis	0400513	102211 & 110140	3
16	Supervised Training	0400516	After 96 credit hours	3
17	IT in Business	0310202	104110	3
18	Math for Management	0110140	-	3

College Requirements: Elective Courses (12 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Business Ethics	400419	400291	3
2	Economic Development of GCC	400512	400410	3
3	Managerial Economics	400522	400393	3
4	Public Relations	400523	400408	3
5	Feasibility Studies	400524	400393 & 400396	3
6	Hospitality & Tourism	400525	400395	3
7	Social Media	400526	400395	3
8	Enterprise Resources Management	400527	400291& 400292	3
9	Business English	400528		3

(C) MAJOR REQUIREMENTS (36 Credit Hours)

Major Obligatory Courses (33 Cr. Hrs.)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Intermediate Accounting I	0420401	400394	3
2	Intermediate Accounting II	0420501	420401	3
3	Cost Accounting	0420603	420401	3
4	Managerial Accounting	0420502	400394	3
5	Advanced Accounting	0420604	420501	3
6	Auditing	0420602	420501	3
7	Accounting Theory	0420707	420604	3
8	Computerized Acct. Inf. Sys.	0420810	420401	3
9	Governmental Accounting	0420705	420401	3
10	Financial Management & Control	0420802	420604 & 420502	3
11	Graduation Project / Accounting	0420811	102 Cr. Hrs.	3

Major Elective Courses (3 Cr. Hrs.)

No.	Course Title	Course Code	Prerequisites	Credit Hours
1	Advanced Auditing	0420706	420602 & 420810	3
2	Taxation Accounting	0420716	420401	3
3	Contemporary Issues in Accounting	0420809	420707	3
4	Oil & Gas Accounting	0420714	420401	3
5	International Accounting	0420612	420707	3
6	Islamic Accounting	0420613	420401	3

ii. Proposed Sequence of Study

1. Semester 1

Course No.	Course Name	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
101000	Orientation	1	0	0	0	-
1021100 1021101 1021300 1021301	Islamic Culture (Arabs), Islamic Culture (Non Arabs) Islamic Civilization (Arabic) Islamic Civilization (English) (Only for 20161 onwards)	3	0	0	3	-
1021400 1021401 1021402	Communication Skills in Arabic Language (Arabs) Communication Skills in Arabic Language (Non Arabs) Communication Skills in Arabic Language-E	2	2	0	3	-
400291	Introduction to Management	3	0	0	3	-
xxxxxxx	University Elective Course 1	3	0	0	3	-
Total		15	2	1	15	

2. Semester 2

Course No.	Course Name	Contact & Credit Hrs				Prerequisite
		Lec.	Lab	Tut	Cr. Hrs.	
104110	Computer Applications	2	2	0	3	-
1141300	Innovation and Entrepreneurship	3	0	0	3	-
102211	Statistics for Business	3	0	0	3	103110
xxxxxxx	University Elective Course 2	3	0	0	3	-

Total	14	2	0	15	

3. Semester 3

Course No	Course Name	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
311102	PC Applications/ Management	2	2	0	3	104110
400393	Microeconomics	3	0	0	3	-
400394	Principles of Accounting II	3	0	0	3	400292
400395	Principles of Marketing	3	0	0	3	400291
400396	Fundamentals of Finance	3	0	0	3	400291
xxxxxxx	University Elective Course 3	3	0	0	3	-
Total		17	2	0	18	

4. Semester 4

Course No	Course Name	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
110140	Mathematics for Management	3	0	2	3	-
310202	IT in Business	2	2	0	3	311102
420401	Intermediate Accounting I	3	0	0	3	400394
400410	Macroeconomics	3	0	0	3	400393
400411	Business Law	3	0	0	3	-
xxxxxxx	College Elective Course 1	3	0	0	3	-
Total		17	2	2	18	

5. Semester 5

Course No	Course Name	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
306460	Data Base Management Systems	2	2	0	3	400394
400408	Business Communications	3	0	0	3	400291
420501	Intermediate Accounting II	3	0	0	3	420401
400513	Quantitative Analysis	3	0	0	3	102211, 110140
420603	Cost Accounting	3	0	0	3	400394
xxxxxxx	College Elective Course 2	3	0	0	3	-
Total		17	2	0	18	

6. Semester 6

	Course Name	Contact & Credit Hrs	Prerequisite

Course No		Lec	Lab	Tut	Cr. Hrs.	
400409	Organizational Behavior	3	0	0	3	400291
400502	Management Information Systems	3	0	0	3	400291, 306460
420502	Managerial Accounting	3	0	0	3	420603
420602	Auditing	3	0	0	3	420401
420705	Governmental Accounting	3	0	0	3	420401
xxxxxxx	College Elective Course 1	3	0	0	3	-
Total		18	0	0	18	

7. Semester 7

Course No	Course Name	Contact & Credit Hrs				Prerequisite
		Lec.	Lab	Tut	Cr. Hrs.	
400516	Supervised Training	-	-	-	3	96 Cr. Hrs.
420604	Advanced Accounting	3	0	0	3	420501
420706	Advanced Auditing	3	0	0	3	420602
xxxxxx	Major Elective Course 1	3	0	0	3	-
Total		9	0	0	12	

8. Semester 8

Course No	Course Name	Contact & Credit Hrs				Prerequisite
		Lec.	Lab	Tut	Cr. Hrs.	
420707	Accounting Theory	3	0	0	3	420604
420802	Financial Management & Control	3	0	0	3	420604, 420502
420810	Computerized Accounting Info. Systems	2	2	0	3	420401, 311102
420811	Graduation Project	3	0	0	3	102 Cr. Hrs.
Total		11	2	0	12	

DEPARTMENT OF MARKETING

According to statistics obtained from labor market research from around the world the field of marketing is expected to grow by more than 40 percent from 2010 to 2020. Employment growth will be managed by consistent use of data and market research across all industries in order to understand the needs and wants of customers and to measure the effectiveness of marketing and business strategies. The BSc Marketing degree program offered at AU provides education of international standard and caters to the needs of all the employment sectors locally, regionally and globally. The program provides students with a wide range of knowledge in the various functional areas of business, as well as prepares them with comprehensive knowledge of successful management of the marketing mix. This major not only produces capable individuals who can address the challenging issues of businesses and the dynamic market but it also equips students with the academic credentials required to pursue higher education in national and international universities.

Bachelor of Science in Marketing

Mission

The mission of the marketing degree program is derived mainly from the philosophy and vision of AU. Hence, the program's mission is in line with the mission and objectives of the College of Business Administration. The focus of this mission is to impart high quality education that will develop the skills and knowledge of students in areas that will enable them to perform efficiently and effectively in their careers. Accordingly, both the structure of the course and the curricula are designed to achieve these ends.

Goals:

1. To develop knowledge and understanding of general business foundation concepts.
2. Enable students to apply quantitative, qualitative analysis and decision making techniques.
3. To build an understanding of marketing foundation concepts.
4. To develop an understanding of marketing issues and problems related to the global marketplace.
5. To enable students to conduct and interpret marketing research.
6. To develop an understanding of consumer behavior concept.
7. Develop and apply strategic marketing plans incorporating ethical and legal issues related to the domestic and international market. objectives

Learning outcomes:

Knowledge

Upon successful completion of B.Sc in Marketing, graduates will be able to :

1. Acquire in in-depth understanding of business foundations and business environment, theoretical as well as conceptual.
2. Acquire an in-depth understanding of the principle concept of Marketing.
3. Identify the critical change in organizational approach towards consumer and marketing as just a function or a philosophy upon which the entire organization should based.
4. Analyze the macro and micro environmental issues related to marketing through research and use
5. Make ethical and professional judgment in business and marketing particularly

Skills

1. Demonstrate in significant depth, knowledge and understanding of theoretical and conceptual framework of business foundation.

2. Demonstrate knowledge and skills in identifying customer needs through market research, developing new products and services based on marketing strategy formulation, and promoting and distributing products and services with relevance in domestic and international settings.

3. Demonstrate professional ability to collaborate and to communicate foundation concepts in personal, group and mass communication contexts.

Competence

Autonomy and Responsibility

1. Show ability to construct solution and decision making involving 4 P's of marketing.
2. Illustrate adherence to social marketing concepts in designing and developing marketing solutions in and individual capacity and in group as well.

Role in Context

3. Demonstrate professional ability to collaborate and to communicate foundation concepts in personal, group and mass communication contexts.

Self – development

4. Engage in learning activities that has direct impact on knowledge and skills which improves analytical skills and ability to face criticism and challenges in the field of marketing.

5. Improves listening skills and need analysis through observation.

	At the completion of BSc Marketing program, Students will be able to :
Knowledge	
K1	Acquire in in-depth understanding of business foundations and business environment, theoretical as well as conceptual.
K2	Acquire an in-depth understanding of the principle concept of Marketing.
K3	Identify the critical change in organizational approach towards consumer and marketing as just a function or a philosophy upon which the entire organization should based.
K4	Analyze the macro and micro environmental issues related to marketing through research and use
K5	Make ethical and professional judgment in business and marketing particularly
Skills	
S1	Demonstrate in significant depth, knowledge and understanding of theoretical and conceptual framework of business foundation
S2	Demonstrate knowledge and skills in identifying customer needs through market research, developing new products and services based on marketing strategy formulation, and promoting and distributing products and services with relevance in domestic and international settings
S3	1. Demonstrate professional ability to collaborate and to communicate foundation concepts in personal, group and mass communication contexts.
Competencies	
Autonomy & Responsibility	
CA1	Show ability to construct solution and decision making involving 4 P's of marketing.
CA2	Illustrate adherence to social marketing concepts in designing and developing marketing solutions in and individual capacity and in group as well.
Role in Context	
CR1	Demonstrate professional ability to collaborate and to communicate foundation concepts in personal, group and mass communication contexts.
Self Development	
CS1	Engage in learning activities that has direct impact on knowledge and skills which improves analytical skills and ability to face criticism and challenges in the field of marketing.

CS2	Improves listening skills and need analysis through observation.

Admission Requirements

The normal entry requirement is the UAE Secondary School Certificate, or an equivalent qualification, with a minimum average grade of 60 percent, & TOEFL certificate with a minimum score of 500.

Career Opportunities

Graduates of the BSc in Marketing degree program are equipped for employment in marketing departments in the following sectors: government, multinational subsidiaries, national companies (especially those operating in distribution), manufacturing, advertising marketing research and social media. In addition, there are employment opportunities in the banking and hospitality sectors, the travel industry, insurance companies, advertising agencies, the media and other organizations that have marketing departments.

Graduation Requirements

Students will be awarded the Bachelor of Science in Marketing degree upon fulfillment of the following requirements:

- Successful completion of 126 credit hours, which normally takes eight semesters
- 8 weeks of industrial internship (after the completion of 96 credit hours including seven marketing core courses), which is equivalent to three credit hours
- A minimum Cumulative Grade Point Average of 2.0

Degree Requirements

The BSc degree in Marketing requires the completion of 126 credit hours distributed according to the following plan:

Type of Courses	Credit Hours
1**. University General Education Requirements**	**24**
(a) University Required Courses	15
(b) University Elective Courses	9
2**. College Requirements**	**66**
(a) College Required Courses	54
(b) College Elective Courses	12
3**. Major Requirements**	**36**
(a) Major Required Courses	30
(b) Major Electives Courses	6
Total Credit Hours	**126**

(A) UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(i) University Compulsory Courses (15 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1010000	Orientation	0	-
1021400	Communication Skills in Arabic Language (For Arabs)	3	-
1021401	Communication Skills in Arabic Language (For Non Arabs)	3	-
1021402	Communication Skills in Arabic- E	3	
1021300	Islamic Civilization (Arabic)	3	
1021301	Islamic Civilization (English)	3	
1021100	Islamic Culture (For Arabs)	3	-
1021101	Islamic Culture (For Non Arabs)	3	
1141300	Innovation and Entrepreneurship	3	60 hrs
1141202	IT Fundamentals	3	
1031333	Statistics (Business)	3	

(ii)University Elective Courses (9 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1151500	The Art of Written Expression (Arabic)	3	-
1201150	Legal Culture	3	-
1121400	Introduction to Art (English)	3	-
1071300	Introduction to Digital Photography	3	-
1091100	Introduction to Aesthetics (English)	3	-
1091200	French Language	3	-
1021500	Introduction to Hadeeth and Sunna	3	-
1191700	Academic Writing (English)	3	-
1191500	The Art of Public Speaking (English)	3	-
1161200	Astronomy	3	-
1081200	Physics	3	-
1031200	Environmental Science (English)	3	-
1031300	Research Methodology (English)	3	-
1151100	History of Science in Islam	3	-
1151200	Scientific Pioneering	3	-

1171100	General Chemistry	3	-
1171200	Fundamental of Human Nutrition	3	-
1171300	First Aid	3	-
1181200	General Biology	3	-
1191100	English Communication Skills	3	-
1151300	General Psychology	3	-
1191600	Communication between Cultures	3	-
1071100	Critical Thinking (English)	3	-
1151600	Emirates Society (English)	3	-
1131400	Library Information System	3	-

(B) COLLEGE REQUIREMENTS (66 Credit Hours)

(i). College Required Courses (54 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Statistics for Business	0102211	103110	3
2	Business Research Method	0400307	102211 & 400291	3
3	Principles of Accounting I	0400292	-	3
4	Principles of Accounting II	0400394	400292	3
5	Introduction to Management	0400291	-	3
6	Fundamentals of Finance	0400396	400292	3
7	Microeconomics	0400393	-	3
8	Business Communication	0400408	400291	3
9	Principles of Marketing	0400395	400291	3
10	Business Law	0400411	400291	3
11	Management Information Systems	0400615	400291 & 306460	3
12	Organizational Behavior	0400409	400291	3
13	Macroeconomics	0400410	400393	3
14	Data Base Management Systems	0306460	104110	3
15	Quantitative Analysis	0400513	102211 & 110140	3
16	Supervised Training	0400516	After 96 credit hours	3
17	IT in Business	0310202	104110	3
18	Math for Management	0110140	-	3

(ii). College Elective Courses (12 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Business Ethics	400419	400291	3
2	Economic Development of GCC	400512	400410	3
3	Managerial Economics	400522	400393	3
4	Public Relations	400523	400408	3
5	Feasibility Studies	400524	400393 & 400396	3
6	Hospitality & Tourism	400525	400395	3
7	Social Media	400526	400395	3
8	Enterprise Resources Management	400527	400291& 400292	3
9	Business English	4005280	None	3

(C)MAJOR REQUIREMENTS (36 Credit Hours)

Major Required Courses (30 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1.	Marketing Research	0430501	0102211,400395	3
2.	Consumer Behavior	0430602	400395	3
3.	Advertising and Promotion	0430603	430602	3
4.	Personal Selling	0430606	400395,400408	3
5.	Product and Brand Management	0430613	400395	3
6.	Business to Business Marketing	0430706	400395	3
7.	Service Marketing	0430707	400395	3
8.	International Marketing	0430808	400395	3
9.	Marketing Management	0430809	430602,430501	3
10.	Graduation Project/Marketing	0430811	Completion of 102 credit hrs.	3

Major Elective Courses (6 Credit Hours)

	No.	Course Title	Course Code	Prerequisites	Credit Hours

	1	Marketing Channels	0430604	400395	3
	2	E-Marketing	0430612	400395	3
	3	Purchasing and Material Management	0410704	400291,400395	3
	4	Retail Marketing	0430714	400395	3
	5	Selected Topics in Marketing	0430715	400395	3
	6	Computer Application in Marketing	0430810	400291	3

Proposed Sequence of Study

Semester 1

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
101000	Orientation	1	0	0	0	-
1021100 1021101 1021300 1021301	Islamic Culture (Arabs), Islamic Culture (Non Arabs) Islamic Civilization (Arabic) Islamic Civilization (English) (Only for 20161 onwards)	3	0	0	3	-
1021400 1021401 1021402	Communication Skills in Arabic Language (Arabs) Communication Skills in Arabic Language (Non Arabs) Communication Skills in Arabic Language-E	2	2	0	3	-
400291	Introduction to Management	3	0	0	3	-
xxxxxxx	University Elective Course 1	3	0	0	3	-
Total		15	2	1	15	

Semester 2

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
104110	Computer Applications	2	2	0	3	-
1101140	Mathematics for Management	3	0	2	3	-
1141300	Innovation and Entrepreneurship	3	0	0	3	-
400292	Principles of Accounting I	3	0	0	3	-
102211	Statistics for Business	3	0	0	3	103110
Total		17	2	2	18	

Semester 3

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	

400393	Microeconomics	3	0	0	3	-
400394	Principles of Accounting II	3	0	0	3	400292
400395	Principles of Marketing	3	0	0	3	400291
400396	Fundamentals of Finance	3	0	0	3	400291
xxxxxxx	University Elective Course 2	3	0	0	3	-
Total		17	2	0	15	

Semester 4

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
310202	IT in Business	2	2	0	3	311102
400408	Business Communications	3	0	0	3	400291
400410	Macroeconomics	3	0	0	3	400393
400411	Business Law	3	0	0	3	-
420602	Consumer Behavior	3	0	0	3	400395
xxxxxxx	College Elective Course 1	3	0	0	3	-
Total		17	2	0	18	

Semester 5

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
306460	Data Base Management Systems	2	2	0	3	3111102
400513	Quantitative Analysis	3	0	0	3	102211, 110140
403603	Advertising and Promotion	3	0	0	3	430602
430606	Personal Selling	3	0	0	3	400395, 400408
xxxxxxx	University Elective Course 3	3	0	0	3	-
xxxxxxx	College Elective course 2	3	0	0	3	-
Total		17	2	0	18	

Semester 6

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
400409	Organizational Behavior	3	0	0	3	400291
430501	Marketing Research	3	0	0	3	102211, 103130
430706	Business-to-Business Marketing	3	0	0	3	400395
430707	Service Marketing	3	0	0	3	400395
xxxxxxx	College Elective Course 3	3	0	0	3	-
Total		15	0	0	15	

Semester 7

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
400516	Supervised Training	-	-	-	3	96 cr. hrs
430613	Product and Brand Management	3	0	0	3	400395
400615	Management Information Systems	3	0	0	3	400291, 306460
430808	International Marketing	3	0	0	3	400395
xxxxxxx	Major Elective Course 1	3	0	0	3	-
Total		9	0	0	15	

Semester 8

Course No	Course Title	Contact & Credit Hrs				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
430809	Marketing Management	3	0	0	3	430602/430501
430810	Computer Applications in Marketing	2	2	0	3	430809
xxxxxxx	Major Elective Course 2	3	0	0	3	
420811	Graduation Project/Marketing	3	0	0	3	Completion:102 Cr. Hrs
Total		11	2	0	12	

DEPARTMENT OF FINANCE

The BSc in Finance degree program is designed to develop students' technical and critical thinking and to provide them with an in-depth understanding of financial theory, analytical financial instruments, and dynamics of financial markets. This major aims at simultaneously imparting all-inclusive functional area knowledge of business firms, for example, management, marketing, accounting and finance. The program prepares students for careers in finance in public, private, as well as non-profit organizations.

Bachelor of Science in Finance

Mission

The mission of the finance degree program is to provide an educational experience that develops the student's financial, technical, and critical thinking, communication skills, the ability to integrate both quantitative and qualitative factors into business and finance decisions, and to create and disseminate knowledge concerning value management in each of these fields.

Goals

The goals of the program are to:

1. Gain deeper insights into the principles and functions of finance.
2. Build strands of knowledge related to modern finance for solving business and finance problems.
3. Enhance the ability to design financial strategies for improving organizational performance.
4. Develop a sound understanding of the dynamic international business environment and its impact on financial strategies.
5. Develop the ability to make ethical and professional decisions related to financial management.
6. Integrate theory of finance into business dynamics of the Middle East.

Learning Outcomes:

Knowledge

Upon successful completion of the B.SC in Finance, graduates will be able to:

1. Acquire an in depth understanding of the principles of finance.

2. Integrate knowledge of the various areas of finance to solve business and financial problems.

3. Analyze contemporary and pedagogical issues in finance.

4. Write financial reports and consolidate financial information.

5. Use appropriate computational and statistical techniques to investment valuation, portfolio management, and derivatives.

6. Make ethical and professional judgment in all areas of finance.

Skills

1. Effective decision-making process by using computational techniques.
2. An analytical and logical approach to problem solving in particular in the areas of investment, corporate finance, risk and insurance, and portfolio management.
3. Proficiency in oral and written communication skills needed by the finance industry.
4. Use financial tools to evaluate the stochastic behavior of the financial markets.
5. Practice ethical and professional responsibilities.

Competence (Autonomy and Responsibility)

4. Conduct research projects independently or in a group.
5. Taking responsibility for writing their graduation projects according to the guidelines that are stipulated by the College of Business Administration.
6. Independent oral presentation of their graduation projects.

Self-development

3. Engage in a life-long learning cycle and respond in a positive and responsible manner to criticism.
4. Enroll in an approved training course at the conclusion of their senior year.

Role in Context

3. Demonstrate Professionalism and respect for their fellow students and faculty members.
4. Moral and ethical obligations for their conducts.

At the conclusion of the B.SC in Finance program, students will be able to

Knowledge	
K1	Acquire an in depth understanding of the principles of finance.
K 2	Integrate knowledge of the various areas of finance to solve business and financial problems.
K 3	Use appropriate computational and statistical techniques to investment valuation, portfolio management, and derivatives.
K4	Write financial reports and consolidate financial information.
K5	Analyze contemporary and pedagogical issues in finance.
K6	Make ethical and professional judgment in all areas of finance.
Skills	
S1	Effective decision-making process by using computational techniques.
S2	Analytical and logical approach to problem solving in particular in the areas of investment, corporate finance, risk and insurance, and portfolio management.
S3	Proficiency in oral and written communication.
S4	Practice ethical and professional standards.
S5	Use financial tools to evaluate the stochastic behavior of the financial markets.
Competencies	
Autonomy and Responsibility	
CA1	Conduct research projects independently.

CA2	Independent oral presentation of their projects.
CA3	Taking responsibility for writing their research reports.
Role in Context	
CR1	Demonstrate Professionalism and respect their fellow students and faculty members.
CR2	Moral and ethical obligations for their conducts.
Self-development	
CS1	Engage in a life-long learning cycle and respond in a positive and responsible manner to criticism.
CS2	Enroll in an approved training course at the conclusion of their senior year.

Admission Requirements

The normal entry requirement for an applicant is the Secondary School Certificate, or an equivalent qualification, with a minimum average grade of 60 percent, & TOEFL certificate with a minimum score of 500.

Career Opportunities

The degree in finance adequately qualifies graduates for various corporate, financial, and management positions in areas such as Financial Analysis, Capital Budgeting, Cash and Risk Management, Portfolio Management, and Bank Management. It also prepares entrepreneurs operating their own business.

Graduation Requirements

Students will be awarded the Bachelor of Science in Finance degree upon fulfillment of the following requirements:

- Successful completion of 126 credit hours, which normally takes eight semesters.
- 8weeks of industrial internship (after the completion of 96 credit hours including seven finance core courses).
- A minimum Cumulative Grade Point Average of 2.0

Degree Requirements

The BSc degree in Finance requires the completion of 126 credit hours distributed according to the following plan:

Type of Courses	Credit Hours
1. University General Education Requirements	**24**
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Requirements	**66**
(a) College Required Courses	54
(b) College Elective Courses	12
3. Major Requirements	**36**

(a) Major Required Courses	30
(b) Major Electives Courses	6
Total Credit Hours	126

(A)UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(i) University Compulsory Courses (15 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1010000	Orientation	0	-
1021400	Communication Skills in Arabic Language (For Arabs)	3	-
1021401	Communication Skills in Arabic Language (For Non Arabs)	3	-
1021402	Communication Skills in Arabic- E	3	
1021300	Islamic Civilization (Arabic)	3	
1021301	Islamic Civilization (English)	3	
1021100	Islamic Culture (For Arabs)	3	-
1021101	Islamic Culture (For Non Arabs)	3	
1141300	Innovation and Entrepreneurship	3	60 hrs
1141202	IT Fundamentals	3	
1031333	Statistics (Business)	3	

(ii)University Elective Courses (9 Credit Hours)

Course No.	Course Title	Cr. Hrs.	Prerequisite
1151500	The Art of Written Expression (Arabic)	3	-
1201150	Legal Culture	3	-
1121400	Introduction to Art (English)	3	-
1071300	Introduction to Digital Photography	3	-
1091100	Introduction to Aesthetics (English)	3	-
1091200	French Language	3	-
1021500	Introduction to Hadeeth and Sunna	3	-
1191700	Academic Writing (English)	3	-
1191500	The Art of Public Speaking (English)	3	-
1161200	Astronomy	3	-
1081200	Physics	3	-
1031200	Environmental Science (English)	3	-
1031300	Research Methodology (English)	3	-
1151100	History of Science in Islam	3	-

1151200	Scientific Pioneering	3	-
1171100	General Chemistry	3	-
1171200	Fundamental of Human Nutrition	3	-
1171300	First Aid	3	-
1181200	General Biology	3	-
1191100	English Communication Skills	3	-
1151300	General Psychology	3	-
1191600	Communication between Cultures	3	-
1071100	Critical Thinking (English)	3	-
1151600	Emirates Society (English)	3	-
1131400	Library Information System	3	-

(B) COLLEGE REQUIREMENTS (66 Credit Hours)

a. College Required Courses (54 Credit Hours)

Obligatory Courses (54 Credit Hours)

	Course Title	Course Code	Prerequisites	Credit Hours
1	Statistics for Business	0102211	103110	3
2	Business Research Method	0400307	102211 & 400291	3
3	Principles of Accounting I	0400292	-	3
4	Principles of Accounting II	0400394	400292	3
5	Introduction to Management	0400291	-	3
6	Fundamentals of Finance	0400396	400292	3
7	Microeconomics	0400393	-	3
8	Business Communication	0400408	400291	3
9	Principles of Marketing	0400395	400291	3
10	Business Law	0400411	400291	3
11	Management Information Systems	0400615	400291 & 306460	3
12	Organizational Behavior	0400409	400291	3
13	Macroeconomics	0400410	400393	3
14	Data Base Management Systems	0306460	104110	3
15	Quantitative Analysis	0400513	102211 & 110140	3
16	Supervised Training	0400516	After 96 credit hours	3
17	IT in Business	0310202	104110	3
18	Math for Management	0110140	-	3

(ii). *College Elective Courses (12 Credit Hours)*

	Course Title	Course Code	Prerequisites	Credit Hours
1	Business Ethics	400419	400291	3
2	Economic Development of GCC	400512	400410	3
3	Managerial Economics	400522	400393	3
4	Public Relations	400523	400408	3
5	Feasibility Studies	400524	400393 & 400396	3
6	Hospitality & Tourism	400525	400395	3
7	Social Media	400526	400395	3
8	Enterprise Resources Management	400527	400291& 400292	3
9	Business English	400528		3

(C) MAJOR REQUIREMENTS (36 Credit Hours)

Major Obligatory Courses (30 Cr. Hrs.)

	Course Title	Course Code	Prerequisites	Credit Hours
1.	Corporate Finance	0440501	400396	3
2.	Money and Financial System	0440520	400410	3
3.	Financial Risk & Insurance	0440602	440501	3
4.	Financial Planning and Control	0440603	440501	3
5.	Commercial Banking	0440604	440520	3
6.	Portfolio Management and Theory	0440611	440705	3
7.	Financial Markets	0440705	400396 & 440604	3
8.	International Finance	0440707	440501	3
9.	Investments	0440809	440602	3
10.	Graduation Project/Finance	0440811	102 Credit Hours	3

Major Elective Courses (6 Cr. Hrs.)

No.	Course Title	Course Code	Prerequisites	Credit Hours
1	Intermediate Accounting I	0420401	400394	3
2	Personal Finance	0440612	400396	3
3	Islamic Banking	0440715	440604	3
4	Selected Topics in Finance	0440808	400396	3
5	Computer Application in Finance	0440810	400396 & 104110	3

Four-Year Study Plan for Bachelor of Science in Finance

PROPOSED SEQUENCE OF COURSES

Semester 1

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
1021100 1021101 1021300 1021301	Islamic Culture (Arabs), Islamic Culture (Non Arabs) Islamic Civilization (Arabic) Islamic Civilization (English) (Only for 20161 onwards)	3	2	2	-	-
1021400 1021401 1021402	Communication Skills in Arabic Language (Arabs) Communication Skills in Arabic Language (Non Arabs) Communication Skills in Arabic Language-E	3	3	0	-	-
103 110	Statistics	3	2	2	-	-
1141300	Innovation and Entrepreneurship	3	0	0	3	-
101 000	Orientation/Academic Advising	0	1	0	-	-

Semester 2

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
400 291	Introduction to Management	3	3	0	-	-
400 292	Principles of Accounting I	3	3	0	-	-
400393	Microeconomics	3	3	0	-	-
102 211	Statistics for Business	3	3	0	103 110	-
104 110	Computer Applications	3	2	2	-	-

Semester 3

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
400 394	Principles of Accounting II	3	3	0	400 292	-
400307	Business Research Methods	3	0	4	102211	400291
400 396	Fundamentals of Finance	3	3	0	400 292	-
400 395	Principles of Marketing	3	3	0	400 291	-
	University Elective – 2	0	3	0	-	-
400 410	Macroeconomics	3	3	0	400393	-

Semester 4

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
310 202	IT in Business	3	2	2	311 102	-
440 501	Corporate Finance	3	3	0	400 394	-
400 409	Organizational Behavior	3	3	0	400 291	-
440520	Money and Financial System	3	3	0	400 410	-
400 411	Business Law	3	3	0	400 291	-
110 140	Math For Management	3	3	2	-	-

Semester 5

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
306 460	Database Management	3	3	0	311 102	-
400 513	Quantitative Analysis	3	3	0	102 211	110 140
440 604	Commercial Banking	3	2	2	440520	
440 603	Financial Planning and Control	3	3	0	440501	
400 408	Business Communication	3	3	0	400 291	
-	College Elective – 1	3	3	0	-	-

Semester 6

Course #	Course Name	Cr.Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
440 707	International Finance	3	3	0	440 501	
	College Elective – 2	3	3	0	-	-
	University Elective – 3	3	3	0	-	-

440 602	Financial Risk & Insurance	3	3	0	440 501	-
400 615	Management Information Systems	3	3	0	400 291	306 460
	Department Elective – 1	3	3	0	-	-

Semester 7

Course #	Course Name	Cr.Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
440 809	Investments	3	3	0	440 602	-
440 705	Financial Markets	3	3	0	400396	440 604
400 516	Supervised Training	3	3	0	-	96 Hours incl.7 Finance courses
	College Elective - 3					

Semester 8

Course #	Course Name	Cr. Hrs.	Lectures	Tut/ Lab	Pre-req.1	Pre-req. 2
	Department Elective - 2	3	3	0	-	-
440 611	Portfolio Management and Theory	3	3	0	440 705	-
	College Elective – 4	3	3	0	-	-
420 811	Graduation Project/Finance	3	3	0	-	Earning 102 Credit Hours

Students are allowed to register a maximum of one elective course outside the proposed list after the approval of the Department Head.

Course Descriptions

Courses offered by the Management Department

400 291 Introduction to Management (3,0,0,3)

This introductory course provides an overview of the field of management. The topics covered are designed around the key functions of management: planning, organizing, leading, and controlling. Students are exposed to the development of management theories and approaches, managerial decision-making, business environment, business ethics and social responsibility.

400 307 Business Research Methods (3,0,0,3)

This course provides an introduction to research methods in social sciences in general and business administration in particular. The primary aim of the course is to equip students with the essential research techniques they would use in advanced specialized courses such as marketing research, feasibility studies and project planning, and the graduation project. The course will cover a range of topics including, in particular, research designs, sampling theory, data collection tools, questionnaire development and program evaluation methodology. The course will also cover basic data analysis methods involving both exploratory and hypothesis testing statistical techniques.

PRE-REQUISITES: 102 211, 400 291

400 408 Business Communications (3,0,0,3)

The course aims to equip students with effective business communication skills, providing thorough practice in writing business letters, memos, reports, resumes and job applications. In addition to developing written communication, the course teaches verbal communication skills, for example public speaking, interviewing and other forms of communication. The entire teaching process is focused on building effective communication skills.

PRE-REQUISITE: 400 291

400 409 Organizational Behavior (3,0,0,3)

This course surveys the background and development of organizational behavior, and examines major conceptual models in the field. A number of topics are explored in detail, including personality, perception, motivation, groups and teams, communication, leadership, conflict and negotiation, and organizational sources of stress and coping strategies. Issues relating to organizational change and development are given special attention.

PRE-REQUISITE: 400 291

400 411 Business Law (3,0,0,3)

The aim of this course is to review basic legal principles and sources of contract law, background of law and legal theory. The following topics are covered in detail: formation of contracts, modifications, terminations, remedies, award law, pricing, patent, business organizations, company law, sales of goods, transfer of ownership rights, employment and health and safety laws.

PRE-REQUISITE: 400 291

400 615 Management Information Systems (3,0,0,3)

This course provides an overview of computers and information processing. It covers the following topics in detail: management information system concepts, information processing applications, data handling process, data processing and automation, fundamentals of any system and system design, and development and implementation.

PRE-REQUISITES: 400 291, 306460

400 419 Business Ethics (3,0,0,3)

The aim of this course is to provide comprehensive and systematic coverage of a wide range of ethical issues in all functional areas of business. Using cases, vignettes and discussion points, the course will examine the ethical problems involved in real-life business situations. Some of the major topics to be covered include: ethical theory and business practice, corporate social responsibility, rights and obligations of employees and employers, ethical issues in international business, and social and economic justice.

PRE-REQUISITE: 400 291

400 524 Feasibility Studies (3,0,0,3)

Feasibility studies and project evaluation have become increasingly important, since they signal the success of any industrial, tourism or investment project. This course is designed to introduce students to the concepts and process of feasibility studies and project evaluation. It explains how to prepare feasibility studies and project evaluation, and how to benefit from them in the investment decision-making process. Feasibility studies and project evaluation depend on collecting and analyzing marketing, technical, administrative and financial data and information.

PRE-REQUISITES: 400 393, 400 396

410 501 Production and Operations Management (3,0,0,3)

This course is designed to cover the principles of production and operations management as they relate to both manufacturing and service operations. The course will examine the following topics: decision-making process, forecasting, operations strategy, production planning, scheduling, productivity, quality control, and future trends in production and operations management.

PRE-REQUISITES: 103 110, 400 291

410 602 Human Resource Management (3,0,0,3)

The aim of this course is to survey the principles and practices in managing human resources. The course covers a number of basic topics, for example job analysis and job design techniques, human resource policies, human resource acquisition and maintenance strategies, recruitment, selection, development and training, compensation, health and safety issues and policies. The topics of labor relations and collective bargaining also receive careful attention.

PRE-REQUISITE: 400 291

410 603 International Business (3,0,0,3)

This course covers a number of topics of both a general and specific nature. It examines the objectives and motives of international companies (MNCs) for operating internationally, and the strategies they use to achieve global presence. Special attention is given to the following topics: theories of international trade, domestic trade, free trade and protectionism, tariffs, foreign exchange, foreign direct investments (FDI), international financial institutions, international corporate planning and competitive strategies.

PRE-REQUISITES: 400 291, 400 410

410 704 Purchasing and Materials Management (3,0,0,3)

This course offers a survey of the principles and techniques used in purchasing and materials management. It examines the following topics: recognition of materials needs, the acquisition process and the overall supply management issues and policies. Within these broader topics, the course looks at techniques used in materials requirement planning, stock and inventory control, transportation, stores management, quality and quality assurance, JIT and TQM. The course also examines the purchasing and supply management processes and methods used by governments, non-profit and service organizations.

PRE-REQUISITE: 410 501

410 706 Strategic Management (3,0,0,3)

This advanced course focuses on all aspects of the strategic management process, including decision-making, company objectives, strategies, implementation and outcome assessment. The course develops a thorough understanding among students of policy formulation and evaluation with special attention to the capabilities and competencies of a firm. The course also addresses issues relating to resource analysis and allocation techniques, and the management of strategic change.

PRE-REQUISITES: 400 291,400 409

410 808 Organizational Theory and Design (3,0,0,3)

The primary aim of this course is to expose students to the evolution of organization theory, and the contribution of different schools of thought to the development of classical and contemporary theoretical perspectives. The topics of bureaucracy, power and politics, organizational structures and technology, and emerging design options will be extensively examined. The course also looks at the issues of information and control, organizational renewal and learning, techno-structural change and adaptive capacity of organizations. Case studies and actual examples from a range of firms will be used to investigate the application of organization theory to management issues.

PRE-REQUISITE: 400 409

410 909 Selected Topics in Management (3,0,0,3)

This is an advanced course in management. Its primary aim is to offer a more thorough examination of selected topics. The course instructor will select topics keeping in view students' interests and the availability of teaching material and resources. In general, an attempt will be made to include topics that have received little attention in other management courses, or topics in new areas that are not covered in the prescribed syllabus. The choice of topics is expected to vary from semester to semester.

PRE-REQUISITE: 410 706

410 612 Management of Small Business (3,0,0,3)

The course is designed to answer the fundamental question that students and aspiring entrepreneurs often ask: how can I start and manage my own business? With this objective, the course discusses different types of businesses, legal organizations, accounting and financial requirements. Other topics covered in the course include: obtaining capital, controlling inventory, setting prices, staffing, marketing strategies, growth and expansion decisions and strategies.

PRE-REQUISITE: 400 291

410 712 Total Quality Management (3,0,0,3)

This course offers an introduction to principles and philosophy of Total Quality Management. It draws upon the work of experts such as Edwards Deming, Joseph Juran, Philip Crosby and Genichi Taguchi to develop an understanding of the concepts of quality from the perspectives of customers and product/service organizations. The course also evaluates the criteria used in well-known quality awards (e.g., The Malcolm Balding National Quality Award, and ISO 9000, as well as local UAE quality awards), and reviews the performance of selected quality-award winning companies.

PRE-REQUISITE: 410 501

400 513 Quantitative Analysis (2,2,0,3)

The aim of this course is to review basic quantitative methods used in business decision-making. The major focus of the course will be on decision-making under uncertainty and certainty such as linear programming. Some of the specific topics to be covered will include: problem formulation, graphic solutions and different forms of linear programming such as transportation and assignment models, queuing theory, decision analysis, inventory systems and forecasting.

PRE-REQUISITES: 102 211, 110 140

Courses Offered by the Accounting Department

400 292 Principles of Accounting I (3,0,0,3)

Accounting is something that affects people in their personal lives just as much as it affects very large businesses. Financial accounting is concerned with the provision of accounting information to owners, investors and other external users. The term accounting may refer to different activities, for example collecting, recording, processing and communicating economic data to produce useful accounting information. This course is a study of the fundamental principles and procedures of accounting as applied to sole proprietorships, partnerships and corporations.

400 394 Principles of Accounting II (3,0,0,3)

The users of accounting information need complete and comparable information to assess company profitability and financial position. The course provides details on the preparation of financial statements (balance sheet, income statement, and statement of cash flow) as well as the accounting treatment of their components

420 401 Intermediate Accounting I (3,0,0,3)

Like other human activities, accounting is largely a product of its environment. Therefore, accounting objectives are not the same today as they were in the past. To provide managers and other interested parties with useful information, they must know how this information can be generated. “Accountants must act as well as think,” therefore it is important for business administration students to understand how accounting reports are prepared, as well as why. The course places particular emphasis on valuation procedures and alternative accounting treatments of various assets and abilities.

PRE-REQUISITE: 400 394

420 501 Intermediate Accounting II (3,0,0,3)

Like other human activities, accounting is largely a product of its environment. Therefore, accounting objectives are not the same today as they were in the past. To provide managers and other interested parties with useful information, they must know how this information can be generated. “Accountants must act as

well as think," therefore it is important for business administration students to understand how accounting reports are prepared, as well as why. The course places particular emphasis on valuation procedures and alternative accounting treatments of various assets and abilities.

PRE-REQUISITE: 420 401

420 502 Managerial Accounting (3,0,0,3)

Managers in every organization are better equipped to perform their duties when they have a reasonable grasp of accounting data. Decision-making, which is "the choice of alternative courses of action" is the core of the management process, that depends ultimately on useful accounting information. This type of information will be provided through management accounting, which refers to accounting information developed for managers within an organization. The course is designed primarily for students who have studied basic accounting for two semesters. Emphasis is placed on accounting as a tool for planning and control.

PRE-REQUISITE: 420 603

420 705 Governmental Accounting (3,0,0,3)

The aim of this course is to equip the students with the theory and practice of fund accounting in government units and not-for-profit organizations. In the process, the course discusses all issues related to the preparation of financial statements of the government units and non-profit organizations.

PRE-REQUISITE: 420401

420 602 Auditing (3,0,0,3)

Auditing is interdisciplinary in its scope and methodology, encompassing accounting theory and applications, legal aspects, managerial issues, environmental factors and computer processing. In its modern sense, an audit is a process whereby the accounts of business entities and managerial performance are subjected to scrutiny to develop an opinion on fairness of financial statements and effectiveness of management. The general concern of auditing could be derived from the famous statement of Confucius: "The aim of the superior man is truth." This course is designed to introduce students to basic concepts and standards. Concentration is mainly on auditing standards, ethics, principles and procedures used by external auditors in conducting financial and managerial audit.

PRE-REQUISITE: 420 401

420 603 Cost Accounting (3,0,0,3)

The relevance of information depends on the decision being made. Decision-making is essentially choosing among several courses of action. Accountants have an important role in the decision-making process, not as decision-makers but as collectors and reporters of relevant information. The accountant's role in decision-making is primarily that of a technical expert on cost analysis, cost control and cost reduction, information that will lead to the best decision on production, marketing, profitability, performance evaluation, transfer pricing and capital budgeting. The study of the basic concepts and practical aspects of cost accounting is the primary concentration of this course.

PRE-REQUISITE: 400 394

420 604 Advanced Accounting (3,0,0,3)

In most business combinations, one company acquires control over the net assets of another. The transfer of control from one group of owners to another affects the economic interests of many people, including the owners, managers, creditors and customers. Although the single proprietorship is the most common form of business in the Arab world, and although the corporate form of organization accounts for the largest volume of business, the partnership form is widely used by smaller business entities in the Arabian Gulf region. The study of partnership and consolidated financial statements is the primary concentration of this course. Fundamentals of fair value and equity accounting methods are reviewed.

PRE-REQUISITE: 420 501

420 706 Advanced Auditing (3,0,0,3)

Many accounting students will choose a career in auditing, either in public accounting, private industry or government. These students need to acquire technical expertise and to understand the theoretical concepts underlying current auditing practice. This course is designed to acquaint the student of accounting with the advanced practical aspects of auditing procedures and techniques with reference to the method of their application in commercial, industrial and other profit making organizations, paying particular attention to assessment of risk, concept of internal control and assertions of assets and liabilities.

PRE-REQUISITE: 420 602

420 802 Financial Management and Control (3,0,0,3)

This course aims to provide with an understanding of financial statements and the analytical tools available for use in properly managing and adding value to an organization. It focuses on analysis of financial and accounting information and its impact on financial decision-making and profit planning. The course uses some basic applications of statistics in analyzing the impact on financial markets and consequently setting up standards in the field of financial planning in order to ensure the financial stability.

PRE-REQUISITES: 420 604, 420 502

420 707 Accounting Theory (3,0,0,3)

Accounting theory is concerned with the models, hypotheses and concepts that together form the foundation for financial accounting practice. This course traces the historical development of accounting to gain an understanding of how we arrived at current practices, together with the social, political and economic influences on accounting standards.

PRE-REQUISITE: 420 604

420 809 Selected Topics in Accounting (3,0,0,3)

This course is to deal with a number of topics of a controversial nature in accounting. The course deals specifically with the theoretical basis and recent professional pronouncements related to some problems in financial reporting and disclosure, application and implications of accounting profit, profit-sharing under the Islamic accounting system, accounting for mergers and acquisitions, as well as accounting under inflationary conditions.

PRE-REQUISITE: 420 401

420 810 Computerized Accounting Information Systems (2,2,0,3)

The computerized accounting information system combines the skill sets of two areas experiencing rapid growth and change - accounting and information technology. Electronic commerce, direct-business-to--business communication, paperless work process and many other technology-intensive innovations have created new challenges and opportunities for accountants who also have expertise in information systems. Many traditional accounting functions are now embodied in systems that require a different combination of technical and financial knowledge. The CAIS course is designed to provide the combination of knowledge and skill sets to meet the new challenges and opportunities of the information technology world.

PRE-REQUISITES: 311 102, 420 401

420 612 International Accounting (3,0,0,3)

The global economy is best characterized by a new economic and corporate world in which national boundaries are losing their importance. Multinational and local firms need to be aware of the linkages, ramifications, conditions and demands of the global economy. This course looks at how accounting information that reflects this international reality for both external and internal users can be produced. International accounting takes in all the technical accounting problems in financial accounting, cost accounting, management accounting and auditing that have a bearing on the conduct of foreign operations.

PRE-REQUISITE: 420 401

420 613 Islamic Accounting (3,0,0,3)

This course provides a broad framework of the structure of Islamic accounting thought. The conceptual framework of accounting, accounting policy, operationalization of terms, financial reporting standardization of accounting practice and profit and loss sharing in Islam on the most controversial issues at the academic and professional levels.

PRE-REQUISITE: 420 401

420 714 Oil and Gas Accounting (3,0,0,3)

Since the early 1970s, oil revenues have transformed the Arabian Gulf region into a modern sophisticated industrialized economy. Crude oil exports, which are the preserve of the Arabian Gulf region, remain the mainstay of economic activity. Oil and gas accounting is concerned with the models and concepts that together form the foundation and practice of financial and cost accounting for oil and gas industry.

PRE-REQUISITE: 420 401

420 716 Taxation Accounting (3,0,0,3)

Managers of local and multinational corporations face different tax systems in different countries that require adequate tax planning and knowledgeable people in the field of taxation accounting. Taxation of business does vary from one country to another. Not only are tax rates different, but also opinions differ as to definitions of taxable income and types of taxes to be used.

PRE-REQUISITE: 420 401

Courses Offered by the Marketing Deptartment:

400 395 Principles of Marketing (3,0,0,3)

This introductory course sheds light on the basic concepts of marketing, its varied definitions, origins and evolution through time. It also covers the main components of the marketing program (product, price, place and promotion) on which any attempts to plan marketing efforts rest.

PRE-REQUISITE: 400 291

400 523 Public Relations (3,0,0,3)

The course represents a survey of the fundamental principles, tools and practices of the public relations profession in addition to the issues involved in designing and evaluating public relations programs to solve specific internal and external communication problems.

PRE-REQUISITE: 400 408 / PRE-REQUISITE: 400 292

430 707 Service Marketing (3,0,0,3)

The course explores the area of service marketing and identifies the main characteristics that set product and service marketing apart. As such the course represents an extension of the marketing management process beyond its traditional role in the physical products area.

PRE-REQUISITE: 400 395

430 501 Marketing Research (3,0,0,3)

This course offers a closer review and examination of research techniques applicable to problem-solving and decision-making in marketing and other management fields. The course exposes the students to the complete research process starting with problem formulation and definition of key concepts and analytical techniques, data collection, analysis, interpretation and presentation of findings. Students are required to develop a major marketing research project using appropriate field techniques.

PRE-REQUISITES: 102 211, 103 130

430 602 Consumer Behavior (3,0,0,3)

The course introduces students to the study of consumer behavior. In so doing, the course borrows key concepts and theories from the behavioral sciences and examines their relevance and usefulness in understanding shopping behavior. Specifically the course traces those forces that shape, constrain and color consumer's buying decisions and their implications for mapping out marketing strategies.

PRE-REQUISITE: 400 395

430 603 Advertising and Promotion (3,0,0,3)

The prime focus of this course is on the communication function of marketing which is known in the marketing literature as the promotional mix, i.e. advertising, public relations, sales promotion and personal selling. As such the course provides an understanding as to how these variables interact in an integrated field.

PRE-REQUISITE: 430 602

430 604 Marketing Channels (3,0,0,3)

The course follows an institutional approach to marketing by concentrating on the main institutions which are involved in making goods and services available for use and consumption. Given such a premise, the course sheds light on these institutions and dwells on their nature, types, history, functions and patterns of development.

PRE-REQUISITE: 400 395

430 706 Business-to-Business Marketing (3,0,0,3)

The focus of this course is on studying and analyzing the unique aspects of marketing goods and services to organizational buyers rather than to ultimate consumers. Towards this end the course constitutes a description and analysis of the institutions and functions of business markets.

PRE-REQUISITE: 400 395

430 808 International Marketing (3,0,0,3)

The interdependence among countries has forced business organizations to practice marketing beyond domestic boundaries. This course addresses this issue and endeavors to expose the students to international marketing and the application of marketing techniques and strategies in a global environment.

PRE-REQUISITE: 400 395

430 809 Marketing Management (3,0,0,3)

This is the capstone course in the marketing major. It is intended to help the students integrate the knowledge he acquired in other marketing courses. As such, it is a managerial decision-making process aimed at matching organizational strengths with market opportunities. The course looks at the relationships between the customer, competition and the company. It explores ways for the company to differentiate itself from competition by providing superior value to the customer.

PRE-REQUISITES: 430 602,430 501

430 810 Computer Applications in Marketing (2,2,0,3)

The course represents an attempt to explore the potential of certain computerized software and programs in summarizing, organizing, interpreting and analyzing marketing data, in addition to the use of a host of advanced statistical packages in predicting specific marketing phenomena.

PRE-REQUISITE: 430 809

430 612 Electronic Marketing (3,0,0,3)

The course introduces students to the Internet and Internet marketing, in a sense enabling them to use the Internet to market goods and services worldwide. Towards this end students will learn how to create and publish web pages, develop Web marketing skills, promote and sell products over the World Wide Web.

PRE-REQUISITE: 400 395

430 613 Product and Brand Management (3,0,0,3)

The product (and/or service) plays a central role in the activities of all organizations for it is the medium through which they seek to achieve their objectives and at the same time satisfy their customers. This course is designed to shed light on issues relevant to product and brand management processes. Specifically the course focuses on two major problems: the development and introduction of new products/brands from the

idea inception to commercialization, and the marketing of existing brands with emphasis on building, measuring and managing brand equity.

PRE-REQUISITE: 400 395

430 714 Retail Marketing (3,0,0,3)

The course provides an overview of the field of retailing and endeavors to familiarize the student with the basic concepts and issues that are deemed pertinent in today's world of retailing and retail marketing. These include, but are not limited to, the nature and structure of retail industry, the determinants of successful retail marketing strategies and the fundamental principles of sound retail management.

PRE-REQUISITE: 400 395

430 715 Selected Topics in Marketing (3,0,0,3)

This course caters for specific issues, topics and recent developments in marketing thought and practice that are new or controversial in nature and that have not adequately covered or addressed in other marketing courses.

PRE-REQUISITE: 400 395

430 606 Personal Selling (3,0,0,3)

This course focuses on familiarizing students with the concepts, theory and practice of personal selling. Through emphasis on professional salesmanship, the course deals with interpersonal communication and understanding consumer motivation for buying as the foundation to effective selling.

PRE-REQUISITES: 400 395,400 408

Courses Offered by the Finance Department

400 396 Fundamentals of Finance (3,0,0,3)

This introductory course discusses in detail basic terms commonly used in finance. Topics covered include functions of financial management, financial analysis and planning, working capital management, the capital budgeting process and long term financing.

PRE-REQUISITE: 400 292

440 501 Corporate Finance (3,0,0,3)

This course introduces financial issues from the corporate point of view. It includes the concept of net present value (NPV) and valuation of future cash flows. The course extends to the application of NPV in the capital budgeting decisions. The course covers the risk-return concept with the help of CAPM and APT theories. It also highlights long-term financial planning and capital structure decisions.

PRE-REQUISITE: 400 396

440520 Money and Financial System (3,0,0,3)

This course is designed to introduce basic economic and financial concepts related to money, banking and financial systems. It uses basic economic principles to introduce the structure of financial markets, financial institution management, the foreign exchange markets, the internationalization of financial markets and the role of monetary policy in the economy. This course offers students a balanced picture of the interactions between money, the financial system and the economy.

Pre-requisite: 400 410

440 603 Financial Planning and Control (3,0,0,3)

This course provides an understanding of financial statements and the analytical tools available for use in properly managing and adding value to an organization. It focuses on analysis of financial and accounting information and its impact on financial decision-making and profit planning. The course uses some basic applications of statistics in financial planning in order to ensure corporate financial stability.

PRE-REQUISITE: 400 396

440 604 Commercial Banking (3,0,0,3)

This commercial bank management course will equip the students with good grounding in the banking industry by teaching both the theory and practice of commercial banking. It focuses on the dynamic and rapidly changing financial-services industry; it explores modern financial management decision-making and highlights the importance of adapting to change and creating value as the way for financial institutions to succeed. The following areas are explained: introduction to bank management, strategic and financial management and the measurement of bank performance, the portfolio risks of banking and their management, managing the bank lending functions, and capital adequacy in banking institutions.

PRE-REQUISITE: 440520

440 705 Financial Markets (3,0,0,3)

This course is designed to build an understanding of financial markets, institutions and market participants. The coverage includes various types of financial markets like foreign exchange markets, stock markets, derivative markets and bond markets. The specific topics covered include the determination of interest rates; fixed income securities, mortgages, foreign exchange, futures, options, and money markets; commercial banks, savings banks, and credit unions; insurance companies, securities firms, finance companies, mutual funds, and pension funds. It also studies financial institution and market regulation, past and present banking crises, management and hedging of risk, central banking and monetary policy.

PRE-REQUISITE: 400 396 & 440 604

440 707 International Finance (3,0,0,3)

This course is designed to introduce an overview of the environment of global finance, the international dimension of corporate finance, balance of payments and exchange market, the international monetary system, political risk, international cash management, international portfolio diversification, foreign direct investment and international and other developmental international financial issues.

PRE-REQUISITE: 440 501

440 808 Selected Topics in Finance (3,0,0,3)

The primary aim of this course is to offer a more thorough examination of selected topics. The course instructor will select topics keeping in view topics of current interest and the availability of teaching material and resources. The choice of topics is expected to vary from semester to semester. In general, the course caters for specific issues, topics and recent developments in financial thought and practice that are new or controversial in nature and that have not been adequately covered or addressed in other finance courses.

PRE-REQUISITE: 400 396

440 809 Investments (3,0,0,3)

This course develops advanced analytical and managerial skills in the field of investments. The topics covered include risk and returns, the analysis of different types of securities, basics of portfolio theory, modern investment theory, and portfolio selection and management. The course helps students learn how to make good investment decisions, recognize investment problems and deal with them.

PRE-REQUISITE: 440 602

440 810 Computer Applications in Finance (2,2,0,3)

This course will equip students with the skills required to apply their acquired finance knowledge using computer applications and available software, like EXCEL. The following topics are covered using computers: accounting primer, cash management, financial ratios analysis, break-even analysis, EPS, P/E ratio, taxation, time-value of money, interest/discount rates, capital budgeting, PV, FV, NPV, IRR, loan repayment schedule, dividends, measurement of risk and returns, valuation of securities, cost of capital, credit-scoring models, yield measurement, and advanced models in finance.

PRE-REQUISITES: 400 396, 104110

440 612 Personal Finance (3,0,0,3)

This personal finance course equips the student with financial knowledge and tools to maximize financial resources over an individual's lifetime. This course discusses the latest financial planning tools and techniques that enable an individual to achieve his/her financial goals. Financial and personal satisfaction is the result of an organized process referred to as personal money management, which is the focus of this course.

PRE-REQUISITE: 400 396

440 715 Islamic Banking (3,0,0,3)

This course will equip students with a firm grounding in the banking industry. It teaches the theory and practice of Islamic banking within the backdrop of conventional banking. Focusing on the dynamic and rapidly changing financial services industry, it explores modern financial engineering for financial product development that is Shari'ah-compliant. The following areas are covered; introduction to Islamic economy and Islamic financial system, Islamic financial instruments, the measurement of bank performance, management of Islamic banks' investment risk, Shari'ah-compliant management of bank financing functions, bank capital (theory, management and regulation), financial innovations, Information technology, and corporate restructuring in the financial services industry.

PRE-REQUISITE: 440 604

440 611 Portfolio Management and Theory (3,0,0,3)

This course is designed to introduce an overview of portfolio management, more specifically securities and security analyses, risk and return, environment analyses, company analyses, bond analyses, options, rights, warrants and convertibles, futures, efficient-market theory, portfolio analyses and selection, capital market theory, managed portfolios and performance measurements.

PRE-REQUISITE: 440 705

440 602 Financial Risk and Insurance (3,0,0,3)

This course explores various types of corporate and financial risks, analyzes them, and identifies methods to control them. Specific issues covered include risk identification and measurement, risk analysis and management, and relevance of corporate risk management from shareholders' value point of view. It also deals with the main tool to diffuse risk, i.e., insurance, describing the mechanics of insurance contracts and their pricing, risk pooling and risk diversification, and risk hedging with derivative contracts.

PRE-REQUISITE: 440 501

400 393 Microeconomics (3,0,0,3)

This course is designed to introduce basic economic concepts related to individual decision-makers in the economy - households, businesses and governments - and how they interact. Meaning, nature and methods of economic study are introduced. Supply, demand and elasticity are used to analyze consumer and firm behaviors in different types of markets. The rationale for various public policies designed to modify the workings of markets is examined.

400 410 Macroeconomics (3,0,0,3)

This course is designed to introduce basic economic concepts related to aggregate economic relationships such as output and income, national income accounting, aggregate supply and aggregate demand, unemployment, inflation, economic growth and development, money and banking, and the international economy. The course emphasizes the main components of aggregate expenditure and determination of equilibrium level of income, in addition to the analysis of the effects of fiscal and monetary policies on the economy. It extends understanding of the ability of governments to influence economic performance.

PRE-REQUISITE: 400 393

400 522 Managerial Economics (3,0,0,3)

This course is designed to acquaint students of business administration with the economics of managerial decision-making, paying special attention to the criteria for rational decision making in private business, non-profit institutions and public agencies. The course emphasizes the application of economic theory and the tools of decision science to examine how an organization can achieve its objectives most efficiently. It is an application of economic theory and analysis to the managerial decision-making process.

PRE-REQUISITES: 400 393

400 512 Economic Development of GCC (3,0,0,3)

This course is designed to introduce the concepts, measurements and theories of broad-based sustainable development, as well as the relationships between economic development, human development and environment. Students will also become familiar with several theories of development, and the characteristics and the quality of life in GCC countries will be investigated and compared to those of other countries. The focus would be on the causes, problems and challenges associated with the development of GCC countries, such as population structure and localization policies, the feasibility of GCC states integration and the impact of oil and non-oil production on development.

PRE-REQUISITE: 400 410

410 811, 420 811, 430 811, 440 811 Graduation Project (3,0,0,3)

This course takes the form of a dissertation completed by graduating students in partial fulfillment of BSc in Management, Accounting, Marketing and Finance degree programs. Students choose an appropriate research project, justify it, work out the research methodology, and analyze, synthesize and evaluate information, then communicate significant knowledge and understanding. The proposed research should be related to the program. An academic advisor is assigned to advise the student at various stages of the research project. This course culminates in the preparation of a dissertation by each student. The course is an integral part of the curriculum, designed to train students to undertake scientific research and bridge the gap between theory and practice in management, accounting, marketing or finance.

PRE-REQUISITE: 102 CREDIT HOURS

400 516 Supervised Training (3,0,0,3)

After the completion of 96 credit hours, including seven major core courses. The aim of supervised training is to enable students to practice the learnt theories and concepts in a business organization. Students from any business discipline undergo a training period that is closely monitored by an instructor and the manager/supervisor of the organization to ensure that the student cultivates sound professional attitudes and ethics needed in work places.

Section 2.07.CBA Minors

CBA Minors within the College of Business

- Minor in Accounting
- Minor in Finance
- Minor in Management
- Minor in Marketing

CBA Minors for Other Colleges

- Minor in Management to the College of Engineering
- Minor in Accounting to the College of Information Systems
- Minor in Marketing to the College of Pharmacy

Important Information

- Minors are open to students from outside College of Business Administration and to College of Business Administration students pursuing minor in disciplines other than the discipline of their major.
- College of Business Administration students may pursue only two minors offered within the College of Business Administration.
- A grade of at least C in each course and a GPA of at least 2.00 must be earned in courses taken to satisfy the minor.
- Minor Requirements (9 credits).
- Minor Electives (minimum of 6 credits).

Structure of the Minor Programs

Minor Programs offered by Business Administration College

1. **Department of Management**

Minor for Business Administration College ONLY

☐ **Management for non-Management Students:** 15 Credit Hours

Compulsory Courses* (9 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4106020	Human Resource Management	3	0	0	**3**	4002910
☐	4106030	International Business	3	0	0	**3**	4004100
☐	4108200	Project Management	3	0	0	**3**	4002910

Optional Courses* (6 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4105010	Production and Operations Management	3	0	0	3	1031100, 4002910
☐	4107050	Computer Applications in Management	2	2	0	3	4002910, 3111020

☐	4108080	Organizational Theory and Design	3	0	0	3	4002910, 4004090

A compulsory course which is part of the student's major must be replaced by another optional course. An optional course which is part of the student's major cannot be taken.

Minor Program offered for Engineering College

☐ **Minor Programs in Management Offered by Business Administration College**
15 Credit Hours

Compulsory Courses* (9 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4002910	Introduction to Management	3	0	0	3	
☐	410820	Project Management	3	0	0	3	4002910
☐	400409	Organization	3	0	0	3	4002910

Optional Courses* (6 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4105010	Production & Operations Management	3	0	0	3	4002910
☐	4107050	Computer Applications in Management	2	2	0	3	4002910
☐	41080	Organization Theory &	3	0	0	3	4002910

2. Department of Accounting

Minor Programs offered by Business Administration College

Minor for Business Administration College ONLY

☐ **Accounting for non-Accounting Students:** 15 Credit Hours

☐ **Compulsory Courses* (9 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	420401	Intermediate Accounting I	3	0	0	3	Principles of Accounting II (400394)
☐	420502	Managerial Accounting	3	0	0	3	Principles of Accounting II (400394)
☐	420603	Cost Accounting	3	0	0	3	Principles of Accounting II (400394)

☐ **Optional Courses* (6 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	420705	Governmental Accounting	3	0	0	3	Principles of Accounting II (400394)
☐	420716	Taxation Accounting	3	0	0	3	Principles of Accounting II (400394)
☐	420810	Computerized Acc. Info. Sys.	2	2	0	3	Principles of Accounting II (400394)
☐	420714	Oil & Gas Accounting	3	0	0	3	Principles of Accounting II (400394)
☐	420602	Auditing	3	0	0	3	Principles of Accounting II (400394)

A compulsory course which is part of the student's major must be replaced by another optional course. An optional course which is part of the student's major cannot be taken.

Minor offered for Information Technology College

15 Credit Hours

☐ **Minor in Accounting for**

- **Information Technology/Network & security**
- **Information Technology/Database and Web system**

Compulsory Courses* (9 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	400394	Principles of Accounting II	3	0	0	3	Principles of Accounting I 400292
☐	420401	Intermediate Accounting I	3	0	0	3	Principles of Accounting II 400394
☐	420502	Managerial Accounting	3	0	0	3	Principles of Accounting II 400394

☐ **Optional Courses* (6 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	420501	Intermediate Accounting II	3	0	0	3	Intermediate Accounting I 420401
☐	420603	Cost Accounting	3	0	0	3	Principles of Accounting II 400394
☐	420705	Governmental Accounting	3	0	0	3	Principles of Accounting II 400394
☐	400527	Enterprise Resources Planning	2	2	0	3	Principles of Accounting I 4002920

Minors offered for Information Technology College

☐ **Minor in Accounting for**

- **Information System/ E Business Management**
- **Information System/Project Management**

☐ **Compulsory Courses* (9 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	400394	Principles of Accounting II	3	0	0	3	Principles of Accounting I 400292

☐	420401	Intermediate Accounting I	3	0	0	3	Principles of Accounting II 400394
☐	420810	Computerized Acc. Information System	2	2	0	3	Principles of Accounting II 400394
☐							

☐ **Optional Courses* (6 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	420502	Managerial Accounting	3	0	0	3	Principles of Accounting II 400394
☐	420603	Cost Accounting	3	0	0	3	Principles of Accounting II 400394
☐	420705	Governmental Accounting	3	0	0	3	Principles of Accounting II 400394
	400527	Enterprise Resources Planning	2	2	0	3	Principles of Accounting I 400292

3. Department of Marketing

Minor for Business Administration College ONLY

☐ **Marketing for non-Marketing students:** 15 Credit Hours

The Study Plans of Minor Programs

Compulsory Courses* (9 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4306020	Consumer behavior	3	0	0	3	Principles of Marketing 4003950
☐	4305010	Marketing Research	3	0	0	3	Principles of Marketing 4003950
☐	4306060	Personal Selling	3	0	0	3	Principles of Marketing 4003950

Optional Courses* (6 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite

☐	4307140	Retail Marketing	3	0	0	3	Principles of Marketing 4003950
☐	4306040	Marketing Channel	3	0	0	3	Principles of Marketing 4003950
☐	4308100	Computer Application in Marketing	2	2	0	3	Principles of Marketing 400395
☐	4306130	Product and Brand Management	3	0	0	3	Principles of Marketing 4003950
☐	4005260	Social Media Marketing	3	0	0	3	Principles of Marketing 4003950
	4307060	Business to Business Marketing	3	0	0	3	Principles of Marketing 4003950

A compulsory course which is part of the student's major must be replaced by another optional course. An optional course which is part of the student's major cannot be taken

Minor Program for Pharmacy and Health Sciences College

- ☐ **Minor in Marketing: 15 credit hours.**
- ☐ **Compulsory Courses* (9 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	400290	Introduction to Management	3	0	0	3	
☐	400390	Principles of Marketing	3	0	0	3	4002910
☐	430700	Service Marketing	3	0	0	3	Principles of Marketing 4003950

- ☐ Optional Courses* (6 Credit Hours)

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4307140	Retail Marketing	3	0	0	3	Principles of Marketing 4003950
☐	4308100	Computer Application in Marketing	2	2	0	3	Principles of Marketing 4003950

☐	4306020	Consumer Behavior	3	0	0	3	Principles of Marketing 4003950
☐	4005260	Social Media Marketing	3	0	0	3	Principles of Marketing 4003950
☐	4306040	Marketing Channels	3	0	0	3	Principles of Marketing 4003950

4. Department of Finance

Minor for Business Administration College ONLY

- ☐ **Finance for non-Finance Students:** 15 Credit Hours
- ☐ **Compulsory Courses*** **(9 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	440520	Money and Financial System	3	0	0	3	4004100
☐	4405010	Corporate Finance	3	0	0	3	4003960
☐	4406030	Financial Planning & Control	3	0	0	3	4003960

- ☐ **Optional Courses*** **(6 Credit Hours)**

Add	Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
☐	4406120	Personal Finance	3	0	0	3	4003960
☐	4407070	International Finance	3	0	0	3	4405010
☐	4406026	Financial Risk & Insurance	3	0	0	3	4405010
☐	4406040	Commercial Banking	3	0	0	3	440520
☐	4407150	Islamic Banking	3	0	0	3	4406040

A compulsory course which is part of the student's major must be replaced by another optional course. An optional course which is part of the student's major cannot be taken

*Students within the college of business administration (CBA) cannot take the same courses as students from other colleges since these courses are in their study plans for their major. For example, *Introduction to Management (4002910), Principles of Accounting I (4002920), Organizational Behaviour (4004090), Principles of Marketing (4003950),* and *Principles of Accounting II (4003940)* are mandatory courses for all students pursuing different majors in CBA. Overall, CBA students are required to take 54 credit hours as part of their major study plans.

**On the other hand, students from other colleges do not take the same courses for their major programs. The courses offered to students from other colleges are thus not part of their major program study plans. This explains the apparent differences in the course offerings for CBA students and those for non-CBA students.

Section 2.08 .Faculty members of the College of Business Administration

Sr. No.	Name	Academic Rank	Specialization	Degree	Date	University
1	Mohamed Ali Alshami, Dean	Dean	Economics (Mineral & Energy)	PhD	1995	Colorado School of Mines, USA
2	Joseph George M. Lutta , Head of Mgt Dept	Assistant Professor.	Human Resources & leadership development	PhD	2008	Louisiana State Univ., USA
3	Lilyan Gheyath Saleh, Head of Acct. Dept	Associate Professor.	Accounting & Auditing	PhD	1988	Free Univ. of Brussels (VUB), Belguim
4	Mohammed N. Chaker. Head Of Department of Finance	Associate Professor.	Economics	PhD	1994	University of Colorado, USA
5	Abdulkarim Ali Dahan	Associate Professor.	Economics	PhD	1996	University of Arizona, USA
6	Samia Abbas Ali Kargawil	Assistant Professor.	Business Management	PhD	2006	Birmingham University, UK
7	Rima Shishakly	Assistant Professor.	Management Information System	PhD	2005	University of Manchester, UK
8	Muhammad Qutubuddin Siddiqui Head of Dept. of Marketing	Lecturer	Business Administration	Master	1990	Central State University
9	Mohd Ariff Bin Kasim	Assistant Professor	Accountancy	PhD	2011	Universiti Teknologi Mara
10	Siti Rosmaini Binti Mohd Hanafi	Assistant Professor	Accountancy	PhD	2011	Universiti Teknologi Mara
11	Mervyn Misajon	Assistant Professor	Resource Development	PhD	1983	Michigan State University
12	Akinola Olatunde Fadahunsi	Professor	Entrepreneurship	PhD	1997	University of Stirling

13	Mohammad Khoshnevisan	Associate Professor	Finance	PhD	2000	The University of Melbourne
14	Abdullah Ismail	Assistant Professor	Management	PhD	2011	Technical University of Denmark
15	Muhammad Hanif	Assistant Professor	Finance	PhD	2014	International Islamic University
16	Sayed Abbas Ahmed Altayeb	Associate Professor	Accounting & Finance	PhD	1987	The University of Bath
17	Maria Jade Catalan Opulencia	Assistant Professor	Management, HRM/MIS	PhD PhD	2002 2015	International Academy of Management and Economics University of Liverpool
18	Ibrahim Elsiddig Ahmed Ibrahim	Associate Professor	Accounting & Finance	PhD	2003	University of Khartoum

College of Dentistry

The College of Dentistry (COD) was established in academic year 1997-1998 as the first oral and dental health teaching institution in the United Arab Emirates. The college's programs are tailored to meet the oral and dental health needs of the UAE community, focusing on the prevention of oral and dental disease.

Mission

The College of Dentistry reflects the mission of Ajman University to provide dental educational programs in the UAE, to initiate and develop basic and clinical research and to offer high quality oral healthcare to meet the needs of the region. The College of Dentistry aims to prepare graduates who are highly qualified in dental sciences to deliver compassionate and ethical orofacial healthcare services.

Objectives

The College of Dentistry aims to:

- educate and train a new generation of oral health professionals to world-class standards
- implement a comprehensive oral healthcare program with emphasis on prevention
- provide community dentistry services that meet world-class standards
- initiate scientific research in oral health in collaboration with prestigious international dental and medical institutions, and companies related to dentistry

Degree Programs

The College of Dentistry currently offers the following undergraduate dental program which is accredited by the UAE Ministry of Higher Education and Scientific Research:

1. Doctor of Dental Surgery (DDS) - 5 year program

Facilities

The College of Dentistry is equipped to deliver world class dental education. Spacious lecture halls with audio-visual and video conferencing facilities provide students with an exciting learning experience. State-of-the-art laboratories with the latest medical and dental education equipment enhance students' knowledge and skills. The college's dental clinics have a contemporary design with modern dental units and x-ray rooms, and are provided with the latest dental materials, instruments and equipment. Free-of-charge comprehensive dental treatment for all patients ensures a regular flow of dental cases for clinical training, skills development and research requirements during the clinical phase of dental education programs.

Doctor of Dental Surgery (DDS) Degree Program

This is a five-year undergraduate program leading to the degree of Doctor of Dental Surgery (DDS). The study program and curriculum is at par with that of renowned international universities and dental institutes.

Program Objectives

The DDS program aims to:

1. educate and train a new generation of competent dental surgeons, who will be able to provide high quality comprehensive oral healthcare with emphasis on prevention
2. emphasize on the prevention and early detection of oral and dental diseases as an integral part of the curriculum
3. provide educational experiences for students using a comprehensive patient care model
4. provide community dentistry services that meet world-class standards
5. establish national recognition in term of academia by the concerned authorities and the public

Program Outcomes

The DDS program at AU-College of Dentistry is only delivered as a full time program. The College of dentistry offers access to e-learning (MOODLE) as a supplementary tool to its traditional face-to-face pedagogy. The effectiveness of the program is evaluated against the program learning outcomes which have been aligned with the UAE Qualifications Framework (UAEQF) and are consistent with the defined level of the degree.

DDS PROGRAM LEARNING OUTCOMES

KNOWLEDGE

On successful completion of the Doctor of Dental Surgery program, graduates will be able to:

1. Express coherent knowledge, capabilities and limitations of specialization areas in dentistry.
2. Describe the importance of prevention, treatment and management of oral and dental diseases.
3. Use the factual and theoretical knowledge in basic medical and dental sciences and allied sciences to gather information from patient as part of history taking and patient examination in order to decide appropriate investigation and decide a suitable course of treatment within the scope of a general dental practice.
4. Identify the integration and importance of the basic medical and allied sciences such as psychology and behavioral sciences to dentistry.
5. Demonstrate a broad knowledge of the fundamental concepts, theories and principles in research projects and protocols complying with ethical principles.

SKILL

1. Demonstrate effective technical and analytical skills using evidentiary and procedural based processes to perform appropriate dental procedures independently and safely in a general dental practice setting.
2. Practice promotion of oral health and prevention of related disorders.
3. Demonstrate highly developed communication skills to explain or critique complex and unpredictable matters related to oral health and disease.
4. Demonstrate accurate record keeping and how to source and analyze information relevant to effective clinical practice.
5. Practice ethical, professional and legal responsibilities and display appropriate attitudes and behavior.
6. Evaluate, select and apply appropriate methods of clinical research in relation to oral health and disease.

COMPETENCE

Autonomy and Responsibility

1. Show responsibility and independent technical and clinical decision-making to evaluate and manage complex and unpredictable clinical work appropriate to a primary care practice.
2. Illustrate adherence to current best practice methods in a mature manner.

Role in Context

3. Recognize the importance of appropriate leadership roles, manage and take accountability of the team involved in patient care.
4. Demonstrate responsibility and supervise the professional activity and mentoring of allied dental health personnel.

Self-development

5. Engage in self-evaluation and professional development apt for general dental practice or towards specific specialization.
6. Value professional ethics, positive criticism and feedback, and engage in a life-long learning.

OUTCOMES MAPPING MATRIX

National Standards of Learning Outcomes for Bachelor Program (UAENQF LEVEL 7)	Program Learning Outcomes of Doctor of Dental Surgery				
KNOWLEDGE					
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
1. Specialized factual and theoretical knowledge and an understanding of the boundaries in a field of work or discipline, encompassing a broad and coherent body of knowledge and concepts, with substantive depth in the underlying principles and theoretical concepts	✓				
2. An understanding of allied knowledge and theories in related fields of work or disciplines and in the case of professional disciplines including related regulations, standards, codes, conventions			✓		
3. Understanding of critical approach to the creation and compilation of a systematic and coherent body of knowledge and concepts gained from a range of sources		✓		✓	
4. A comprehensive understanding of critical analysis, research systems and methods and evaluative problem-solving techniques					✓
5. Familiarity with sources of current and new research and knowledge with integration of concepts from outside fields					✓
SKILL					
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6
1. Technical, creative and analytical skills appropriate to solving specialized problems using evidentiary and procedural based processes in predictable and new contexts that include devising and sustaining arguments associated with a field of work or discipline	✓				✓	
2. Evaluating, selecting and applying appropriate methods, procedures or techniques in processes of investigation towards identified solutions		✓		✓		
3. Evaluating and implementing appropriate research tools and strategies associated with the field of work or discipline						✓
4. Highly developed advanced communication and information technology skills to present, explain and/or critique complex and unpredictable matters			✓			

COMPETENCE		
Autonomy and responsibility	PLO 1	PLO 2
1. Can take responsibility for developing innovative and advanced approaches to evaluating and managing complex and unpredictable work procedures and processes, resources or learning	✓	
2. Can manage technical, supervisory or design processes in unpredictable, unfamiliar and varying contexts		✓
3. Can work creatively and/or effectively as an individual, in team leadership, managing contexts, across technical or professional activities	✓	
4. Can express an internalized, personal view, and accept responsibility to society at large and to socio-cultural norms and relationships		✓
COMPETENCE		
Role in context	PLO 3	PLO 4
1. Can function with full autonomy in technical and supervisory contexts and adopt para-professional roles with little guidance		✓
2. Can take responsibility for the setting and achievement of group or individual outcomes and for the management and supervision of the work of others or self in the case of a specialization in field of work or discipline	✓	
3. Can participate in peer relationships with qualified practitioners and lead multiple, complex groups	✓	
4. Can take responsibility for managing the professional development and direct mentoring of individuals and groups		✓
COMPETENCE		
Self-development	PLO 5	PLO 6
1. Can self-evaluate and take responsibility for contributing to professional practice, and undertake regular professional development and/ or further learning can manage learning	✓	✓
2. Can manage learning tasks independently and professionally, in complex and sometimes unfamiliar learning contexts	✓	
3. Can contribute to and observe ethical standard		✓

Admission Requirements

Admission is based on the following requirements:

1. A UAE secondary school certificate, science section, or its equivalent, with a grade of not less than B (80 percent). Priority is given to students with higher grades in the following subjects:
   Biology
   Physics
   Chemistry
2. English proficiency test (TOEFL score of 500 or above, or the equivalent)
3. Personal interview
4. Health Fitness Certificate

Career Opportunities

Graduates of the College will have a wide range of career opportunities to choose from, in addition to continuing higher education (Masters and PhD degrees) in one of the following specialties:

- Endodontics
- Periodontics
- Prosthodontics
- Operative Dentistry
- Pediatric Dentistry
- Orthodontics
- Oral and Maxillofacial Surgery
- Oral Radiology and Oral Medicine
- Dental Public Health
- Implantology
- Aesthetic Dentistry
- Oral Pathology

Graduates may wish to take advanced courses in Oral Surgery, Implantology and other clinical specialties, or they may choose to work in research facilities.

Those who prefer to practice in UAE will be able to do so provided that they pass the UAE Licensing Exams. Graduates are subject to the regulations of the UAE licensing authorities with regard to the type of examination and certification criteria.

Graduation Requirements

Students will be awarded the Doctor of Dental Surgery (DDS) degree upon fulfillment of the following requirements:

1. Completing successfully the required credit hours (199 Credit Hours), including the University requirement courses, with an accumulative grade point average (AGPA) not less than C, otherwise students should take, during the following semester(s), clinical subjects as suggested by the academic advisor to fulfill this graduation requirement.
2. Completing successfully the required clinical cases during the clinical phase in addition to the mandatory two months internal clinical training during summer.
3. Submitting & defending a research project before an academic committee of the College.

Degree requirements

The Doctor of Dental Surgery (D.D.S.) degree requires the completion of 199 Credit Hours, distributed according to the following plan:

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	15

(b) University Elective Courses	9
2. College Requirements	175
TOTAL	199

UNIVERSITY REQUIREMENTS COURSES

(a) University required Courses (15 cr. Hrs)

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T	Cr/H	
0102110	Islamic Culture	3	–	3	xxx xxx
0102140	Communication skills in Arabic Language	3	–	3	xxx xxx
0103110	Statistics	2	2	3	xxx xxx
0117140	Environmental Sciences	3	–	3	xxx xxx
0104110	Computer Applications	2	2	3	xxx xxx

(b) University elective Courses (9 cr. Hrs)

Although elective, the student has to register for three (03) courses, after consulting his/her academic advisor, as stated in the curriculum.

Field	Course Code	Course Name	Credit hours
Social or Behavior Science **(3 Cr. Hrs.)**	0115130	General Psychology	3
	0115160	Emirates Society	3
	0114110	Economic Concepts	3
	0119120	Introduction to communication Sociology	3
	0119130	Information Society	3
	0114120	Entrepreneurship Development	3
	0119110	English Communication Skills	3
	107110	Critical Thinking	3
	104130	Information Literacy	3
	119140	Media Culture	3
	107150	Family System	3
Humanities or Arts **(3 Cr. Hrs.)**	0115150	The Art of Written Expression	3
	0112110	Principles of Architecture & Art	3
	0118110	Principles of Ethics	3
	112130	Introduction to Aesthetics	3
	112140	Introduction to Art	3
	107130	Introduction to Digital Photography	3
	102120	French Language	3
	0120110	Legal Culture	3

Natural Sciences Applied Sciences, Mathematics **(3 Cr. Hrs.)**	0115110	History of Science in Islam	3
	0115120	Scientific Pioneering	3
	0112130	Modern Technology and Society	3
	0115140	Principle of Mathematics	3
	0115170	Educational Technology	3
	0118130	Oral Health	3
	0117120	Fundamentals of Human Nutrition	3
	0117130	First Aid	3
	0103130	Research Methodology	3
	0117120	Applications of Remote sensing & GIS	3
	0107120	Technical Writing	3
	0113110	Internet Concepts	3
	0113120	Introduction to Information System	3
	102120	The Miraculousness of the Holy Koran	3

Suggested Course sequencing

First Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0103110	Statistics	2	2	3	xxx xxx
0104110	Computer Applications	2	2	3	xxx xxx
0120101	Physics (Dentistry) *	3	-	3	xxx xxx
0700126	General Chemistry (Dentistry) *	2	2	3	xxx xxx
0801110	English for Special Purposes (Dentistry)	3	-	3	xxx xxx
0801111	Integrated Biological Sciences I *	2	2	3	xxx xxx
0801112	Histology & Cell Biology *	2	2	3	xxx xxx
Total		16	10	21	

Second Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0102140	Communication Skills in Arabic Language	3	-	3	xxx xxx
0700236	Biochemistry (Dentistry) *	3	2	4	0700126
0801121	Integrated Biological Sciences II *	3	2	4	0801111
0801122	Oral Histology *	3	2	4	0801112
0801123	Head & Neck Anatomy I *	2	2	3	0801111
xxx xxx	Elective Course	3	-	3	xxx xxx
Total		17	8	21	

* THIS IS A FOUNDATIONAL COURSE FOR THE DDS PROGRAM. EVERY DENTAL STUDENT **MUST PASS** THIS COURSE BEFORE PROCEEDING TO THE CLINICAL COMPONENT OF THE DEGREE PROGRAM.
** Two (02) Practical Hours = 1 Credit Hour

Third Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0102110	Islamic Culture	3	-	3	xxx xxx
0700239	Pharmacology I (Dentistry) *	2	-	2	0801121
0801210	Psychology & Behavioral Sciences	3	-	3	xxx xxx
0801213	Head & Neck Anatomy II *	2	2	3	0801123
0801214	Microbiology & Immunology *	3	2	4	xxx xxx
0801215	Pathology *	3	1	3	0801112
0802213	Biomaterials *	2	1	2	0120101
Total		18	6	20	

Fourth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0700240	Pharmacology II (Dentistry) *	2	-	2	0700239
0801226	General Medicine & Infectious Diseases *	4	1	4	0801214, 0801215
0801227	General Surgery & ENT *	2	1	2	0801123, 0801215
0802221	Introduction to Oral & Dental Diseases	2	2	3	0801215
0802222	Dental Anatomy & Occlusion *	3	2	4	0801123
0802228	Four Handed Dentistry & Infection Control *	2	-	2	0801214
0804221	Oral Radiology I *	2	2	3	0120101, 0801123
Total		17	8	20	

* THIS IS A FOUNDATIONAL COURSE FOR THE DDS PROGRAM. EVERY DENTAL STUDENT **MUST PASS** THIS COURSE BEFORE PROCEEDING TO THE CLINICAL COMPONENT OF THE DEGREE PROGRAM
** Two (02) Practical Hours = 1 Credit Hour

Fifth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0802315	Pre-Clinical Operative Dentistry I *	2	3	3	0802213, 0802222
0802316	Pre-Clinical Prosthodontics I *	2	6	4	0802213, 0802222

0802317	Pre-Clinical Endodontics I *	1	3	2	0802213, 0802222
0803311	Preventive Dentistry & Nutrition	3	2***	4	0801226, 0802221
0803312	Pre-Clinical Pediatric Dentistry I *	2	-	2	0802221
0804312	Pre-Clinical Periodontics I *	1	1	1	0801122
0804313	Pre-Clinical Oral Surgery I & Pain Control *	2	2	2	0700240, 0801210, 0801214, 0801227
0804314	Oral Pathology I *	2	2***	3	0801215, 0802221
Total		15	19	21	

Sixth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Lb/T**	Cr/H	
0802325	Pre-Clinical Operative Dentistry II *	2	3	3	0802315
0802326	Pre-Clinical Prosthodontics II *	2	3	3	0802315, 0802316
0802327	Pre-Clinical Endodontics II *	1	3	2	0802317
0803322	Pre-Clinical Pediatric Dentistry II *	1	3	2	0803312
0803323	Pre-Clinical Orthodontics *	1	3	2	0801122, 0802222
0804322	Pre-Clinical Periodontics II *	1	3	2	0804312
0804323	Pre-Clinical Oral Surgery II & CPR *	3	2	3	0801226, 0804313
0804324	Oral Pathology II *	2	2***	3	0804314
Total		13	22	20	

* THIS IS A FOUNDATIONAL COURSE FOR THE DDS PROGRAM. EVERY DENTAL STUDENT **MUST PASS** THIS COURSE BEFORE PROCEEDING TO THE CLINICAL COMPONENT OF THE DEGREE PROGRAM.

** Three (03) Pre-clinical Training Hours=1 Credit Hour

*** Two (02) Practical Hours = 1 Credit Hour

Seventh Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0802415	Clinical Operative Dentistry I	1	4	2	
0802416	Clinical Prosthodontics I	1	4	2	All
0802417	Clinical Endodontics I	1	4	2	
0803412	Clinical Pediatric Dentistry I	1	4	2	Pre-Clinical
0803413	Clinical Orthodontics I	1	4	2	

0804410	Oral Diagnosis / Oral Medicine	2	4	3	
0804412	Clinical Periodontics I	1	4	2	Courses
0804413	Clinical Oral Surgery I	1	4	2	“and 0801210
0804411	Oral Radiology II	1	2**	2	0804221
Total		10	34	19	

** Two (02) Practical Hours = 1 Credit Hour

Eighth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0103130	Research Methodology	3	-	3	0103110
0802425	Clinical Operative Dentistry II	1	4	2	0802415
0802426	Clinical Prosthodontics II	1	4	2	0802416
0802427	Clinical Endodontics II	1	4	2	0802417
0803422	Clinical Pediatric Dentistry II	1	4	2	0803412
0803423	Clinical Orthodontics II	1	4	2	0803413
0804422	Clinical Periodontics II	1	4	2	0804412
0804423	Clinical Oral Surgery II	1	4	2	0804413
Total		10	28	17	

* Four (04) Clinical Training Hours=1 Credit Hour

In-Campus Training Program *

This in-campus clinical training program is held at the end of the eighth semester.

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0805435	Internal Clinical Training Fourth Year	-	20	2	All Clinical Courses

Ninth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0802510	Ethics	1	-	1	xxx xxx
0802511	Geriatric Dentistry	1	-	1	All Clinical Courses
0802519	Clinical Dentistry I	-	24	6	All Clinical Courses
0803510	Applied Biostatistics	2	-	2	0103110
0804515	Emergency Dental Care	1	4	2	All Clinical Courses
0804518	Implantology	1	1	1	All Clinical Courses
0805511	Treatment Planning & Seminars I	2	-	2	0804324, 0804410

xxx xxx	Elective Course	3	-	3	xxx xxx
Total		11	29	18	

Tenth Semester

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0802529	Clinical Dentistry II	-	28	7	0802519
0804526	Hospital Dentistry	-	8	2	0804515
0804527	Lasers & Modern Technology	1	1	1	0804422, 0804423
0805521	Treatment Planning & Seminars II	2	-	2	0805511
0805522	Research Project	1	-	1	0803510
0805523	Practice Management	1	-	1	xxx xxx
0805524	Equipment Maintenance	1	1	1	xxx xxx
xxx xxx	Elective Course	3	-	3	xxx xxx
Total		9	38	18	

* Four (04) Clinical Training Hours= 1 Credit Hour

Internal Training Program *

The internal clinical training program is held at the end of the tenth semester.

Course Code	Course Title	Credit Hours			Prerequisite(s)
		L/C	Cl/T*	Cr/H	
0805535	Internal Clinical Training Fifth Year	-	20	2	All Clinical Courses

Course Descriptions for Undergraduate program

Doctor of Dental Surgery (DDS) Degree Program

COLLEGE REQUIREMENTS

1) 0120 101 Physics / Dentistry (3 cr. /h.)

The course is designed to cover the basic concepts in most branches of classical mechanics, electricity and thermodynamics as well as some of modern physics concepts applicable to x-ray, lasers and radioactivity. Finally, x-ray, lasers, radioactivity and applications of these concepts in dentistry will also be covered.

2) 0700 126 General Chemistry / Dentistry (3 cr. /h.)

This course presents the fundamentals of certain topics in general chemistry. It includes two major parts: Part I is the general part, and Part II is the organic part. The general part will introduce the student to basic aspects of general chemistry, i.e. the atomic structures, electronic configuration, periodic table of elements, chemistry of metals, and the fundamentals of chemical bonds and chemical reactions. The organic part covers some important areas in organic chemistry, which include aliphatic and aromatic hydrocarbons, stereochemistry, as well as some functional groups, e.g.: alcohols, phenols, carbonyl compounds.

3) 0700 236 Biochemistry / Dentistry (4 cr. /h.)

The course is designed to provide a comprehensive survey of the major topics in biochemistry. It explores how the structure of proteins, carbohydrates, lipids, nucleic acids, and vitamins relates to their function. Metabolism and energy production as well as biosynthesis of small and macromolecules is discussed. Special topics such as Calcium metabolism, bone mineralization, and Dental caries are included.

4) 0700 239 Pharmacology-I / Dentistry (2 cr. /h.)

This course will introduce the general aspects of pharmacokinetics and pharmacodynamics. Students will also learn basic pharmacotherapy for relevant disorders of cardiovascular system, CNS, endocrine system, gastrointestinal system, including asthma and drugs of abuse that are pertinent to practice of dentistry.

5) 0700 240 Pharmacology-II / Dentistry (2 cr. /h.)

This course is designed to teach the students the various drugs used to control the pain and anxiety of dental patients as well as those used for treatment of different oral conditions. A special emphasis is made on the clinical indications, dosage, potential side effects and drug-interactions. The course will also highlight the importance of standard practice in prescription writing to ensure both effectiveness of the treatment and patient safety.

6) 0801 110 English for Special Purposes - Dentistry (3 cr./h.)

This course aims at preparing the students of Dentistry College to cope with the kind of English needed in the real life situations and field of specializations in the future. It enables the students to practice the four skills. The course develops the students' competence through using the language resource room, CD ROMs, the internet and some other audio-visual facilities.

7) 0801 210 Psychology & Behavioral Sciences (3 cr. /h.)

This course aims at providing dentistry students with an insight of psychology, and helps them to observe, evaluate and explain the behavior of people in relation to oral/dental health care in particular. The students are provided with information regarding basic psychological concepts, psychological disturbances and disorders, management techniques and their application specifically in the field of dentistry and healthcare. It is designed to be helpful to dental students by providing them an understanding of the people (patients and dental team members) they will come across in their dental practice/career. This will allow them to

better understand the feelings and thoughts of their patients and help them relax and be comfortable during dental treatments.

8) 0801 111 Integrated Biological Sciences - I (3 cr. /h.)

This course deals with the study of two complementary branches of biology, human anatomy and human physiology which provide the basic concepts helping dental students understand how the human body is developed, the way it is built up and how it works. Objectives of this course are to develop the foundational knowledge and basic concepts necessary to independently perform the diagnostic and clinical skills.

9) 0801 121 Integrated Biological Sciences-II (4 cr. /h.)

This course is intended to help the dental students to understand the basic concepts of Anatomy & Physiology simultaneously, with emphasis on topics related to the dental practice. The course covers the study of the main body systems with great emphasis on the applied & the practical aspects. The teaching tools include CD presentations, Power points presentations, videotapes & Internet explorations.

10) 0801 112 Histology & Cell Biology (3 cr. /h.)

This course provides students with general knowledge about the cell and various cellular organelles, and the characteristic structure of each organelle that enable it to perform essential functions within the cell. The students are also provided with wide knowledge concerning the morphological features of the four primary tissues and recognize their roles in forming organs. A basic knowledge of cell division, general embryology and genetics integrates the above information.

11) 0801 122 Oral Histology (4 cr. /h.)

This course describes in details the development and structure of the oral cavity and teeth. Students are provided with the basic concepts of oro-facial development and structures. The microscopic, histological and ultrastructural organizations of soft and hard oral tissues are studied in details. A considerable knowledge of functional and clinical correlation is also stressed.

12) 0801 123 Head & Neck Anatomy I (3 cr. /h.)

The course is intended to help the dental student to study & understand the basic terms & facts about the gross anatomy of the head and neck region of human body. The course includes the study of the detailed structures of the skull, the head & their nerve and blood supply. Also, the course includes full descriptions of the various muscles & glands of the face, orbit, nasal cavity, oral cavity, floor of the mouth, palate and tongue. In general, the course will provide the dental student with the fundamental detailed structures of the skull & head as related to dental practice.

13) 0801 213 Head & Neck Anatomy II (3 cr. /h.)

The course deals with the description of the head & neck region including brain & spinal cord. The main elements are the nerves & vessels, lymphatic drainage, fascial spaces and muscles of neck, the pharynx and larynx with special reference to the anatomical basis of the management of upper airway obstruction and related radiology. Further it provides the relevant details of pain physiology, brain, spinal cord their development and cranial nerves function and test. In general the course will provide the basis to the dental practice involving the anatomical structures.

14) 0801 214 Microbiology & Immunology (4 cr. /h.)

The course covers the fundamentals of microbiology with emphasis on oral microbiota, pathogens & defense mechanisms in the dental environment. The basics of immunology including the immune system & organisms of medical & dental significance; virus structure & classification, viral pathogenesis & mechanisms of host defense; hygiene covering pathogenesis of bacterial, infections, etiology, clinical picture, lab diagnosis, treatment, prevention and control of diseases caused by the different bacteria, are also discussed.

15) 0801 215 Pathology (3 cr. /h.)

This course covers the fundamentals of the basic disease process in the body. Students are provided with gross, microscopic & biochemical features of different pathological conditions. Objectives of this course are to study and understand different pathogenic processes in details in order to establish a sound foundation for clinical practice in dentistry. Teaching tools include power point plus projection, practical lessons with CD presentations & internet explorations.

16) 0801 226 General Medicine (4 cr. /h.)

This comprehensive course covers topics specific to the medical field, with interest to medically compromised patient as related to dental care. Students are provided with basic concept of general medical & infectious diseases. Teaching tools include: power point plus projection, practical lessons with CD presentations & internet explorations.

17) 0801 227 General Surgery & ENT (2 cr. /h.)

The course is intended to help dental students to study & understand the basic principles of surgery & ENT in relation to Dentistry and Oral and maxillofacial Surgery. The course includes the knowledge of the theoretical & practical approaches to the assessment of surgical and how to perform an effective risk assessment preoperatively based on the information obtained from case history, clinical examination, investigations in relation to the anaesthetic potential risks and also the invasiveness of the planned surgery. Also, the student will identify the pathology of tumors, cysts, fistulae, sinuses & ulcer in head and neck region. Information about trauma, tissue repairs & preoperative management of inpatients like administered fluids, water balance monitoring and indications and possible complications of blood transfusion are also included within the course. In addition, the student will study the various common diseases of the ear, nose, paranasal sinuses & pharynx. Finally the students will learn the common postoperative complications seen in surgical patient whether due to anaesthesia, the surgical intervention or those initiated or aggravated by the existing morbid conditions of surgical patients.

18) 0802 221 Introduction to Oral & Dental Diseases (3 cr. /h.)

This is an introduction to profession of dentistry. This course provides students with knowledge and understanding of oral and dental diseases, their etiology, pathogenesis and different stages of these lesions and their clinical manifestations.

19) 0802 222 Dental Anatomy & Occlusion (4 cr. /h.)

This course deals with nomenclature as related to the morphology of the natural dentition. It includes theory related to the morphology of the deciduous & permanent teeth in the human dentition & features related to the normal occlusion. Laboratory exercises include wax-adding & carving to build up the crowns of permanent teeth, analyze occlusal patterns and correct occlusal disharmonies. Its significance is integrated with dental treatment in Operative dentistry, Endodontics, Prosthodontics, Periodontics and Orthodontics. This course will help students in diagnosing dental disorders affecting the crowns or roots of human teeth & thus forms a basic foundation to the understanding of clinical dentistry. The study of occlusion part of this course involves the whole masticatory system, it includes the static relationship of teeth as well as the functional inter-relationship between teeth, periodontal, tissue, jaws, temporomandibular joints (TMJ), muscles and nervous system.

20) 0802 213 Biomaterials (2 cr. /h.)

The course is designed to provide students with knowledge to define and memorize the physical, chemical, and biological properties of dental materials. The program emphasizes on employment of concepts in modern materials science to solve problem of dental treatment.

21) 0804 221 Oral Radiology-I (3 cr. /h.)

This course discusses the basic principles of X-ray production, the biological effects of ionizing radiation and radiation safety. This course demonstrates the intra oral and extra oral radiographic techniques and prepare the Students learn to take and interpret radiographs, and perform initial screening, examination and diagnosis. The course is integrated with different dental specialties. Objectives of this course are to develop the fundamental knowledge of x-ray production and skill to independently perform the radiographs and interpretation of radiographic normal anatomy.

22) 0802 315 Pre-Clinical Operative Dentistry I (3 cr. /h.)

The main components of this course are the principles of cavity preparation for the currently available restorations according to their physical and manipulative characteristics and the steps of cavity restorations. The restorative department during the two semesters of the third year provides them.

23) 0802 325 Pre-clinical Operative Dentistry II (3 cr. /h.)

This course consists of two main components, the principle of cavity preparations for the currently available restorations and their physical and manipulative characteristics and cavity restorations. The restorative department during the two semesters of the third year provides them.

24) 0802 316 Pre-Clinical Prosthodontics I (4 cr. /h.)

This is a dental technology course consist of lectures and pre-clinical laboratory practical sessions .Terminology, nomenclature, theories, principles, concepts and basic techniques necessary for the construction of complete denture service will be presented. The course is designed to prepare the student to understand the biological, esthetic and mechanical aspects of complete dentures treatments. Correlation of basic science concepts as related to mechanical and clinical conditions will be stressed.

25) 0802 326 Pre-Clinical Prosthodontics II (3 cr. /h.)

This course provides both didactic and practical sessions in dental technology. Students will be introduced to the dental skills laboratory (phantom head or the simulator). Lectures cover all the procedures of teeth preparation for fixed restorations, and the use of equipment and instruments needed for the construction of all types of fixed prosthodontics. More emphasis will be directed to the principles of tooth preparation. Included in the course a practical sessions for the training of the students on how to prepare abutment teeth, apply impression techniques and making provisional restorations.

26) 0802 317 Pre-Clinical Endodontics I (2 cr. /h.)

The theoretical part covers topics which include an introduction to the subject, anatomy and morphology of the root canal system, access cavity preparation, cleaning and shaping of the root canal systems and it lays emphasis on possessing thorough knowledge of the various endodontic instruments. The pre-clinical practical component focuses on the treatment of anterior and premolar teeth. This prepares and enables students to be competent in treatment of clinical endodontic cases in the next year.

27) 0802 327 Pre-Clinical Endodontics II (2 cr. /h.)

The theoretical part covers topics which include root can obturation, endodontic microbiology, endodontic mishaps management, pulp and periapical pathology, diagnosis and diagnostic procedures. The pre-clinical lab/practical component focuses on performing endodontic procedures on molars. This prepares the students to perform basic endodontic procedures prior to entering the clinics in next year.

28) 0802 228 Four Handed Dentistry & Infection Control (2 cr. /h.)

Four Handed Dentistry

This course describes the concept and advantages of four handed dentistry. It describes the ergonomic position for the patient, dental assistant and doctor and explain the responsibilities of the dental assistant during clinical dental work. The course also describes the ergonomic arrangement of dental clinic.
Infection Control:
This course explains the different ways of transmission of infectious diseases and emphasis on the immunization of all oral health care providers. The course describes the sterilization methods in dental practice, application of protective barriers, personal protective equipment and infection control during all clinical dental procedures.

29) 0803 311 Preventive Dentistry & Nutrition (4 cr. /h.)

The Preventive Dentistry and Nutrition course introduces the student to the principles and methods of prevention including information on etiology of dental caries, periodontal diseases and methods of preventing and controlling dental diseases through a preventive treatment plan and health education programs. In addition, this course provides the students with a basic knowledge of the essential nutrient materials in both health and disease, and discusses the role of the nutrition on the development, prevention and treatment of the oral and dental diseases.

30) 0803 312 Pre-Clinical Pediatric Dentistry I (2 cr. /h.)

This course introduce pediatric dentistry as an essential branch of dentistry related to child patients mainly focusing on the development and growth of oral/facial structures of children and recognizing the chronology of primary and permanent dentition. Different types of dental anomalies have been described with their genetic aspects. Child abuse and neglect are discussed in relation to pediatric dentistry. Psychological management, examination, diagnosis and treatment planning of child patient are introduced.

31) 0803 322 Pre-Clinical Pediatric Dentistry II (2 cr. /h.)

This course discusses radiographic as well as local anesthetic techniques used for child patient which needs specific modifications. Management and treatment of dental caries with different types of cavity preparations have been discussed. Also it describes vital and non –vital pulp therapy for primary teeth which considered an important issue in restoration and prevention of primary teeth extraction, on the other hand in case of loss of the primary teeth it is necessary to plan arch space analysis and construction of space maintainer to prevent space loss.

32) 0803 323 Pre-Clinical Orthodontics (2 cr. /h.)

The course will introduce the third year dental student to the fundamentals of orthodontics, including topics on the concepts of growth and development of the craniofacial structures, etiology of orthodontic problems, biological basis of orthodontic therapy, and clinical features of different malocclusions. This course is also designed to give the student a basic understanding of the skills required to fabricate removable orthodontic appliances that are typically indicated for limited tooth movement and retention in interceptive orthodontics.

33) 0804 312 Pre-Clinical Periodontics-I (1 cr. /h.)

This course describes in details the anatomy of periodontium and associated structures. Students are provided with the basic concepts of periodontal health. The microscopic, histological and ultrastructural organizations of soft and hard oral tissues are studied in detail. Basic knowledge of functional and clinical correlation is also stressed.

34) 0804 322 Pre-Clinical Periodontics-II (2 cr. /h.)

In this course lectures and practical training are given to students to expose them to immune response (host response) and periodontal pathogenesis. A complete spectrum of periodontal lesions and their pathogenicity, plaque control, trauma from occlusion, food impaction and halitosis are to be stressed.

35) 0804 313 Pre-clinical Oral Surgery-I & Pain Control (2 cr. /h.)

This preclinical course introduces the student to oral surgery and prepares him/her for clinical experience with dentoalveolar surgery. The student will learn to assess the patient, diagnose and treat basic oral surgical problems encountered in general practice. In addition to this, the goal of this course is to learn the pharmacology and toxicology of dental local anesthetic drugs and the proper techniques for their administration during dental extraction and related procedures.

36) 0804 323 Pre-Clinical Oral Surgery-II & C.P.R (3 cr. /h.)

The purpose of this course is to prepare the student to recognize advanced oral and maxillofacial surgery problems. Upon the completion of this course, the student will be able to formulate diagnosis and treatment plans in order to provide surgical care within the context of a patient-centered system of care delivery. In addition, this course will promote surgical principles and techniques to correct the pathologic conditions mentioned here. The course also emphasizes the principles and application of skills in basic life support, external cardiac compression and the emergency medical systems. Students will learn how to evaluate and treat a patient who sustains cardiac arrest in the dental office or an airway obstruction, through the techniques of CPR and Foreign Body Airway Obstruction.

37) 0804 314 Oral Pathology-I (3 cr. /h.)

This course deals with the understanding of the basic disease processes affecting the head & neck regions. The etiopathogenesis, clinical features & histopathologic features of developmental disorders, non-odontogenic & odontogenic lesions, cysts & infections related to the teeth, their supporting structures, jaw bones & soft tissues in & around the oral cavity will be dealt with. It also includes the oral manifestations of systemic diseases, like mucocutaneous disorders. The differential diagnosis & prognosis of various pathologies will also be considered.

38) 0804 324 Oral Pathology-II (3 cr. /h.)

This course is a continuation of Oral Pathology I. Students will continue learning the etiopathogenesis, clinical features & histopathologic features of non-odontogenic & odontogenic lesions, cysts & tumours related to the teeth, their supporting structures, jaw bones & soft tissues in & around the oral cavity. The oral manifestations of physical & chemical injuries to the oral tissues will also be detailed. The differential diagnosis & prognosis of various pathologies will also be considered.

39) 0804 411 Oral Radiology-II (2 cr. /h.)

The course deals with the acquisition and interpretation of radiographic imaging studies performed for diagnosis of conditions affecting the oral and maxillofacial region and assist in treatment planning.

40) 0802 415 Clinical Operative Dentistry-I (2 cr. /h.)

The course of operative dentistry consists of the diagnosis, prevention, treatment, and prognosis of the diseases and injuries inflicted upon the teeth. Also includes the study of basic concepts of restoration relation to oral and dental tissues and the various restorative materials. The curriculum includes both didactic and clinical components over a period of two semesters, and involves a clinical training program. The clinical training program for two semesters involves a clinical application of principles and skills acquired, based on a comprehensive approach in the oral health care.

41) 0802 425 Clinical Operative Dentistry-II (2 cr. /h)

The course of operative dentistry consists of the prevention, diagnosis, treatment, and prognosis of the diseases and injuries inflicted upon the teeth. It serves as a defining clinical experience for the dental students by providing them with the opportunity to participate in the evaluation and management of discolored, fractured and endodontically treated teeth. The curriculum includes both didactic and clinical components, and involves a clinical training program. The clinical training program involves a clinical application of principles and skills acquired, based on a comprehensive approach in the oral health care.

42) 0802 416 Clinical Prosthodontics-I (2 cr. /h.)

This course consists of two main components - complete denture, and removable partial denture prosthodontics. Prosthodontic treatment planning principles are provided in lectures and the group seminars. The didactic component focuses on planning and integrating removable prosthodontic interventions within a continuum of comprehensive patient care. The clinical instructors will ensure that the knowledge acquired in the preclinical years of studying is towards evidence-based decision making regarding prosthodontic management of patients partially and completely edentulous jaws. The course will be presented in lectures and clinical sessions, the lectures cover various clinical techniques, the manipulation of dental materials, and how to use dental instruments and equipment.

43) 0802 426 Clinical Prosthodontics-II (2 cr. /h)

The clinical fixed partial denture prosthodontics course consists of the theoretical part and the clinical training. The students should know how to do clinical examination, proper diagnosis and sound treatment plan. At the end of this course all students will be familiar with the best techniques of fixed partial dentures treatment, and will develop their manual dexterity in all clinical aspects for the construction of this type of prosthesis. Every student should complete all the requirements needed, recognize the importance of the preservation of the prepared teeth, periodontal tissues, and other soft tissues of the oral cavity while performing all types of restorations.

44) 0802 417 Clinical Endodontics-I (2 cr. /h.)

This Course aims to enable the students to diagnose the need for endodontic therapy. Previous endodontic courses presented a biologic foundation relating to endodontic clinical diagnosis. Students are provided with the basic concepts of diagnosis and treatment planning including medically compromised patients. Advanced endodontic techniques and/ or treatment modalities for the following conditions are also discussed: endodontic retreatment, apexification and apexogenesis, internal and external resorption, traumatic injuries to teeth.

45) 0802 427 Clinical Endodontics-II (2 cr. /h)

This Course aims to enable the students to gain knowledge and experience in endodontic treatment. Students are provided with the techniques used to determine success or failure of Endodontic treatment and the indication and contraindication of endodontic surgery, describing procedures and materials. Advanced endodontic techniques and/ or treatment modalities for the following conditions are also discussed: single visit root canal therapy, bleaching of discolored teeth, restoring endodontically treated teeth and relationship of orthodontic treatment, periodontal lesion to endodontic treatment.

46) 0803 412 Clinical Paediatric Dentistry-I (2 cr. /h.)

This course will reinforce basic knowledge developed during third year preclinical course, and facilitate continued development as the student performs routine pediatric dentistry procedures commonly employed in general dental practice. This course will also provide the fourth year dental student with a defining clinical experience that will include: diagnosis, prevention and treatment of the different pathological conditions in pediatric patients; classification, diagnosis and management of different traumatic injuries of oral & dental structures in primary and permanent teeth. Objectives of this course are to develop the foundational knowledge, skills and values necessary to independently perform diagnostic and clinical skills and participate safely in the care of pediatric patients.

47) 0803 422 Clinical Paediatric Dentistry-II (2 cr. /h.)

This course intends to inform and provide the dental student with sufficient knowledge on indications, techniques used in pharmacological methods of child's management including sedation and GA in management of anxious children. This course will also provide the fourth year dental student the team approach for the management of cleft lip & palate child at the level of the undergraduate students, dental management of special health care need children. They are also taught interceptive orthodontic methods in a growing child. Child abuse and neglect are discussed in relation to pediatric dentistry.

48) 0803 413 Clinical Orthodontics-I (2 cr. /h.)

This course introduces the dental student to the practice of orthodontics. The primary goal of this experience is to reinforce didactic concepts taught in the third year and build upon them in a manner that will better prepare the student to recognize, communicate and manage orthodontic problems in the general dentistry setting. In this manner, the student will be able to make proper diagnosis and differential diagnosis of patients of all ages, plan and execute the treatment of selected uncomplicated malocclusion cases.

49) 0803 423 Clinical Orthodontics-II (2 cr. /h.)

This course is intended to complement the orthodontic lectures and the pre-doctoral orthodontic experience; it will provide for each student to briefly present a clinical case and to view a large number of clinical orthodontic cases and establish combination between orthodontic treatment and the other four dental specialties - Pedodontics, Periodontics, Prosthodontics and Oral Surgery. Multidisciplinary treatment approaches will be discussed in the lectures. Clinically, they will be discussed in the patient examination and diagnosis sessions.

50) 0804 410 Oral Diagnosis & Oral Medicine (3 cr. /h.)

This course describes in details the art of history taking, examination, investigation of oro-facial lesions and interpretation of the results of investigations. The course also will help the students to learn etiopathogenesis of local disease processes in orofacial area along with oral manifestation of systemic diseases affecting the oral mucosa. Students are provided with the basic concept of oral manifestation of psychiatric diseases and their management.

51) 0804 412 Clinical Periodontics-I (2 cr. /h.)

The lecture and clinical training will prepare the students to understand the clinical phenomena in terms of underlying tissue changes and comprehensive nature of periodontal response to therapy. The course focuses on differential diagnosis, prognosis and treatment planning of different forms of periodontal diseases. The solution of periodontal problems can be incorporated into the practice of dentistry.

52) 0804 422 Clinical Periodontics-II (2 cr. /h.)

This course consists of a didactic and clinical component. It will cover: The treatment of different types of periodontal diseases. The interrelation between periodontics and related dental specialties. Introduction to the surgical approaches in the management of moderate to advanced periodontal diseases. To distinguish acute and chronic (mild, moderate and advanced) form of periodontal diseases and management by non-surgical and surgical treatment. To expose the students to focus on objectives of periodontal therapy, treatment planning and techniques including pre-prosthetic, pre-restorative, reconstructive surgery and knowledge necessary for advanced periodontal regeneration procedures.

53) 0804 413 Clinical Oral Surgery-I (2 cr. /h.)

This course will reinforce basic knowledge developed during third year preclinical course, and facilitate continued development as the student performs routine oral surgery procedures commonly employed in general dental practice. This course serves as a defining clinical experience for the dental students by providing them with the opportunity to participate in the evaluation and management of surgical patients such as with intraoral lesions, maxillary sinus and salivary gland pathologies to name a few. Objectives of this course are to develop the foundational knowledge, skills and values necessary to independently perform diagnostic and clinical skills and participate safely in the care of surgical patients.

54) 0804 423 Clinical Oral Surgery-II (2 cr. /h.)

The purpose of Clinical Oral Surgery II is to prepare the student to recognize advanced oral and maxillofacial surgery problems that in most cases will require referral to an oral and maxillofacial surgeon. Discussions will include diagnostic and treatment considerations relative to cases that require referral to an oral and maxillofacial surgeon as well as those that may be treated by the general dentist. The course will

also describe the characteristics and surgical management of the more common trauma, anomalies and malignancies of the oral & maxillofacial region.

55) 0805 511 Treatment Planning & Seminars-I (2 cr. /h.)

Problem Oriented Learning (POL) is an instructional strategy to help students acquire and integrate basic science, behavioral, and clinical knowledge in the context of solving a patient problem. POL is one of many instructional techniques used to teach problem solving. Problem Oriented Learning course is designed to give the students the experience to apply lecture materials to life-like situations and allows the student to experience the process as seen in daily clinical practice.

56) 0805 521 Treatment Planning & Seminars-II (2 cr. /h.)

This course is developed to give the students the experience to analyze their clinical cases, in order to enhance their clinical capability and patient management using case studies and patients presented by students. Treatment Planning & Seminar II will help the students to acquire and integrate their basic science, behavioral and clinical knowledge in the context of solving a patient's problem, including communication and ethical aspects. Topics presented are in a multidisciplinary field of dentistry, such as ethics, health care delivery, communication skills and practice management. Ethics related cases discussions will provide the needed experience to the dental students to the medico-legal aspects related to their future practice, in the fields of: Medical Ethics, Medical Responsibility and Forensic Medicine.

57) 0805 522 Research Project (1 cr. /h.)

The course is designed to enable the student to conduct a research project under the guidance of a teaching faculty. Students learn how to approach a research topic of interest, apply the basic principles of research design and to formulate the appropriate methodology and analysis for the research.

58) 0802 519 Clinical Dentistry-I (6 cr. /h.)

The purpose of this course is to reinforce and refine patient management skills that students have been introduced to in the fourth year courses. It is designed to observe, evaluate, and subsequently assist students in understanding and practicing proper comprehensive patient care and management. This course focuses on refinement and integration of clinical skills. It does not contain any formal theoretical lecturing. Students are assigned in clinical blocks for patient care and treatment planning. These treatment plans and completed treatment are discussed, and are evaluated as to the rationale and sequences used. Taught by an interdisciplinary faculty, this course considers strategies and approaches for the integration of isolated dental procedures into an appropriately sequenced treatment plan for comprehensive patient care.

59) 0802 529 Clinical Dentistry-II (7 cr. /h.)

This course is a continuation of Clinical Dentistry I, and does not contain any formal theoretical lecturing. Small group clinical discussions and demonstrations will be taken by the faculty. It is designed to provide students with more clinical experience in the care of patients with a focus on an advanced comprehensive care and treatment planning. Students are assigned in clinical blocks for patient care and treatment planning. All treatment options are discussed so that the student learns the fundamentals of good treatment planning and patient care. Taught by an interdisciplinary faculty, this course considers strategies and approaches for the integration of isolated dental procedures into an appropriately sequenced treatment plan for comprehensive patient care. The course mainly focuses on improving the quality of comprehensive care expected of a graduating student.

60) 0802 511 Geriatric Dentistry (1 cr. /h.)

This course focuses on issues and concerns related to the rapidly increasing elderly population. It also provide the student with an understanding of the aging process and the multidisciplinary needs of the older patient. Myths and stereotypes about aging and the aged, which exist and influence the provision of health care to the older population, will be discussed and expelled. It will provide the student with a framework of knowledge about the biological, psychological, sociological, behavioral and general medical aspects of

aging from which treatment can be planned and provided appropriately. A multidisciplinary team of speakers will present approaches that will help the student in integrating dental training and practice with the management, diagnosis and treatment of the older patient.

61) 0802 510 Ethics (1cr. /h.)

Dental ethics is the systematic and critical study of morality as it pertains to the practice of dentistry. The course consists of 16 hours of classroom lecture and discussion. It is designed to heighten students' awareness of the importance of ethical issues as they relate to dentistry. The curriculum provides students with an understanding of ethical principles, which have direct relevance to students' training and future practice experience. It focuses on common ethical dilemmas found in the relationships between dentist and patient, between dentists themselves, and between dentist and society.

62) 0803 510 Applied Biostatistics (2 cr. /h.)

This course provides the dental students with the necessary background of specific statistics relevant to the medical / dental fields in addition to adequate knowledge of study design in medical & dental research, enabling the dental student to critically evaluate and apply the appropriate statistics to dental and medical research.

63) 0805 523 Practice Management (1cr. /h)

This course is designed to provide the senior dental student with a general introduction to the basic principles of dental practice management. Primary focus will be on developing an understanding of various management concepts, processes & its role in obtaining an effective overall management of dental practice. The topics focused on include staff management, patient management, legal concepts and terminologies, office design, equipment placement, occupational hazard, appointments management, records management, dental insurance system, inventory and supply management.

64) 0805 524 Equipment Maintenance (1cr. /h)

This course focus on basic principles of various dental equipment, their operations and general preventive maintenance procedures. It also covers basic electrical theories and electrical safety precautions while dealing with dental equipment. Additionally advances in dental equipment technologies will also be covered in this course. This course helps the students to build the required skills and confidence to perform routine maintenance and minor repairs without the help of Biomedical technicians/Engineers.

65) 0804 515 Emergency Dental Care (2 cr. /h.)

This course provides a study of dental office emergencies with emphasis on prevention, prompt recognition and effective emergency care. Emphasis is also placed on etiology of common chronic oral diseases, treatment of specific dental emergencies and applicable assessment methods used in the prevention of emergencies related to the particular disease process. The course also deals with the use of emergency drugs and equipment.

66) 0804 526 Hospital Dentistry (2 cr. /h.)

Fifth year students are assigned for six weeks to an affiliated hospital. During this rotations, students are assigned to hospitalized patients to reinforce principles of physical diagnosis for patients with severe medical problems, learn to request and answer consultations.

67) 0804 527 Lasers & Modern Technology (1 cr. /h.)

This course is designed to provide the students with the fundamentals of laser technology and its use in dental practice including oral and maxillofacial surgery, periodontics, preventive and operative dentistry with more emphasis on the understanding and appreciation of laser safety measures. In addition, this course will introduce the students to some of the latest technologies in the dental field and their applications.

68) 0804 518 Implantology (1 cr. /h.)

This comprehensive lecture course presents the scientific basis and clinical applications of modern dental implantology techniques, and cover both the surgical procedures and periodontics and prosthodontics consideration in implant dentistry. Students perform implantology procedures in Lab setting.

69) 805 435 Internal Clinical Training Fourth Year (2 cr. /h.)

This clinical course is in the summer semester of the fourth year of the dental curriculum. It is designed to provide students with clinical experience in the care of patients in the areas of Periodontics, Operative Dentistry, Endodontics, Pediatric Dentistry and Oral Surgery with a focus on comprehensive care and treatment planning. There is no theoretical component to this course. Students are assigned patients having various dental problems, and they have to formulate a comprehensive diagnosis and treatment planning, including patient and clinical management.

70) 805 535 Internal Clinical Training Fifth Year (2 cr. /h.)

This clinical course is in the summer semester of the fifth year of study. It is designed to provide students with clinical experience in the care of patients in the areas of Periodontics, Operative Dentistry, Endodontics, Pediatric Dentistry and Oral Surgery with a focus on comprehensive care and treatment planning. There is no theoretical component to this course. It reinforces and refines the student's knowledge and skill required for the graduate level of clinical practice of dentistry. Students are assigned patients having various dental problems, and they have to formulate a comprehensive diagnosis and treatment planning, including patient and clinical management. Students are expected to perform comprehensive care at an advanced level from that of the previous summer semester.

College of
Education and Basic Sciences

Introduction

The College of Education & Basic Sciences (CEBS) is the founding college of Ajman University (AU). As a part of a leading university, the college is a national leader in enhancing educational practice. The College programs help students gain both a high-level education and a practical experience for the real world.

The College of Education and Basic Sciences offers three Bachelor Programs in Education, a Professional Graduate Diploma in Teaching:

- Bachelor of Education in Teacher Training Program in Arabic Language & Islamic Studies (in Arabic)
- Bachelor of Education in Teacher Training Program in Mathematics & Science (in Arabic)
- Bachelor of Education in Teaching English as a Foreign Language
- Professional Diploma in Teaching (Graduate Program, in Arabic)

The Bachelor Program in Educational Technology is discontinued for lack of enrolled students.

In addition, the Department of Mathematics and Science in the College of Education and Basic Sciences offers all courses in Basic Sciences such as Mathematics, Physics, and Statistics for students enrolled in the other colleges of the University.

Mission

In line with the vision and mission of Ajman University , the College of Education and Basic Sciences constantly endeavors to equip its students with a threefold system of values, knowledge and skills to enable them to acquire the adequate resources and practices, necessary for them to success in their post-university life.

Objectives

1- Preparing class teachers for basic education level (first & second cycle) as well as teachers for the preparatory level core subjects (Arabic & Islamic studies, Maths & Science and English Language).
2- Preparing individuals specialized in education technology who are capable of helping teachers to develop educational situations.
3- Adding to learners knowledge and experience in using accurate Arabic language in their work as well as giving a special care to foreign languages especially English.
4- Helping learners acquire an Islamic culture that can help in guiding students.
5- Showing the importance of Arabic and Islamic civilization and its role in the fields .
6- Helping students acquire psychological knowledge and foundations of curriculum and using the best ways to enhance learning develop.
7- Emphasizing on the importance of different Sciences in developing technology which help solve a lot of education problems.
8- Enabling students to gain the modern education technology and teaching methodology which enables them to solve some education problems.
9- Emphasizing on conducting educational researches that help developing the educational process.
10- Participating in lectures, workshops, forums and local and international conferences.

TEFL Program

The Department of Teaching English as a Foreign Language (TEFL) offers a four-year accredited Bachelor Degree program in Education in Teaching English as a Foreign Language.

a) Mission

The mission of the TEFL program is to provide the local society and the various educational institutions with qualified English language teachers and to promote relations with other English departments and language centers in the UAE and the region to exchange ideas, information, experience and research findings.

b) Goals

The goals of the TEFL program are to provide the society and the field of Education with graduates who have the ability to:

- Teach in a multi-national society and embrace cultural diversity
- Use English as a foreign language in diverse contexts
- Promote a culture of learning among students at schools
- Implement interactive teaching methodologies in the classroom
- Use technology as an aid to language teaching and learning
- Apply decision-making skills to various teaching situations
- Interact with students, parents, colleagues and school principal and administrators
- Identify and solve problems in the workplace
- Demonstrate a life-long learning attitude

c) Program Outcomes

On successful completion of the TEFL program, graduates are expected to:

1. Identify learning theories and various methods of teaching English as a foreign language.
2. Show a broad and coherent knowledge of the fundamental concepts, principles and techniques of language learning.
3. Demonstrate knowledge of integrating technology and methods of teaching English including emerging trends in the field of educational technology.
4. Demonstrate effective communication skills using English orally and in writing to present ideas and engage in meaningful interaction.
5. Employ high-level thinking skills in lesson planning, lesson execution and evaluation of the teaching and learning processes.
6. Implement researching skills in data gathering, data analysis and presentation of results to identify and solve field- related problems.
7. Show independent decision-making on handling learning difficulties and classroom management problems and come up with appropriate solutions.
8. Interact with peer colleagues, qualified cooperative teachers and school administration in different situations.
9. Apply ethical standards to the teaching/ learning practice.
10. Use positive criticism and feedback on their learning/ teaching performance to inform their approaches to professional development

d) Admission Requirements

To be admitted to the program, each applicant should have a certified UAE secondary school certificate, or its equivalent, with a minimum average grade of 60 percent. In addition the applicant should hold an English proficiency certificate with a minimum score of 500 for TOEFL or 5.0 for IELTS. Admission is also dependent upon the successful outcome of an interview during which the applicant's physical and personal capabilities for joining the teaching profession are assessed

e) Career Opportunities

In today's globalized world there is an increasing demand for English language teachers across the UAE and the region. The AU bachelor degree in TEFL provides students with a thorough grounding in many areas of teaching English as a foreign language and prepares them for a career in a variety of educational environments. Graduates can also have a good opportunity in various work fields as they acquire communication skills in addition to the foreign language competence through their study at this program.

f) Graduation Requirements

- The completion of 126 credit hours listed in the study plan.
- Cumulative GPA of at least 2.0.

g) Degree Requirements

The Bachelor in Education in Teaching English as a Foreign Language degree requires students to successfully complete 126 credit hours: University Required Courses (24 credit hours), College Required Courses (27 credit hours), and Major Required Courses (75 credit hours), as follows:

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Requirements	
(a) College General Education Courses	6
(b) College Required Courses	15
(c) College Elective Courses	3
3. Major Requirements	
(a) Major Required Courses	63
(b) Major Elective Courses	12
Total Credit Hours	126

I. College General Education Courses (6 Credit hours)

Number	Course Title	Credit hrs.	Prerequisites
0500222	Technology in Education	3	0104110
0560102	Study Skills	3	None

II. College Required Courses (18 Credit hours)

Number	Course Title		Credit hrs.	Prerequisites
0512101	Developmental Psychology		3	None
0511102	Const. and Dev. of Curriculum		3	None
0511101	Educational Foundation		3	None
0511308	School/Class Management		3	None
0512203	Educational Psychology		3	0512101
0511309	Educational Evaluation		3	0511102

III. Faculty Elective Courses (3 Credit hours)

Number	Course Title	Credit hrs.	Prerequisites
0511204	Teaching Profession and Teacher Role	3	None
0511205	Education and Society Problems	3	None

IV. Major Required Courses (63 Credit hours)

Course Number	Course Title	Credit hrs.	Prerequisites
560201	2nd Language Acquisition	3	None
560202	Methodology I	3	None
560208	Grammar of English	3	None
560301	Contrastive and Error Analysis	3	560201
560302	Methodology II	3	560202
560303	Applied Linguistics	3	560201
560304	Pedagogical Grammar	3	560302
560305	Children's Literature (TEFL)	3	None
560306	Discourse Analysis for Language Teachers	3	None
560308	Phonetics and Phonology	3	610212
560401	Introduction to Textbook Analysis	3	560202
560402	Methodology III	3	560302
560403	Testing in EFL	3	511309
511410	Practical Training	9	560302
610101	English Writing Skills		None
610209	Advanced English Writing Skills	3	610101
610212	Introduction to Linguistics	3	None
610323	Introduction to English Literary Genres	3	None

610439	Survey of 20th –Century English Literature	3	610323

V. Major Elective Courses (12 Credit hours)

Number	Course Title	Credit hrs.	Prerequisites
560203	Integrating Technology in EFL Classroom	3	104110
560204	Islamic Heritage	3	None
560205	Advanced English Listening and Speaking	3	None
560206	Readings in L2 Culture	3	None
560207	Short Stories	3	610323
560307	Language Learning and Teaching Strategies	3	560202
610204	Advanced English Reading Skills	3	None
610412	Arabic-English Translation I	3	None

Course Descriptions

560 102 Study Skills

This course covers the skills that relate directly to the needs of most university students such as: improving reading efficiency, taking notes, managing their studies, doing basic research, organizing and preparing assignments, and learning through discussions.

560 201 Second Language Acquisition (SLA)

The course reviews the different theories of second language acquisition and their application to classroom practices. It also examines some of the major factors that influence the acquisition of English as a second language. It further examines the strategies employed by the second language learners in the process of learning. The learners' errors and the second language students' specific learning situations are the main topics for detailed discussions in this course of study.

560 202 Methodology 1

The course touches upon the underlying principles of current language learning theories and shows their influence on classroom practices. At the same time, the course provides students with a historical and theoretical background about the major approaches and methods of teaching foreign languages and their classroom applications. Attention is directed at the communicative and eclectic approaches. Students are exposed to practical applications of major teaching methods through microteaching. Towards the end of the course, students are introduced to lesson planning.

560 203 Integrating Technology in EFL Classroom

This course develops the students' skills in using modern technologies in learning and teaching English as a foreign language. Students are expected to use such tools to access materials, do projects, and create a good language learning context to meet their potential students' individual language needs.

560 204 Islamic Heritage

This course aims at developing the students' understanding of the *Islamic civilization*. It also familiarizes students with the Islamic concepts and values and encourages them to apply these educational concepts to their life. The course focuses on the Islamic ethics and the life and works of some prominent Muslim scholars who have left a great impact not only on the Islamic civilization but also on the global civilizations, as a whole.

560 205 Advanced English Listening and Speaking

Advanced Speaking and Listening is a course designed for upper-intermediate to advanced students. The course aims at developing students' fluency and accuracy in oral communication. Students learn how to take notes as well as prepare and organize good presentations. Students are expected to master various oral skills such as expressing positive and/or negative views, debating, negotiating, etc. Students are also exposed to complex listening materials. This includes longer conversations and academic lectures in which students practice academic note-taking, outlining, and summarizing ideas while listening.

560 206 Readings in L2 Culture

Readings in L2 Culture helps L2 learners to widen their horizons of thinking and sharpen their views of the world through the study of some aspects of English culture and the culture of some other countries. The course is an integration of advanced reading skills, culture, and methodology. Through target reading passages, students are acquainted with various aspects of L2 culture and language and, hence, students are expected to develop an awareness of and sensitivity towards the values and traditions of other people across the globe.

560 207 Short Stories

This course builds on its prerequisite "Introduction to English Literary Genres" which introduces students to short story as one such genre. It provides further understanding of the elements of short story and the characteristics which distinguish it from long fiction. As it deals exclusively with this particular genre, the course allows students the opportunity to read a good number of English short stories that vary in complexity and techniques. Discussion will focus on the analysis of the elements of short fiction, language, and cultural issues.

560 208 Grammar of English

This course is designed to help students improve their linguistic accuracy and extend their range of expressions. It focuses on the grammatical problems encountered by students and encourages them to find their own answers. It also focuses on various features of English grammar with challenging exercises that engender creative, independent use of target structures.

560 301 Contrastive and Error Analysis

This course provides students with some insights into the differences between English and Arabic at the phonological, morphological, syntactic, semantic, and discourse levels. It further familiarizes students with the methodology of analyzing errors made by Arabic speakers in their attempt to learn English.

560 302 Methodology II

This course is a continuation of Methodology I. It gives students first hand experience of lesson planning with an emphasis on the nature of presentation, practice, and interactive activities. The primary objective of this course is to focus on both the theoretical and the practical aspects of teaching the four basic language skills (listening, speaking, reading, and writing) in addition to other aspects of teaching English as a foreign language. The course focuses on classroom-related issues such as error correction, asking questions in the classroom, etc.

560 303 Applied Linguistics

This course introduces students to the field of applied linguistics. It familiarizes students with applied linguistic investigation of some issues in the areas of language teaching and learning. It further familiarizes students with some key terms and concepts in these areas.

560 304 Pedagogical Grammar

This course aims at developing students' understanding of the role of English grammar in language development. It focuses on acquainting students with various techniques, methods, and approaches to teaching grammar. The course also reviews some basic grammar concepts that are likely to be taught in schools. It further helps students develop comprehensive lesson plans.

560 305 Children's Literature

This course deals with the nature of children's literature and the specific ways of making children's narratives and poems interesting and appealing. Students are exposed to many examples of children's literature such as poems, folktales, fantasies, realistic stories and biographies. The literary samples chosen for this course reflect the type of literature taught in Grades 1 - 9. The literary samples help students understand Western society and its cultural, moral, religious and aesthetic values as they are reflected in stories, poems, fairy tales, etc.

560 306 Discourse Analysis for Language Teachers

In this course, students are introduced to the field of discourse analysis and its relevance to language teaching. The course covers interesting issues such as the nature and scope of discourse analysis, spoken language, written language, differences between speech and grammar, cohesion, and coherence. The course gives special attention to the implications of discourse analysis in teaching English as a foreign language.

560 307 Language Learning and Teaching Strategies

This course aims at giving students the opportunity to learn, practice, and apply different learning and teaching strategies. The strategies comprise direct strategies (memory, cognitive, compensation strategies) and indirect strategies (metacognitive, affective, and social strategies). The students also learn how to apply these strategies to learning and teaching of the four language skills, and how further enhance their learning and teaching experiences by considering learner differences.

560 308 Phonetics and Phonology

This course introduces students to the analysis of English pronunciation and the scientific study of speech sounds. Theoretical principles underlying the articulation of speech sounds and their organization into syllables and words are combined with practical exercises designed to improve students' knowledge.

560 401 Introduction to Textbook Analysis

In this course, students are acquainted with the analysis of EFL textbooks in order to be able to identify their strengths, pitfalls, relevance, appropriateness, degree of complexity, etc. with a particular emphasis on school textbooks. Students are also familiarized with a variety of textbook analysis systems and checklists used in material evaluation.

560 402 Methodology III

The course gives students a good background on how children learn language and how to support children in their endeavor to learn a second language. It presents explicit instructions in selecting, adapting, creating, and evaluating classroom activities.

560 403 Testing in EFL

The course examines different types of English tests including vocabulary, grammar, pronunciation, reading, writing, speaking, and listening. It also considers such related issues as concepts of validity and reliability, principles of test administration, etc.

511 410 Practical Training

This course takes the form of an extensive practicum in schools. The focus in this course is, primarily, on learning from the practical experience of preparing and teaching lessons. The course also introduces trainees to core skills involved in teaching English as a foreign language. Students are expected to observe classes, teach lessons, and participate in professional activities under the supervision of university supervisors and cooperating teachers.

610 101 English Writing Skills

The course is designed to develop students' proficiency in writing academic essays using rhetorical modes such as analysis, classification, comparison, and contrast. The course focuses on the organization and logical development of ideas as well as on language accuracy. A special emphasis is put on cohesion and coherence.

610 204 Advanced English Reading Skills

In this course, students examine extensive readings in a variety of styles. The vocabulary in the readings includes words students typically encounter during their university study. Students are required to read articles and extract information from various forms of charts, graphs, and illustrations.

610 209 Advanced English Writing Skills

This course builds upon the skills acquired in the English Writing Skills course to further develop students' critical thinking and academic writing competencies. The course devotes part of the semester to the skills required to write summaries, critiques, and syntheses. It also focuses on writing a research paper with special attention to paraphrasing, using quotation, referencing, etc.

610 212 Introduction to Linguistics

This course introduces students to the basic concepts and issues in linguistics. It also focuses on the nature of human language and its main features. The course familiarizes students with the procedures of analyzing a language at various phonetic and phonological levels taking English as an example.

610 323 Introduction to English Literary Genres

This course introduces students to the study of English literary genres, fiction, drama, and poetry, giving them insights into the nature of literary discourse. It develops the language skills and critical thinking necessary for analyzing and appreciating English literature and culture.

610 412 Arabic-English Translation I

This course is designed to equip students with the basic skills of translation with special focus on translating from Arabic into English. It covers various registers including the social, scientific, etc.

610 439 Survey of 20th English Literature

This course deals with aspects of British and American literature that reflect the events that have shaped twentieth-century literature and consciousness. It focuses on prominent writers who dealt with the concerns of the periods: World War I, imagism, industrialization, modernism, and the absurd.

Bachelor of Education in Teacher Training Program in Mathematics & Science

The Department of Mathematics and Sciences shoulders the responsibility of teaching all courses of Mathematics and Physics at the different colleges of the university. Basically, the department offers a

Bachelor degree in Education – Teaching Mathematics and Sciences. The program is accredited by the ministry of higher education and scientific research. This program is provided in Arabic Language.

Program Outcomes

1. To apply knowledge of mathematics, sciences and Technology in education.
2. To use basic concepts in Education, Psychology, Teaching Methods and Curriculum Design.
3. To practice the knowledge of mathematics and sciences through differential, integral calculus, and basic sciences necessary.
4. To Practice the basic skills of computer, educational technology and internet efficiently to acquire and present mathematical and sciences knowledge to the learners.
5. To become an independent teacher/learner that recognize the need for engage in life-long learning.
6. To understand the professional and ethical responsibility for being a teacher of mathematics and science.

Admission Requirements

- Certified UAE secondary school certificate or its equivalent, with a minimum average grade 60 percent.
- Passing an interview that is run by the college.

Graduation requirements

- Students are required to complete a total of 132 credit hours and a minimum of 2.0 GPA out of 4.0.
- Students should successfully pass 42 courses.

Career Opportunities

- Teaching in the elementary and secondary schools.
- Working in institutions related to the areas of media, endowment (Awqaf) Authority, legislative courts, educational management etc.

Bachelor of Education in Teacher Training Program in Arabic Language & Islamic Studies

The Arabic and Islamic Studies program aims at academically preparing a generation of graduates; holders of a college degree in Arabic Language and Islamic Studies who are able to participate in the enrichment of the intellectual, cultural, and educational institutions in and out of the UAE. The program reflects the diversity and complexity of the Arabic/Islamic culture and civilization. While studying Arabic Language and Islamic Studies, the students will learn about the linguistics and culture of Arabic across history. They will also learn about the teaching methodology of Arabic language and Islamic studies and using the educational technology and its applications. It helps students realize how Arabic language has grown over centuries. Arabic Language and Islamic Studies can set students off on many career paths; they can become lecturers or teachers. This field, in addition to the teaching profession, can help graduates join the fields of business,

journalism, etc. Moreover, the program is accredited by the Ministry of Higher Education and Scientific Research. This program is introduced in Arabic Language.

Admission Requirements

- Certified UAE secondary school certificate or its equivalent, with a minimum average grade 60 percent.
- Passing an interview that is run by the college.

Graduation requirements

- Students are required to complete a total of 132 credit hours and a minimum of 2.0 GPA out of 4.0.
- Students should successfully pass 42 courses.

Career Opportunities

- Teaching in the elementary and secondary schools.
- Working in institutions related to the areas of media, endowment (Awqaf) Authority, legislative courts, educational management etc.

Professional Diploma in Teaching (Graduate Program)

Overview:

The Professional Diploma program in teaching is offered by the Department of Educational Sciences. The program aims to qualify bachelor's degree graduates who wish to join the teaching profession. It also contributes in improving the qualifications of teachers who are working in the field of education and in developing them educationally. The general objectives and outcomes of the program are derived from the basic educational knowledge and skills that the teacher must have in light of the most recent relevant demands and the international standards.

The program Goals:

1. Provide the learner with the knowledge and skills that are related to the educational qualifications of the areas of: teaching methods, psychology, curricula, classroom management, testing and evaluation.
2. Prepare the learner to be able to obtain the basic professional skills necessary to perform his or her duties successfully.
3. Develop the learner' necessary skills in the use of modern technologies and their applications in the classroom.
4. Develop the learner's social communication skills.
5. Develop the learner's ability to rely on himself or herself and take the appropriate decision at the right time.
6. Apply the scientific research skills and the use of statistical methods in conducting a research.

Learning Outcomes:

On successful completion of the general education program the graduate will be able to:

1. Identify the steps to build a curriculum and its components.
2. Apply the principles of teaching and learning theories in the classroom environment or learning situations.
3. Use the technology and learning resources of the learning situation to develop the capacities, knowledge, and skills among students.

4. Implement research and studies that contribute to the development and improvement of education and the learning process.
5. Design achievement tests according to the students' levels and their developmental characteristics.
6. Analyze students' classroom problems and find solutions for them.
7. The Professional employment of the results of a research in the improvement of the educational process at school.

Admission Requirements

- Certified Bachelor degree from an accredited university or its equivalent with a minimum GPA of 2.0.
- Passing an interview that is run by the college.

Graduation requirements

- Graduate students are required to complete a total of 24 credit hours and a minimum of 2.0 GPA out of 4.0.
- Graduate students should successfully pass 7 courses including the course of practical training and an optional course. The practical training course weights 6 credit hours while all other 6 courses weigh 3 credit hours each.

Career Opportunities

- Teaching in secondary and high schools.
- Working in institutions related to the areas of media, endowment (Awqaf) authority, Sharia courts, educational management, etc.

Faculty Members

Ajman Campus

Faculty Members					
Prof. Dr. Cheikh Ould Hamoud,	Professor Dean	Mathematics	PhD	1998	Univ. of Mohammaed V - Agdal / Morroco
Dr. Mazen Ahmed Jaradat, Head of Department of Arabic &Islamic studies	Associate Professor	Arabic Language	PhD	1993	Ain Shams Univ, Egypt
Dr. Sami Al-Qatawneh, Head of Education Science. Department	Assistant Professor	Methods of Teaching Arabic	PhD	2005	Jordan
Dr. Mohamed Farhat Mehdi,	Assisstant Professor	Applied Linguistics	PhD	1987	University of Texas-AUS
Prof. Dr. Samir Hadid	Professor	Mathematics	PhD	1979	London Univ.
Prof.Dr. Kubais S. A.Fahady	Professor	Mathematics	PhD	1972	The Univ. of Hull / UK
Dr. Omar Akesh	Associate Professor	Arabic Language	PhD	1993	Damascus, Syria
Dr. Muzahim Bani T. Al-ubaidi	Associate Professor	Mathematics	PhD	1993	The Hungarian Committee
Prof. Dr. Ababakr Ali El-Saddik	Professor	Islamic Studies	PhD	1990	Al Azhar Univ. / Egypt

Dr. Abdul Kareem A. Yaseen	Associate Professor	Mathematics	PhD	1987	Wales Univ. / UK
Dr. Atef Fayez Abd El Kader Head of Department of Math & Science.	Assistant Professor	Physics	PhD	1998	The Queens Univ / UK
Dr. Najah Shabib	Assistant Professor	Education	PhD	2001	Wales Univ. / UK
Dr. Randa Abdou Soliman Head of TEFL Department	Assistant Professor	Curricula & Methodology/ TEFL	PhD	2011	Alexandria Univ. / Egypt
Dr. Ghassan Mohamed Alchikh	Assistant Professor	Islamic Studies	PhD	2012	Damascus Univ. / Syria
Mr. Mahmoud Ibrahim Y. khrais	Lecturer	Mathematics	Master	1982	Sam Houston
Dr Mohd Elmagzoub Ahmed Babiker	Assistant Professor	Education Technology	PhD	207	Univ. Khartoum
Dr. Elmuez Dawi	Assistant Professor	Physics	PhD	2009	Utrecht University - Netherlands
Ms. Khitam Aqel	Lecturer	Mathematics	Master	2015	American University of Sharjah-AUS
Mr. Samer Zyoud	Lecturer	Physics	Master	2003	Baghdad University - Iraq
Ms. Enas Khalil Alquqa	Lecturer	Business-HR	Master	2013	Ajman University Of science & Technology
Ms. Ahood Al Rawashdeh	Lecturer	TESL	Master	2002	University of Central Oklahoma
Ms. Tizreena Ismail	Lecturer	English Language	Master	2008	Cardiff University
Ms. Asifa Alhayali	Lecturer	Physics	Master	2013	Umea University Sweden

College of Engineering

Engineering is the profession of applying theories and fundamentals of pure science to solve practical problems and develop new equipment, instruments and techniques to meet the needs of society in a variety of areas such as electrical power, electronics, communication, control, IT, architecture, interior design, medicine, transportation and agriculture.

Mission

Consistent with the University mission, the College of Engineering has been established to provide high quality education in engineering. The College programs focus on teaching students the fundamental principles of engineering and their applications to solving real-world problems. It places special emphasis on developing the technical as well as generic skills of its students so that they are well qualified for gainful employment in their area of specialization and can effectively contribute to the technological advances of the community. The programs also seek to prepare the students to undertake graduate studies in their area of specialization.

Goals

The academic programs of the College of Engineering are designed to produce graduates who are:

- Competent engineers with sound knowledge and professional attitude
- Capable of applying theoretical knowledge to solve practical problems
- Equipped with skills required for productive engineering careers
- Able to perform as individuals and team members
- Proficient in oral and written communication
- Motivated for life-long learning throughout their careers
- Capable of pursuing graduate studies

Departments

- Department of Electrical Engineering
- Department of Biomedical Engineering
- Department of Architectural Engineering
- Department of Interior Design

Programs Offered

The College of Engineering offers the following programs:

Undergraduate Programs:

- Bachelor of Science in Electrical Engineering (Electronics)
- Bachelor of Science in Electrical Engineering (Communication)
- Bachelor of Science in Electrical Engineering (Instrumentation and Control)
- Bachelor of Science in Biomedical Engineering
- Bachelor of Science in Architectural Engineering
- Bachelor in Interior Design

Graduate Program:

Master in Urban Design

Admission Requirements for Undergraduate Programs

Admission to the College of Engineering requires a UAE secondary school certificate (science major) or its equivalent with a minimum grade of 70 percent for Electrical Engineering (electronics, communication, instrumentation and control), Biomedical Engineering and Architectural Engineering programs. For

admission to the Interior Design program, the minimum acceptable grade is 60 percent (science or arts major).

For further information please refer to the University admissions policy.

Facilities

Academic Staff

College members hold terminal degrees from internationally-recognized universities and are well versed in their areas of specialization.

Laboratories

The College of Engineering has well-equipped laboratories which provide practical hands-on experience to engineering students of all specializations.

The specialized laboratories in the College are as follows:

- Electronics Laboratory
- Communication Laboratory
- Biomedical Laboratory
- Computer Aided Design Laboratory
- Power Electronics Laboratory
- Measurements Laboratory
- Digital Design Laboratory
- Control Laboratory
- Computer Laboratory
- Projects Laboratory

Studios

The College accommodates modern studios equipped with a variety for architectural engineering and interior design students.

Lecture Rooms

Lecture rooms are equipped to facilitate the use of audiovisual aids such as overhead projectors, slide projectors, computer projection devices and video players. Many lecture rooms are also connected to the university computer network.

Other Facilities

College of Engineering students have access to a wide range of university facilities including computer labs, learning and information resources, a bookshop, sports and recreation facilities, swimming pool, cafeteria and clinics.

Training

External training is an essential part of the curriculum of all College of Engineering programs. Students are required to complete external training lasting from three to four months (depending on the program). The College has extensive links with local organizations such as engineering companies, hospitals, power plants, interior design companies and telecommunication firms, who offer on-site external training to engineering students. The aim of the external training program is to enable students to acquire practical skills, gain an understanding of the work environment and improve their communication skills.

Prior to the external training, students of Electrical and Biomedical Engineering programs take part in an internal training program to enhance their practical and professional skills.

Bachelor of Science in Electrical Engineering (Electronics)

Modern life has become increasingly dependent on electronic devices and systems. Electronics Engineering plays a major role in a wide range of industries and is one of the fastest developing specialization fields. Competent electronics engineers are needed in a wide range of industries involving electronic equipment and systems. The electronics engineering specialization equips its graduates with technical knowledge and skills in areas such as electronic circuit design, microcontroller-based systems, digital systems, instrumentation, control systems, CAD and integrated circuit applications.

Mission

The mission of the Electrical Engineering (Electronics) program is to provide high quality electronic engineering education to its students. It places special emphasis on developing the technical as well as generic skills of its students so that they are well qualified for gainful employment in their area of specialization and are able to contribute effectively to the advancement of the community. The program also aims to prepare its students for graduate study in electronics engineering.

Goals

The Electrical Engineering (Electronics) program is designed to produce graduates who have:

- strong foundation of basic sciences and mathematics and are able to apply this knowledge to analyze and solve engineering problems
- broad theoretical as well as practical knowledge related to electronics engineering specialization
- skills needed for designing, analyzing and trouble-shooting electronic circuits or systems
- proficiency in computer-aided design tools and software packages to design projects or systems to meet specified requirements
- good communication skills and ability to work effectively as team members
- the generic skills needed to function in the multidisciplinary, diverse, competitive and fast-changing engineering environment of the UAE
- abilities for critical thinking, lifelong learning, and updating of technical knowledge while working as professional engineers.

Program Outcomes (POs)

The Program Outcomes (POs) are also referred to as Student Outcomes (SOs). To combine both terminologies, these outcomes may also be referred to as Student/Program Outcomes. The EE program has 12 Program Outcomes, stated as A to L, as given below.

(A) an ability to apply knowledge of mathematics, science, and engineering

(B) an ability to design and conduct experiments, as well as to analyze and interpret data

(C) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

(D) an ability to function on multidisciplinary teams

(E) an ability to identify, formulate, and solve engineering problems

(F) an understanding of professional and ethical responsibility

(G) an ability to communicate effectively

(H) the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context

(I) a recognition of the need for, and an ability to engage in life-long learning

(J) a knowledge of contemporary issues

(K) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

(L) an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in Electronics.

Alignment of Program Outcomes to QFEmirates

The Program Outcomes are consistent with the level of qualification awarded as defined in the UAE Qualification Framework. Out of twelve Program Outcomes, four each are for knowledge, skills, and competencies, as follows:

Knowledge:

1) An ability to apply knowledge of mathematics, science, and engineering.
2) An ability to identify, formulate, and solve engineering problems.
3) A knowledge of contemporary issues.
4) An ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.

Skills:

1) An ability to design and conduct experiments, as well as to analyze and interpret data.
2) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
3) An ability to communicate effectively.
4) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Competencies:

1) An ability to function on multidisciplinary teams.
2) An understanding of professional and ethical responsibility.
3) Understanding of the impact of engineering solution in a global, economic, environmental, and societal context.
4) A recognition of the need for, and an ability to engage in life-long learning.

The alignment of Program Outcomes to QFEmirates is shown in the following Table :.

Table: Alignment of Program Outcomes to QFEmirates

Program Outcomes	Strand 1 Knowledge	Strand 2 Skills	Strand 3 Autonomy & Responsi-bility	Strand 4 Role in Context	Strand 5 Self-Development
A. an ability to apply knowledge of mathematics, science, and engineering	X				
B. an ability to design and conduct experiments, as well as to analyze and interpret data		X			
C. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability		X			
D. an ability to function on multidisciplinary teams			X		
E. an ability to identify, formulate, and solve engineering problems	X				
F. an understanding of professional and ethical responsibility				X	
G. an ability to communicate effectively		X			
H. the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context				X	
I. a recognition of the need for, and an ability to engage in life-long learning					X
J. a knowledge of contemporary issues	X				
K. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice		X			

L. an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.	**X**				

Admission Requirements

Admission to the electronics engineering specialization requires a UAE secondary school certificate (science major) or its equivalent with a minimum grade of 70 percent. For further information please refer to the university admissions policy.

Career Opportunities

Graduates of the electronics engineering specialization pursue careers in a wide range of industries and services, including the electronic and computer industries, industrial manufacturing plants, security control systems, design automation companies, product design and development companies and major service companies for electronic appliances.

Graduation Requirements

The Bachelor of Science degree is awarded upon the fulfillment of the following:

- Successful completion of all courses in the program curriculum (138 credit hours)
- Successful completion of 2 weeks of internal training and 12 weeks of external training at engineering companies (4 credit hours)
- The cumulative grade points average CGPA is at least 2.0

Degree requirements

The B.Sc. degree in Electrical Engineering (Electronics) requires the completion of 138 Cr. Hrs of course work, distributed according to the following plan, plus 4 credit hours of practical training or internship (total of 142 credit hours):

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	18
(b) University Elective Courses	6
2. College Required Courses	34
3. EE Required Courses	55
4. Specialization Courses	19
5. Graduation Projects I & II	6
Total Credit Hours (course work)	138

University General Education Requirements

(a) University Required Courses (18 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1010000	Orientation	1	0	0	0	---
1021100	Islamic Culture	3	0	1	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
1031331	Statistics	2	2	0	3	---
1031200	Environmental Sciences	3	0	0	3	---
1041200	IT Fundamentals	2	2	0	3	---
1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours

(b) University Elective Courses (Humanities or Arts) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1201150	Legal Culture	3	0	0	3	---
1121400	Introduction to Art	3	0	0	3	---
1071300	Introduction to Digital Photography	3	0	0	3	---
1091100	Introduction to Aesthetics	3	0	0	3	---
1091200	French Language	3	0	0	4	---
1151500	The Art of Written Expression	3	0	0	3	---
1191400	Academic Writing	3	0	0	3	---
1191500	The Art of Public Speaking	3	0	0	3	---

1021500	Introduction to Hadeeth and Sunna	3	0	0	3	---

(c) University Elective Courses (Social or Behavioral Sciences) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1141100	Economic Concepts	3	0	0	3	---
1151600	Emirates Society	3	0	0	3	---
1151300	General Psychology	3	0	0	3	---
1191100	English Communication Skills	3	0	0	3	---
1191600	Communication between Cultures	3	0	0	3	---
1131400	Library Information System	3	0	0	3	---
1071400	Critical and Analytical Thinking	3	0	0	3	---

College Required Courses (34 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite(s)
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
2171500	Introduction to Engineering	1	0	1	1	---
2173210	Report Writing & Presentation	3	0	1	3	2171500
2172030	Engineering Mathematics III	3	0	2	3	2171020
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2164010	Engineering Management	2	0	0	2	2173210
2164020	Financial Management	2	0	0	2	2173210

EE Required Courses (55 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signal and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communications	3	2	2	4	2122210
2123850	Electromagnetic Fields & Wave Propagation	3	0	2	3	2171220 2172030
2143520	Control Systems	3	2	2	4	2122210
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2133330	Microprocessors and Microcontrollers	3	2	0	4	2132350 2131400
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines & Power Systems	3	0	0	3	2152120
2173630	Probability and Random Variables	3	0	0	3	2171020

Specialization Required Courses & Graduation Projects (16 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2114290	Power Electronics	3	2	0	4	2113520 2152120
2114100	Digital System Design	3	0	2	3	2132350
2114180	VLSI Design	3	0	0	3	2113520 2132350
2114910	Graduation Project I	1	4	0	3	2113670
2114930	Graduation Project II	1	4	0	3	2114910

Specialization Elective Courses (9 Cr. Hrs.)

The student will take three of the following Specialization Electives as approved by the academic advisor. At least two of these courses must have the course code as 2114xxx. Advisor's approval is required if the third elective is not from the listed electives.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2114150	Digital Integrated Circuits	3	0	0	3	2113520 2132350
2114330	Communication Electronics	3	0	0	3	2113520 2123150
2114440	Optoelectronics	3	0	0	3	2113520 2123850
2114620	Solid-State Electronics	3	0	0	3	2113520
2114860	Nanotechnology	3	0	0	3	2113520
2114900	Selected Topics in Electronics	3	0	0	3	2113520
2114950	Directed Study in Electronics	3	0	0	3	2113670+Advisor's approval
2124340	Digital Signal Processing	3	0	2	3	2122210
2124560	Communication & Switching Networks	3	2	0	4	2123150
2144510	Fuzzy Logic and Neural Networks	3	0	0	3	2132350
2144436	Industrial Control Systems	3	2	0	4	2143520
2144780	Power System Protection & Control	3	0	0	3	2143520 2153350

Study Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
1010000	Orientation	1	0	0	0	---
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
1041200	IT Fundamentals	2	2	0	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
2171500	Introduction to Engineering	1	0	1	1	---
TOTAL		**15**	**6**	**5**	**17**	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
1021100	Islamic Culture	3	0	1	3	---
xxxxxxx	University Elective I	3	0	0	3	---
TOTAL		**15**	**2**	**7**	**16**	

SUMMER SEMESTER

1031200	Environmental Sciences	3	0	0	3	---
xxxxxxx	University Elective II	3	0	0	3	---
TOTAL		**6**	**0**	**0**	**6**	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220

2172030	Engineering Mathematics III	3	0	2	3	2171020
1031331	Statistics	2	2	0	3	---
TOTAL		**14**	**6**	**8**	**17**	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signals and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2173210	Report Writing & Presentation	3	0	1	3	2171500
TOTAL		**15**	**4**	**9**	**17**	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communication	3	2	2	4	2122210
2123850	Electromagnetic Fields and Wave Propagation	3	0	2	3	2171220 2172030
2133330	Microprocessors & Microcontrollers	3	2	0	4	2132350 2131400
2173630	Probability and Random Variables	3	0	0	3	2171020
TOTAL		**15**	**6**	**6**	**18**	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2143520	Control Systems	3	2	2	4	2122210
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines and Power Systems	3	0	0	3	2152120
1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours
TOTAL		**15**	**6**	**2**	**18**	

Summer Session: Training I (2104000) for six weeks period

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2114290	Power Electronics	3	2	0	4	2113520 2152120
2114100	Digital System Design	3	0	2	3	2132350
2114910	Graduation Project I	1	4	0	3	2113670
2114xxx	Specialization Elective I	3	0	0	3	As specified
2164010	Engineering Management	2	0	0	2	2173210
TOTAL		**12**	**6**	**2**	**15**	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2114180	VLSI Design	3	0	0	3	2113520 2132350
2114930	Graduation Project II	1	4	0	3	2114910
2114xxx	Specialization Elective II	3	0	0	3	As specified
21x4xxx	Specialization Elective III	3	0	0	3	As specified
2164020	Financial Management	2	0	0	2	2173210
TOTAL		**12**	**4**	**0**	**14**	

Summer Session: Training II (2104000) for six weeks period

Bachelor of Science in Electrical Engineering (Communication)

Communication engineering is concerned with modern techniques of transmitting various forms of information. The information can be digital or analog and transmitted by wired or wireless media, for example radio waves, cables and optical fibers. Radio, television, telephone and computer networks are examples of communication systems. The widespread use of modern communication systems demands qualified communication engineers to deal with the various technical aspects of these systems. The communication engineering specialization equips its graduates with technical knowledge and skills in areas such as communication systems, digital data communication, microwave engineering, satellite communication, mobile communication and computer networks.

Mission

The mission of the Electrical Engineering (Communication) program is to provide high quality communication engineering education to its students. It places special emphasis on developing the technical as well as generic skills of its students so that they are well qualified for gainful employment in their area of specialization and can contribute effectively to the advancement of the community. It also aims to prepare its students for graduate study in communication engineering.

Goals

The Electrical Engineering (Communication) program aims to produce graduates who have:

- strong foundation of basic sciences and mathematics and are able to apply this knowledge to analyze and solve engineering problems
- broad theoretical as well as practical knowledge related to communication engineering specialization
- skills needed for designing, analyzing, and trouble-shooting communication circuits or systems
- proficiency in computer aided design tools and software packages to design projects or systems to meet specified requirements
- good communication skills and ability to work effectively as team members
- the generic skills needed to function in the multidisciplinary, diverse, competitive and fast-changing engineering environment of the UAE
- abilities for critical thinking, lifelong learning, and updating of technical knowledge while working as professional engineers

Program Outcomes (POs)

The Program Outcomes (POs) are also referred to as Student Outcomes (SOs). To combine both terminologies, these outcomes may also be referred to as Student/Program Outcomes. The EE program has 12 Program Outcomes, stated as A to L, as given below.

(A) an ability to apply knowledge of mathematics, science, and engineering
(B) an ability to design and conduct experiments, as well as to analyze and interpret data
(C) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(D) an ability to function on multidisciplinary teams
(E) an ability to identify, formulate, and solve engineering problems
(F) an understanding of professional and ethical responsibility
(G) an ability to communicate effectively
(H) the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context
(I) a recognition of the need for, and an ability to engage in life-long learning
(J) a knowledge of contemporary issues

(K) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
(L) an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in Electronics.

Alignment of Program Outcomes to QFEmirates

The Program Outcomes are consistent with the level of qualification awarded as defined in the UAE Qualification Framework. Out of twelve Program Outcomes, four each are for knowledge, skills, and competencies, as follows:

Knowledge:

1) An ability to apply knowledge of mathematics, science, and engineering.
2) An ability to identify, formulate, and solve engineering problems.
3) A knowledge of contemporary issues.
4) An ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.

Skills:

1) An ability to design and conduct experiments, as well as to analyze and interpret data.
2) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
3) An ability to communicate effectively.
4) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Competencies:

1) An ability to function on multidisciplinary teams.
2) An understanding of professional and ethical responsibility.
3) Understanding of the impact of engineering solution in a global, economic, environmental, and societal context.
4) A recognition of the need for, and an ability to engage in life-long learning.

The alignment of Program Outcomes to QFEmirates is shown in the following Table :.

Table: Alignment of Program Outcomes to QFEmirates

Program Outcomes	Strand 1 Knowledge	Strand 2 Skills	Strand 3 Autonomy & Responsi-bility	Strand 4 Role in Context	Strand 5 Self-Development
A.an ability to apply knowledge of mathematics, science, and engineering	X				
B.an ability to design and conduct experiments, as well as to analyze and interpret data		X			
C.an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability		X			
D.an ability to function on multidisciplinary teams			X		
E.an ability to identify, formulate, and solve engineering problems	X				
F.an understanding of professional and ethical responsibility				X	
G.an ability to communicate effectively		X			
H.the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context				X	
I.a recognition of the need for, and an ability to engage in life-long learning					X
J.a knowledge of contemporary issues	X				
K.an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice		X			
L.an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.	X				

Admission Requirements

Admission to the Electrical Engineering (Communication) program requires a UAE secondary school certificate (science major) or its equivalent with a minimum grade of 70 percent. For further information please refer to the university admission policy.

Career Opportunities

Graduates of the communication engineering specialization can pursue careers in a wide range of areas, such as:

- local or international telecommunication companies to work as design, maintenance or marketing engineers
- digital data communication industry including computer networks
- mobile telephone industry
- television and radio stations

Graduation Requirements

The Bachelor of Science Degree is awarded upon the fulfillment of the following:

- Successful completion of all courses in the program curriculum (138 credit hours)
- Successful completion of two weeks of internal training and 12 weeks of external training in engineering companies (4 credit hours)
- The cumulative grade points average CGPA is at least 2.0

Degree requirements

The B.Sc. degree in Electrical Engineering (Communication) requires the completion of 138 Cr. Hrs of course work, distributed according to the following plan, plus 4 credit hours of practical training or internship (total of 142 credit hours):

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	18
(b) University Elective Courses	6
2. College Required Courses	34
3. EE Required Courses	55
4. Specialization Courses	19
5. Graduation Projects I & II	6
Total Credit Hours (course work)	138

University General Education Requirements

(a) University Required Courses (18 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1010000	Orientation	1	0	0	0	---
1021100	Islamic Culture	3	0	1	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
1031331	Statistics	2	2	0	3	---
1031200	Environmental Sciences	3	0	0	3	---

1041200	IT Fundamentals	2	2	0	3	---
1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours

(b) University Elective Courses (Humanities or Arts) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1201150	Legal Culture	3	0	0	3	---
1121400	Introduction to Art	3	0	0	3	---
1071300	Introduction to Digital Photography	3	0	0	3	---
1091100	Introduction to Aesthetics	3	0	0	3	---
1091200	French Language	3	0	0	4	---
1151500	The Art of Written Expression	3	0	0	3	---
1191400	Academic Writing	3	0	0	3	---
1191500	The Art of Public Speaking	3	0	0	3	---
1021500	Introduction to Hadeeth and Sunna	3	0	0	3	---

(c) University Elective Courses (Social or Behavioral Sciences) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1141100	Economic Concepts	3	0	0	3	---
1151600	Emirates Society	3	0	0	3	---
1151300	General Psychology	3	0	0	3	---
1191100	English Communication Skills	3	0	0	3	---
1191600	Communication between Cultures	3	0	0	3	---
1131400	Library Information System	3	0	0	3	---
1071400	Critical and Analytical Thinking	3	0	0	3	---

College Required Courses (34 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite(s)
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
2171500	Introduction to Engineering	1	0	1	1	---

2173210	Report Writing & Presentation	3	0	1	3	2171500
2172030	Engineering Mathematics III	3	0	2	3	2171020
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2164010	Engineering Management	2	0	0	2	2173210
2164020	Financial Management	2	0	0	2	2173210

EE Required Courses (55 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signal and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communications	3	2	2	4	2122210
2123850	Electromagnetic Fields & Wave Propagation	3	0	2	3	2171220 2172030
2143520	Control Systems	3	2	2	4	2122210
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2133330	Microprocessors and Microcontrollers	3	2	0	4	2132350 2131400
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines & Power Systems	3	0	0	3	2152120
2173630	Probability and Random Variables	3	0	0	3	2171020

Specialization Required Courses & Graduation Projects (16 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2124240	Digital Communication	3	0	2	3	2123150 2173060
2124340	Digital Signal Processing	3	0	2	3	2122210
2124660	Microwave Engineering	3	2	0	4	2123850
2124910	Graduation Project I	1	4	0	3	2113670
2124930	Graduation Project II	1	4	0	3	2124910

Specialization Elective Courses (9 Cr. Hrs.)

The student will take three of the following Specialization Electives as approved by the academic advisor. At least two of these courses must have the course code as 2124xxx. Advisor's approval is required if the third elective is not from the listed electives.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2114100	Digital System Design	3	0	2	3	2132350
2114330	Communication Electronics	3	0	0	3	2113520 2123150
2114440	Optoelectronics	3	0	0	3	2113520 2123850
2124450	Radar Systems	3	0	0	3	2123150 2123850
2124560	Communication & Switching Networks	3	2	0	4	2123150
2124610	Telecommunication Systems	3	0	0	3	2123150
2124670	Wireless Communications	3	0	0	3	2123150 2123850
2124900	Selected Topics in Communication	3	0	0	3	2123150
2124950	Directed Study in Communication	3	0	0	3	2123150+Advisor's Approval
2144436	Industrial Control Systems	3	2	0	4	2143520
2144510	Fuzzy Logic and Neural Networks	3	0	0	3	2132350

Study Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
1010000	Orientation	1	0	0	0	---
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
1041200	IT Fundamentals	2	2	0	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
2171500	Introduction to Engineering	1	0	1	1	---
TOTAL		**15**	**6**	**5**	**17**	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
1021100	Islamic Culture	3	0	1	3	---
xxxxxxx	University Elective I	3	0	0	3	---
TOTAL		**15**	**2**	**7**	**16**	

SUMMER SEMESTER

1031200	Environmental Sciences	3	0	0	3	---
xxxxxxx	University Elective II	3	0	0	3	---
TOTAL		**6**	**0**	**0**	**6**	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220

2172030	Engineering Mathematics III	3	0	2	3	2171020
1031331	Statistics	2	2	0	3	---
TOTAL		**14**	**6**	**8**	**17**	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signals and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2173210	Report Writing & Presentation	3	0	1	3	2171500
TOTAL		**15**	**4**	**9**	**17**	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communication	3	2	2	4	2122210
2123850	Electromagnetic Fields and Wave Propagation	3	0	2	3	2171220 2172030
2133330	Microprocessors & Microcontrollers	3	2	0	4	2132350 2131400
2173630	Probability and Random Variables	3	0	0	3	2171020
TOTAL		**15**	**6**	**6**	**18**	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2143520	Control Systems	3	2	2	4	2122210
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines and Power Systems	3	0	0	3	2152120
1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours
TOTAL		**15**	**6**	**2**	**18**	

Summer Session: Training I (2104000) for six weeks period

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2124240	Digital Communication	3	0	1	3	2123150 2173060
2124340	Digital Signal Processing	3	0	2	3	2122210
2124910	Graduation Project I	1	4	0	3	2113670
2124xxx	Specialization Elective I	3	0	0	3	As specified
2164010	Engineering Management	2	0	0	2	2173210
TOTAL		**12**	**4**	**3**	**14**	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2124660	Microwave Engineering	3	2	0	4	2123850
2124930	Graduation Project II	1	4	0	3	2124910
2124xxx	Specialization Elective II	3	0	0	3	As specified
21x4xxx	Specialization Elective III	3	0	0	3	As specified
2164020	Financial Management	2	0	0	2	2173210
TOTAL		**12**	**6**	**0**	**15**	

Summer Session: Training II (2104000) for six weeks period

Bachelor of Science in Electrical Engineering (Instrumentation and Control)

Considering the recent significant developments in the fields of instrumentation and control and the rapid industrialization of the UAE, the demand for engineers specializing in instrumentation and control engineering is on the rise. Instrumentation and control engineering has applications in modern industries which manufacture a variety of products. It also has extensive applications in various control systems encountered in everyday life. The Instrumentation and Control Engineering specialization prepares students to deal with modern techniques used in instrumentation and control systems. In addition to developing a strong theoretical basis, it provides students with the laboratory experience they need to enhance their practical skills. It also develops their generic skills so that upon graduation they are well prepared to start their professional careers.

Objective

To provide students with a broad theoretical knowledge base and equip them with strong practical application skills so that they can meet the competitive requirements of the job market in instrumentation and control engineering, and are well prepared to pursue higher study in this fast-developing field.

Goals

The Electrical Engineering (Instrumentation and Control Engineering) program aims to produce graduates who have:

- strong foundation of basic sciences and mathematics and are able to apply this knowledge to analyze and solve engineering problems
- broad theoretical as well as practical knowledge related to related to instrumentation and control specialization
- skills needed for designing, analyzing, and trouble-shooting circuits or systems utilized in instrumentation and control fields
- proficiency in computer aided design tools and software packages to design projects or systems to meet specified requirements
- good communication skills and ability to work effectively as team members
- the generic skills needed to function in the multidisciplinary, diverse, competitive and fast-changing engineering environment of the UAE
- abilities for critical thinking, lifelong learning, and updating of technical knowledge while working as professional engineers.

Program Outcomes (POs)

The Program Outcomes (POs) are also referred to as Student Outcomes (SOs). To combine both terminologies, these outcomes may also be referred to as Student/Program Outcomes. The EE program has 12 Program Outcomes, stated as A to L, as given below.

(M)an ability to apply knowledge of mathematics, science, and engineerin
(N) an ability to design and conduct experiments, as well as to analyze and interpret data
(O) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
(P) an ability to function on multidisciplinary teams
(Q) an ability to identify, formulate, and solve engineering problems
(R) an understanding of professional and ethical responsibility
(S) an ability to communicate effectively
(T) the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context
(U) a recognition of the need for, and an ability to engage in life-long learning

(V) a knowledge of contemporary issues
(W) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
(X) an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in Instrumentation and Control.

Alignment of Program Outcomes to QFEmirates

The Program Outcomes are consistent with the level of qualification awarded as defined in the UAE Qualification Framework. Out of twelve Program Outcomes, four each are for knowledge, skills, and competencies, as follows:

Knowledge:

5) An ability to apply knowledge of mathematics, science, and engineering.
6) An ability to identify, formulate, and solve engineering problems.
7) A knowledge of contemporary issues.
8) An ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.

Skills:

5) An ability to design and conduct experiments, as well as to analyze and interpret data.
6) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
7) An ability to communicate effectively.
8) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Competencies:

5) An ability to function on multidisciplinary teams.
6) An understanding of professional and ethical responsibility.
7) Understanding of the impact of engineering solution in a global, economic, environmental, and societal context.
8) A recognition of the need for, and an ability to engage in life-long learning.

The alignment of Program Outcomes to QFEmirates is shown in the following Table :.

Table: Alignment of Program Outcomes to QFEmirates

Program Outcomes	Strand 1 Knowledge	Strand 2 Skills	Strand 3 Autonomy & Responsi-bility	Strand 4 Role in Context	Strand 5 Self-Development
A.an ability to apply knowledge of mathematics, science, and engineering	X				
B.an ability to design and conduct experiments, as well as to analyze and interpret data		X			
C.an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability		X			
D.an ability to function on multidisciplinary teams			X		
E.an ability to identify, formulate, and solve engineering problems	X				
F.an understanding of professional and ethical responsibility				X	
G.an ability to communicate effectively		X			
H.the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context				X	
I. a recognition of the need for, and an ability to engage in life-long learning					X
J.a knowledge of contemporary issues	X				
K.an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice		X			
L.an ability to demonstrate broad knowledge in the field of electrical engineering and specialized knowledge in chosen concentration.	X				

Admission Requirements

Admission to the Electrical Engineering (Instrumentation and Control Engineering) program requires a UAE secondary school certificate (science major) or its equivalent with a minimum grade of 70 percent. For further information please refer to the university admissions policy.

Career Opportunities

Graduates of the instrumentation and control engineering specialization can pursue careers in a wide range of areas, for example the petroleum industry, the chemical industry, power plants, the auto industry, robotics, the manufacturing industry and in engineering companies designing control systems for industry and smart homes.

Graduation Requirements

The Bachelor of Science degree is awarded upon the fulfillment of the following:

- Successful completion of all courses in the program curriculum (138 credit hours)
- Successful completion of two weeks of internal training and 12 weeks of external training in engineering companies (4 credit hours)
- The cumulative grade points average CGPA is at least 2.0

Degree requirements

The B.Sc. degree in Electrical Engineering (Instrumentation and Control) requires the completion of 138 Cr. Hrs of course work, distributed according to the following plan, plus 4 credit hours of training (total of 142 credit hours):

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	18
(b) University Elective Courses	6
2. College Required Courses	34
3. EE Required Courses	55
4. Specialization Courses	19
5. Graduation Projects I & II	6
Total Credit Hours (course work)	138

University General Education Requirements

(a) University Required Courses (18 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1010000	Orientation	1	0	0	0	---
1021100	Islamic Culture	3	0	1	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
1031331	Statistics	2	2	0	3	---
1031200	Environmental Sciences	3	0	0	3	---
1041200	IT Fundamentals	2	2	0	3	---

1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours

(b) University Elective Courses (Humanities or Arts) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1201150	Legal Culture	3	0	0	3	---
1121400	Introduction to Art	3	0	0	3	---
1071300	Introduction to Digital Photography	3	0	0	3	---
1091100	Introduction to Aesthetics	3	0	0	3	---
1091200	French Language	3	0	0	4	---
1151500	The Art of Written Expression	3	0	0	3	---
1191400	Academic Writing	3	0	0	3	---
1191500	The Art of Public Speaking	3	0	0	3	---
1021500	Introduction to Hadeeth and Sunna	3	0	0	3	---

(c) University Elective Courses (Social or Behavioral Sciences) (3 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1141100	Economic Concepts	3	0	0	3	---
1151600	Emirates Society	3	0	0	3	---
1151300	General Psychology	3	0	0	3	---
1191100	English Communication Skills	3	0	0	3	---
1191600	Communication between Cultures	3	0	0	3	---
1131400	Library Information System	3	0	0	3	---
1071400	Critical and Analytical Thinking	3	0	0	3	---

College Required Courses (34 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite(s)
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
2171500	Introduction to Engineering	1	0	1	1	---
2173210	Report Writing & Presentation	3	0	1	3	2171500

2172030	Engineering Mathematics III	3	0	2	3	2171020
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2164010	Engineering Management	2	0	0	2	2173210
2164020	Financial Management	2	0	0	2	2173210

EE Required Courses (55 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signal and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communications	3	2	2	4	2122210
2123850	Electromagnetic Fields & Wave Propagation	3	0	2	3	2171220 2172030
2143520	Control Systems	3	2	2	4	2122210
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2133330	Microprocessors and Microcontrollers	3	2	0	4	2132350 2131400
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines & Power Systems	3	0	0	3	2152120
2173630	Probability and Random Variables	3	0	0	3	2171020

(b) Specialization Required Courses & Graduation Projects (16 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2144436	Industrial Control Systems	3	2	0	4	2143520
2144440	Computer-Based Instrumentation and control	2	2	0	3	2133330
2144780	Power System Protection and Control	3	0	0	3	2143520 2153350
2144910	Graduation Project I	1	4	0	3	2113670
2144930	Graduation Project II	1	4	0	3	2144910

(c) Specialization Elective Courses (9 Cr. Hrs.)

The student will take three of the following Specialization Electives as approved by the academic advisor. At least two of these courses must have the course code as 2144xxx. Advisor's approval is required if the third elective is not from the listed electives.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2114100	Digital System Design	3	0	2	3	2132350
2114290	Power Electronics	3	2	0	4	2113520 2152120
2124340	Digital Signal Processing	3	0	2	3	2122210
2124560	Communication & Switching Networks	3	2	0	4	2123150
2144260	Intelligent Systems & Robotics	3	0	0	3	2133330
2144450	Digital Control Systems	3	0	0	3	2122210 2143520
2144510	Fuzzy Logic and Neural Networks	3	0	0	3	2132350
2144720	Biomedical Instrumentation	3	0	0	3	2143220
2144900	Selected Topics in Instrumentation & Control	3	0	0	3	2143220
2144950	Directed Study in Instrumentation & Control	3	0	0	3	2143220+Advisor's approval

Study Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
1010000	Orientation	1	0	0	0	---
2171010	Engineering Mathematics I	3	0	2	3	---
2171210	Engineering Physics I	3	2	2	4	---
2171410	Chemistry for Engineers	2	2	0	3	---
1041200	IT Fundamentals	2	2	0	3	---
1021400	Communication Skills in Arabic Language	3	0	0	3	---
2171500	Introduction to Engineering	1	0	1	1	---
TOTAL		**15**	**6**	**5**	**17**	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2131400	Computer Programming	3	0	2	3	1041200
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	---
1021100	Islamic Culture	3	0	1	3	---
xxxxxxx	University Elective I	3	0	0	3	---
TOTAL		**15**	**2**	**7**	**16**	

SUMMER SEMESTER

1031200	Environmental Sciences	3	0	0	3	---
xxxxxxx	University Elective II	3	0	0	3	---
TOTAL		**6**	**0**	**0**	**6**	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2132350	Logic Design	3	2	2	4	1041200
2132500	Engineering Analysis	3	0	2	3	2131400
2152110	Circuit Analysis I	3	2	2	4	2171220
2172030	Engineering Mathematics III	3	0	2	3	2171020
1031331	Statistics	2	2	0	3	---
TOTAL		**14**	**6**	**8**	**17**	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2112510	Electronic Devices & Circuits I	3	2	2	4	2152110
2122210	Signals and Systems	3	0	2	3	2172030
2152120	Circuit Analysis II	3	2	2	4	2152110
2172040	Engineering Mathematics IV	3	0	2	3	2172030
2173210	Report Writing & Presentation	3	0	1	3	2171500
TOTAL		**15**	**4**	**9**	**17**	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113520	Electronic Devices & Circuits II	3	2	2	4	2112510
2123150	Principles of Communication	3	2	2	4	2122210
2123850	Electromagnetic Fields and Wave Propagation	3	0	2	3	2171220 2172030
2133330	Microprocessors & Microcontrollers	3	2	0	4	2132350 2131400

2173630	Probability and Random Variables	3	0	0	3	2171020
TOTAL		**15**	**6**	**6**	**18**	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2113670	Design with Integrated Circuits	3	2	0	4	2113520
2143520	Control Systems	3	2	2	4	2122210
2143220	Instrumentation and Measurements	3	2	0	4	2113520 2152120
2153350	Electrical Machines and Power Systems	3	0	0	3	2152120
1141300	Innovation and Entrepreneurship	3	0	0	3	60 credit hours
TOTAL		**15**	**6**	**2**	**18**	

Summer Session: Training I (2104000) for six weeks period

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2144436	Industrial Control Systems	3	2	0	4	2143520
2144440	Computer-Based Instrumentation and control	2	2	0	3	2133330
2144910	Graduation Project I	1	4	0	3	2113670
2144xxx	Specialization Elective I	3	0	0	3	As specified
2164010	Engineering Management	2	0	0	2	2173210
TOTAL		**11**	**8**	**0**	**15**	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2144780	Power System Protection and Control	3	0	0	3	2143520 2153350
2144930	Graduation Project II	1	4	0	3	2144910
2144xxx	Specialization Elective II	3	0	0	3	As specified
21x4xxx	Specialization Elective III	3	0	0	3	As specified
2164020	Financial Management	2	0	0	2	2173210
TOTAL		**12**	**4**	**0**	**14**	

Summer Session: Training II (2104000) for six weeks period

Course Descriptions

2112510 Electronic Devices and Circuits I (3-2:4)

Basic properties of semiconductor materials. Theory of operation and applications of p-n junction diodes, Zener diodes and photodiodes. Theory of operation, biasing circuits, and small signal analysis of bipolar junction transistor and junction field effect transistor. Transistor configurations and two-port network representation of transistor AC equivalent circuits. Analysis and design of transistor amplifier circuits. Pre-requisite: 2152110

2113520 Electronic Devices and Circuits II (3-2:4)

Operational amplifiers and their applications. MOSFETs: theory of operation and characteristics of depletion and enhancement type MOSFETs, analysis of various biasing circuits. Small-signal model and AC analysis of amplifiers. Frequency response of amplifiers. Multistage amplifiers. Feedback amplifiers and oscillator circuits. Power amplifiers. Pre-requisite: 2112510

2113670 Design with Integrated Circuits (3-2:4)

A review of Op-Amps and Digital IC families. Design of analog signal conditioning circuits. Design of power supplies using IC regulators. Op-amp applications. Design of systems for measuring and displaying the measured values on LEDs. Applications of ADC, DAC, and counter ICs. Optoisolators, triacs, and control of high-voltage systems and actuators. Design of signal generators. Applications of commonly used ICs such as VCO, PLL, Timer IC, F/V and V/F ICs. Pre-requisite: 2113520

2114100 Digital System Design (3-0:3)

Design methodologies for implementing digital systems in programmable logic. Hardware Description Language (HDL) to describe and implement hardware. Behavioral modeling, dataflow modeling, structural modeling and design verification. Computer-aided synthesis and implementation for PLDs and FPGAs design. Finite state machines, VHDL models. Practical exercises for complete programmable logic design cycle. Prototype of a digital system starting with VHDL entry, functional and timing simulations, logic synthesis, device programming, and verification. Prerequisite: 2132350

2114150 Digital Integrated Circuits (3-0:3)

Properties and definitions of digital ICs, ideal inverter. BJT logic gates: BJT Inverter Circuit, RTL NOR and NAND gates, OR and AND gates. Description of DTL NOR and NAND gate circuits, Analysis of Modified DTL gate, Basic TTL circuit, Practical TTL circuit. MOSFET logic gates: NMOS and CMOS technologies and their applications. MSI digital circuits. Interfacing between logic families, and their comparison, BiCMOS technology. Memories. Pre-requisites: 2113520, 2132350

2114180 VLSI Design (3-0:3)

Introduction to VLSI design. Review of basic logic gates in CMOS. Analysis and review of transistors as switches. Silicon layers manufacturing process and lithography. CMOS, nMOS, pMOS, BiCOMS design. Pass transistors, TGs & MUXs building units, buffers and latches. CMOS configurations: dynamic CMOS. Stick diagrams, pattern diagrams, floor-planning and routing. DRAM, SRAM, ROM designs. Pre-requisites: 2113520, 2132350

2114290 Power Electronics (3-2:4)

Introduction to power electronics and power electronic devices. Power diodes and power transistors BJTs, MOSFETs, IGBTs, and SITs. Thyristor, thyristor firing circuits, triggering circuits using UJTs and PUTs. Analysis and design of single-phase/three-phase half-wave/full wave uncontrolled/controlled rectifiers with resistive and inductive loads. AC voltage controllers: Principles of on-off and phase control, single-phase controllers with resistive load/inductive load. DC choppers: step-down and step-up operations. Three-phase inverters, DC and AC drives. Industrial applications. Pre-requisites: 2113520, 2152120

2114330 Communication Electronics (3-0:3)

Communication Systems. Types of electronic communications. Amplitude modulation (AM) and demodulation circuits. Single sideband (SSB) communication circuits. Frequency modulation (FM) and

demodulation circuits. Communication circuits: Oscillators, power amplifiers, mixers, impedance-matching networks. Multiplexing and Demultiplexing. Radio transmitter and receiver circuits. Digital Communication Circuits. Pre-requisites: 2113520, 2123150

2114440 Optoelectronics (3-0:3)

Fundamental concepts of semiconductors optical properties. Characteristics and classification of detectors. Radiation sources, classification of radiation sources. Population inversion and gain in a two-level lasing medium. Optical feedback and laser cavity. P-N junction laser operating principles, threshold current, Hetero-junction lasers, Quantum well lasers, device fabrication and fiber coupling. Optical fibers and design of optical systems. Pre-requisites: 2113520, 2123850

2114620 Solid-State Electronics (3-0:3)

Basic physics and transport mechanisms inside semiconductors. Bonding forces and energy bands in solids, drift of carriers in electric and magnetic fields. Bipolar and Field Effect devices: I-V characteristics, dependence of performance limits on device and circuit parameters. Metal-semiconductor devices: Physics of operation and high frequency performance enhancement. Low dimensional Quantum and high frequency devices: Tunnel diode, Gunn diode, Impatt diode, zero dimensional quantum dot devices, one dimensional quantum wire devices, two dimensional layered crystals, spintronic memory nanoelectronic resistive memory. Pre-requisite: 2113520

2114860 Nanotechnology (3-0:3)

Basic concepts and physics in the nanometer scale. Areas of application of Nanotechnology. Nanoparticle Beams. Electron and Ion Beam lithography. Deposition Methods. Nanoimprint methods. Chemical Synthesis of Self-Assembled Structures. Nanostructure Architecture. Characterization of Nanostructures. Architecture and Properties of Nano-electronic Devices. Quantum Dots as Light Emitters. Nanoelectromechanical Switches and Systems (NEMs). Applications of Nanotechnology. Pre-requisite: 2113520

2114900 Selected Topics in Electronics (3-0:3)

Topics of current interest in Electronics as selected by the faculty and approved by the EE Department. The course is tailored according to market demands and the technology directions. Pre-requisite: 2113520

2114950 Directed Study in Electronics (3-0:3)

Directed study in Electronics is conducted under the supervision of a faculty member. A student interested to undertake such a study shall submit a proposal outlining the description of the work to be performed with clearly defined objectives and intended outcomes. The study may include experimental investigation, computer simulation or completely theoretical research. The proposal must be approved by the concerned faculty and Head of the EE Department. Pre-requisites: 2113670 and Advisor's Approval

2122210 Signals and Systems (3-0:3)

Continuous- and discrete-time signals and systems. Basic system properties. Linear Time-Invariant (LTI) systems. Properties of LTI systems. Convolution sum. Fourier series of periodic signals. Fourier transform of non-periodic signals. Filtering. Analysis of continuous-time LTI systems using Laplace transform. Pre-requisite: 2172030

2123150 Principles of Communication (3-2:4)

Introduction to fundamentals of communication systems. Amplitude Modulation (AM): Modulation index, spectrum of AM signals, AM circuits. Single side band modulation, frequency division multiplexing. Frequency Modulation (FM): Spectrum of FM signals, FM circuits. FM versus AM. Sampling, quantization, coding, pulse code modulation, delta modulation, time division multiplexing. Shift Keying methods. Pre-requisite: 2122210

2123850 Electromagnetic Fields and Wave Propagation (3-0:3)

Electrostatics: Coulomb's Law, Gauss's Law. Electric fields in material space, Polarization in Dielectrics. Ampere's Law, Stoke's Theorem. Time-varying Fields, Faraday's Law, Maxwell's Equations in point form,

Maxwell's equations in integral form, boundary conditions. Wave equation, plane wave propagation, Poynting vector and average power. Transmission line theory, reflection and transmission on transmission lines. Pre-requisites: 2171220, 2172030

2124240 Digital Communication (3-0:3)

Review of random processes. Pulse Modulation: sampling process, Analog Pulse Modulation (PAM, PWM, PPM), Pulse Code Modulation (PCM). Time Division Multiplexing (TDM). Digital Communication Systems. Line coding, pulse shaping, equalization, and eye-pattern. M-ary baseband signaling. Digital carrier modulation and demodulation. Performance analysis of digital communication systems. Error detection and correction. Error control coding. Spread Spectrum Communication. Pre-requisites: 2123150, 2173060

2124340 Digital Signal Processing (3-0:3)

Review of discrete-time signals and systems. Transform-domain representations of signals: Discrete-time Fourier Transform, Fast-Fourier Transform, applications of Z-Transform. Transform-domain representations of LTI systems: Types of transfer functions, stability condition and test. Frequency response of a Rational Transfer Function. Concept of filtering: Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) Filters. Pre-requisite: 2122210

2124450 Radar Systems (3-0:3)

Introduction to modern radar systems; examples of simple radar systems and their applications. Radar block diagram. Overview of the radar equation. Define radar frequencies, radar cross section (RCS). Design of a surveillance radar. Detection theory, matched filter detection. Range and range ambiguity. Doppler and velocity measurements. Radar transmitters. Pre-requisites: 2123150, 2123850

2124560 Communication and Switching Networks (3-2:4)

Introduction to computer networks, protocol architecture and OSI reference model. Local Area Network (LAN): Topologies and transmission media. high-speed LAN. Token-Ring, FDDI. Circuit switching and packet switching, ISDN, DSL, packet switching network, X.25, frame relay, ATM. Internetworking devices. UDP, TCP architecture, Internet protocols, TCP/IP. Application Layer: Client-server model, socket interface, SMTP, FTP, HTTP, and WWW. Wireless Networking. Pre-requisite: 2123150

2124610 Telecommunication Systems (3-0:3)

Introduction to telecommunication systems. Telecommunication fundamentals and transmission media characteristics. Design analogue and digital data transmission schemes. Telephony systems: ISDN and PSTN, essentials of traffic engineering. Overview of Wireless LAN technology. Comparison of ZigBee with other standards and applications. Introduction to satellite and optical communication. Pre-requisites: 2123150

2124660 Microwave Engineering (3-2:4)

Introduction to microwave engineering, time domain analysis of transmission lines. Bounce diagrams. Steady-State Waves on Transmission Lines, field equations for lossless guiding structures, TEM waves. Power flow on a transmission line. Rectangular and Circular waveguides, Coaxial Lines and Stripline, Microstrip Lines. Impedance transformation and matching techniques. Scattering Matrix. Passive Microwave Devices. Terminators and attenuators. Phase shifters. Directional couplers. Hybrid couplers. Antennas. Applications of Microwave Engineering. Pre-requisite: 2123850

2124670 Wireless Communications (3-0:3)

Introduction to cellular mobile radio systems: Cellular-concept system design fundamentals, trunking and grade of service. Mobile channel, large scale and small-scale fading. Outdoor propagation models. Multiple access techniques for mobile communication. Modern wireless communication systems: Second-generation (2G) cellular networks, Third-Generation (3G) and Fourth Generation (4G) wireless systems. Pre-requisites: 2123150, 2123850

2124900 Selected Topics in Communication (3-0:3)
Topics of current interest in Communication as selected by the faculty and approved by the EE Department. The course is tailored according to market demands and the technology directions. Pre-requisites: 2123150

2124950 Directed Study in Communication (3-0:3)
Directed study in Communication is conducted under the supervision of a faculty member. A student interested to undertake such a study must submit a proposal outlining the description of the work to be performed with clearly defined objectives and intended outcomes. The study may include experimental investigation, computer simulation or completely theoretical research. The proposal must be approved by the concerned faculty and the Head of EE Department. Pre-requisites: 2123150 and Advisor's Approval.

2131400 Computer Programming (3-0:3)
Problem solving using flowcharts, structure of a C++ program, data types, operators, variables and constants. Input and output, output formatting. Control Statements: IF and SWITCH, WHILE, DO-WHILE and FOR statements. Function definition and calling, library functions, arrays and strings, pointers. File input and output. Pre-requisite: 1041200

2132350 Logic Design (3-2:4)
Basic theorems and properties of Boolean Algebra and boolean functions. Simplification of Boolean Functions: Karnaugh Map Method. Product of Sums (POS) and Sum of Products (SOP) forms. Combinational logic circuits: Design and analysis procedures. Decoders, encoders, multiplexers, demultiplexers, ROM, PLA and PAL. Sequential logic circuits: Flip Flops (RS, D, JK, T), design procedure for clocked sequential circuits, counters. Registers and shift registers. Pre-requisite: 1041200

2132500 Engineering Analysis (3-0:3)
Developing C++ programs to solve electrical engineering problems. MATLAB programming environment, vectors and matrices, input/output, M-files: scripts and functions, control statements. Plotting with MATLAB. GUI in MATLAB. Introduction to SIMULINK. Electrical system modeling via SIMULINK. Introduction to LabVIEW. Development of Virtual Instruments using LabVIEW. Pre-requisite: 2131400

2133330 Microprocessors and Microcontrollers (3-2:4)
Introduction to microprocessor and its internal architecture. Typical microprocessor bus systems. Addressing modes and address decoding. Memory and I/O interface. Assembly language programming. Microcontrollers and embedded systems. Programming of microcontroller using C language. Interrupt processing and interrupt-based control. Microcontroller interfacing to real-world applications. Design and implementation of course projects using a microcontroller. Pre-requisites: 2132350, 2131400

2143220 Instrumentation and Measurements (3-2:4)
Basic measurement concepts, sources and types of measurement errors, sources of noise and interference. DC and AC Bridges and their applications. Analog DC and AC meters. Oscilloscopes: types, specifications, operation, measurements with oscilloscopes. Electronic voltmeters, digital multimeters, electronic counters. Transducers and their applications. Pre-requisites: 2113520, 2152120

2143520 Control Systems (3-2:4)
Introduction to Control Systems: Characteristics, time response, steady-state error. Open loop and closed loop concepts, transfer function, time domain, frequency domain, stability of linear feedback control systems, Root Locus method, Bode diagram. Design of feedback control systems: principles of design, design with the PD, PI, and PID controllers. Performance evaluation of feedback control systems. Compensation: phase-lead, phase-lag and lead-lag compensation. Pre-requisite: 2122210

2144260 Intelligent Systems and Robotics (3-0:3)
Introduction to intelligent systems and robotics, applications of robots in industry and other workplaces, block diagram representation and explanation of various parts of a robot. Machine learning and its comparison with human learning. Application of artificial intelligence in robotics. Robot kinematics: Position

and motion analysis of a robot with different degrees of freedom. Different types of sensors, characteristics and comparison of actuating systems. Image processing and analysis. Communication technologies for robotics. Pre-requisite: 2133330

2144436 Industrial Control Systems (3-2:4)

Industrial control principles. Block diagram representation of industrial control systems. Application of analog and digital signal conditioning in industrial control. Thermal, optical, displacement, position, strain, motion, pressure, and flow sensors used in industrial control. Actuators in industrial control. Data Logging, Supervisory Control, Computer-based Controllers. Programmable Logic Controllers (PLCs). Sequential programming, Ladder diagrams. Introduction to Process Control Systems. Foundation Fieldbus and Profibus standards. Pre-requisite: 2143520

2144440 Computer-Based Instrumentation and Control (2-2:3)

Introduction to PC-based instrumentation and control. Explanation of standard bus types: ISA, EISA, PCI, PXI busses. IEEE 488 (GPIB) and RS-232 standards. Hardware and software interrupts, programmable interrupt controllers, interrupt service routines, DMA control and DMA controllers. Parallel Port interfacing. Serial Port Interfacing. USB Port interfacing. Data acquisition and control using plug-in cards. Development of virtual instruments using LabVIEW, remote data transmission and control, telemetry. Applications for a variety of measurements involving different kinds of sensors/transducers. Pre-requisite: 2133330

2144450 Digital Control Systems (3-0:3)

Discrete-time signals and systems, solution of difference equations by Z-transform. Sampling and reconstruction, zero-order hold equivalence, sampled-data systems, stability tests, state-space methods. Control system design parameters: dynamic response parameters and steady-state parameters; conventional design tools: root-locus and Bode diagram; compensation: phase-lead, phase-lag, and PID controller. Second-order and high-order digital controller structures. Software and hardware implementations of digital controller. Pre-requisites: 2122210, 2143520

2144510 Fuzzy Logic and Neural Networks (3-0:3)

Introduction to Fuzzy Logic and Neural Networks history, applications, and implementations. Fuzzy logic fundamentals, fuzzy sets, types of membership functions, linguistic variables, creation of fuzzy logic rule base, fuzzy logic operations. Fuzzy inference system. Neural network fundamentals, neural type learning process, single layer perceptron. Artificial neural networks architectures, training algorithms, genetic algorithms and evolution computing, neuro-fuzzy technology. Fuzzy control systems and applications. Associative memory Hopfield neural networks. Pre-requisites: 2132350

2144720 Biomedical Instrumentation (3-0:3)

Biomedical sensors and transducers. Biopotential amplifiers, pre-amplifier circuits, instrumentation amplifier, isolation amplifiers, surge protection, input guarding, filters and signal conditioning circuits. Physiological recording systems ECG, EMG, EEG, ERG, etc. Blood pressure and its measurement. Pace-makers and Defibrillators. Clinical laboratory instrumentation. Pre-requisite: 2143220

2144780 Power System Protection and Control (3-0:3)

Power system apparatus, modeling of overhead transmission lines, Per Unit system. Single-line diagram. Load flow analysis, balanced three-phase faults and analysis of power system during short circuits. Primary and backup protection systems. Different types of protective relays and their operating principles. Rotating machinery protection. Protection of transmission lines, transformers, bus-bars, and generators. Pilot relaying, digital relays. Power system control: load frequency control, automatic generation control, reactive power and voltage control. Pre-requisites: 2143520, 2153350

2144900 Selected Topics in Instrumentation and Control (3-0:3)

Topics of current interest in Instrumentation and Control as selected by the faculty and approved by the EE Department. The course is tailored according to market demands and the technology directions. Pre-requisite: 2143220

2144950 Directed Study in Instrumentation and Control (3-0:3)

Directed study in Instrumentation and Control is conducted under the supervision of a faculty member. A student interested to undertake such a study shall submit a proposal outlining the description of the work to be performed with clearly defined objectives and intended outcomes. The study may include experimental investigation, computer simulation or completely theoretical research. The proposal must be approved by the concerned faculty and the Head of EE Department. Pre-requisites: 2143220 and Advisor's Approval.

2152110 Circuit Analysis I (3-2:4)

Basic quantities: charge, current, voltage, resistance, energy and power. Analysis of series, parallel and series-parallel D.C. resistive circuits using Ohm's law, Kirchhoff's voltage and current laws. Star-Delta and Delta-Star Transformations. Analysis of more resistive circuits using loop and nodal methods, superposition, source transformation, Thevenin and Norton theorems, maximum power transfer theorem. Transient analyses of RC, RL, and RLC circuits with DC excitation. Pre-requisite: 2171220

2152120 Circuit Analysis II (3-2:4)

AC circuits: impedance and admittance, phasors and phasor diagrams, series and parallel circuits, power and power factor correction. Steady-state response using phasor method. Nodal and loop analysis, application of circuit theorems. Steady-state power analysis. Magnetically-coupled circuits. Analysis of balanced three-phase circuits. Frequency response of simple circuits. Series and parallel resonance. Pre-requisite: 2152110

2153350 Electrical Machines and Power System (3-0:3)

Introduction to power systems. Basics of generation, transmission and distribution of electrical energy. Control of reactive power, control of voltage and frequency. Contemporary issues related to power systems. Environmental issues. Load flow and power system stability. Basics of power system protection. Magnetic circuits and electromagnetics. Principles of DC machines. DC generators and motors. Speed control of DC motors. Permanent magnet DC motors. Transformers, voltage regulation and efficiency. Principles of A.C machines. Synchronous generators and motors, induction motors, speed control of induction motors. Servomotors. Stepper motors. Pre-requisite: 2152120

2164010 Engineering Management (2-0:2)

Introduction to engineering management and role of effective management. Strategic and operational planning, forecasting, action planning. Organization: activities, organizational structures, delegating, establishing working relationships. Basics of leadership. Controlling activities: setting standards, measuring, evaluating, and improving performance. Marketing Management: marketing process and strategies, pricing, promotion strategy, channels of distribution and types of distribution. Pre-requisite: 2173210

2164020 Financial Management (2-0:2)

Introduction to financial management concepts and financial skills. Ethical concerns. Time value of money. Annuities and Perpetuities, comparing rates. Income statement and cash flow statement. Long-term financial planning. Capital Budgeting: Net Present Value; Internal Rate of Return; Other Investment Criteria; Relevant Project Cash Flows. Capital market efficiency. Variability of returns. Pre-requisite: 2173210

2171010 Engineering Mathematics I (3-0:3)

Limits of functions, theorems about limits, evaluation of limit at a point and infinity, continuity. Derivatives of algebraic and trigonometric functions, maxima and minima, engineering applications of derivatives. The definite and indefinite integrals and their applications. Integration by parts, Integration using powers of trigonometric functions, Integration using trigonometric substitution, Integration by partial fractions. Integration of improper integrals. Transcendental Functions. Pre-requisite: None

2171020 Engineering Mathematics II (3-0:3)

Matrix addition, subtraction, multiplication and transposition. Complex numbers, algebraic properties of complex numbers, absolute values, complex conjugate, polar representation, powers and roots. Functions of several variables. Double and triple integrals in rectangular and polar coordinates. Applications of multiple integrals in engineering. Infinite sequences, tests for convergence, power series expansion of

functions, Taylor series, Laurent series, Fourier series and their applications in engineering. Pre-requisite: 2171010

2171210 Engineering Physics I (3-2:4)

Vectors, motion, and Newton's laws. Work, energy, momentum and conservation of momentum. Rotation of rigid bodies, dynamics of rotational motion. Equilibrium and elasticity. Stress and strain. Periodic motion. Engineering applications. Pre-requisite: None

2171220 Engineering Physics II (3-2:4)

Electric charge and electric field. Coulomb's law and Gauss's law with applications. Capacitance and dielectrics. DC circuits. Magnetic fields. Ampere's law and its applications. Electromagnetic induction, Faraday's law, Lenz's law, induced electric fields. Self- and mutual-inductance. Electromagnetic waves and Maxwell's equations. Optics and its engineering applications. Pre-requisites: None

2171410 Chemistry for Engineers (2-2:3)

Atoms, molecules, ions and formulas of ionic compounds. Electronic structure and the periodic table. Quantum numbers, energy levels and orbital. Orbital diagrams of atoms. Various types of bonds. Chemistry of metals and transition metals. Chemistry of semiconductors, polymers, polymerization. Introduction to organic chemistry, bonding and types of hybridization in carbon atom, alkanes and cyclo alkanes, alkyl and halogen substituents. Alkenes and alkynes, Diels-Alder reaction, problems. Pre-requisites: None

2171500 Introduction to Engineering (1-0:1)

Engineering profession and the role of engineers in modern developments, engineering ethics, and engineering disciplines. Electrical engineering, importance of math and science to engineers. Engineering design and analysis, lab skills for engineers, computer skills for engineers. Engineering curriculum, curriculum planning and management. Critical thinking, soft skills for engineers, creativity, engineering communications. Case studies on engineering ethics. Pre-requisite: None

2172030 Engineering Mathematics III (3-0:3)

Vector Calculus and its engineering applications. First order differential equations. Homogeneous linear second-order differential equations with constant and variable coefficients, non-homogeneous linear second-order differential equations with constant coefficients, higher-order linear differential equations with constant coefficients. Power series solution of differential equations. Laplace Transform, Inverse Laplace Transform. Application of Laplace Transform to solve ordinary differential equations. Introduction to partial differential equations (PDEs), first order PDEs, second order PDEs, boundary value problems, engineering applications. Pre-requisite: 2171020

2172040 Engineering Mathematics IV (3-0:3)

Linear Algebra: Matrices and determinants, solution of systems of linear equations, eigenvalues and eigenvectors, engineering applications, computer exercises. Complex Analysis: Complex functions, derivative of complex functions, analytic functions, Cauchy-Riemann equations, harmonic functions. Fourier analysis: Fourier Series, Fourier Integrals, Fourier series of even and odd functions with applications. Discrete Mathematics and its engineering applications. Pre-requisite: 2172030

2173630 Probability and Random Variables (3-0:3)

Concept of Probability. Discrete and continuous random variables. Operations on single random variable: Expected values and moments. Joint cumulative distribution function and joint probability density function. Sum of random variables. Independent random variables. Jointly Gaussian random variables. Definition and classification of random process, transmission of random process through linear filters, and optimum filtering. Applications in signal processing and communication systems. Pre-requisite: 2171020

2173210 Report Writing and Presentation (3-0:3)

Writing of technical reports, brief reports and progress reports. Business communication: business letters and memos, executive summary, business reports. Oral presentation: planning, preparation of visuals and delivering of an oral presentation. Pre-requisite: 2171500

21x4910 Graduation Project I (1-4:3)

Teams of three to four students shall design, implement, test, and demonstrate their graduation project in two semesters. Graduation Project I is to be completed in first semester and includes a literature survey, action plan, design of complete project taking into account realistic constraints, computer simulation (if applicable), partial implementation and testing. Report writing and oral presentation. Pre-requisite: 2113670

21x4930 Graduation Project II (1-4:3)

It is continuation of Graduation Project I in the second semester. Students will complete the implementation and testing of remaining part of their design. They will integrate the complete project, test it and prepare a PCB. Report writing, oral presentation, poster presentation and project demonstration. Pre-requisite: 21x4910.

Bachelor of Science in Biomedical Engineering

Mission

The mission of the biomedical engineering program is to produce graduates equipped with the theoretical knowledge and practical skills necessary for pursuing a successful professional career in the healthcare industry. The program also prepares its students for graduate studies.

Objectives

Biomedical Engineering program educational objectives are as follows:

Biomedical engineering graduates are:

1. Successful in applying theoretical knowledge and practical skills in the field of Biomedical Engineering.
2. Gainfully employed in the healthcare industry.
3. Successful in postgraduate studies.

- **BME Program Learning Outcomes**

  By the time of graduation, the students must have:

  (a) An ability to apply knowledge of mathematics, science, and engineering

  (b) An ability to design and conduct experiments, as well as to analyze and interpret data

  (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

  (d) an ability to function on multidisciplinary teams

  (e) an ability to identify, formulate, and solve engineering problems

  (f) an understanding of professional and ethical responsibility

(g) an ability to communicate effectively

(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

(i) a recognition of the need for, and an ability to engage in life-long learning

(j) a knowledge of contemporary issues

(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

(l) broad knowledge in the field of biomedical engineering.

Mapping of BME Program Learning Outcomes with Level–7 of the UAE's Qualifications Framework.

Descriptor Codes	QF Emirates Descriptor Statements (Level 7)	Related BME Program Outcome Codes
Knowledge		
K1	Specialized factual and theoretical knowledge and an understanding of the boundaries in a field of work or discipline, encompassing a broad and coherent body of knowledge and concepts, with substantive depth in the underlying principles and theoretical concepts.	**(a)**
K2	an understanding of allied knowledge and theories in related fields of work or disciplines and in the case of professional disciplines including related regulations, standards, codes, conventions	**(h), (l)**
K3	understanding of critical approach to the creation and compilation of a systematic and coherent body of knowledge and concepts gained from a range of sources	**(l)**
K4	a comprehensive understanding of critical analysis, research systems and methods and evaluative problem-solving techniques	**(e)**
K5	familiarity with sources of current and new research and knowledge with integration of concepts from outside fields	**(j)**
Skills		

S1	technical, creative and analytical skills appropriate to solving specialized problems using evidentiary and procedural based processes in predictable and new contexts that include devising and sustaining arguments associated with a field of work or discipline	**(c)**
S2	evaluating, selecting and applying appropriate methods, procedures or techniques in processes of investigation towards identified solutions	**(b)**
S3	evaluating and implementing appropriate research tools and strategies associated with the field of work or discipline	**(k)**
S4	highly developed advanced communication and information technology skills to present, explain and/or critique complex and unpredictable matters	**(g)**
Aspects of Competence		
Autonomy and responsibility		
CA1	can take responsibility for developing innovative and advanced approaches to evaluating and managing complex and unpredictable work procedures and processes, resources or learning	**(i)**
CA2	can manage technical, supervisory or design processes in unpredictable, unfamiliar and varying contexts	**(i)**
CA3	can work creatively and/or effectively as an individual, in team leadership, managing contexts, across technical or professional activities	**(d)**
CA4	can express an internalized, personal view, and accept responsibility to society at large and to socio-cultural norms and relationships	**(d), (f)**
Role in context		
CB1	can function with full autonomy in technical and supervisory contexts and adopt para-professional roles with little guidance	**(d)**

CB2	can take responsibility for the setting and achievement of group or individual outcomes and for the management and supervision of the work of others or self in the case of a specialization in field of work or discipline	**(d)**
CB3	can participate in peer relationships with qualified practitioners and lead multiple, complex groups	**(d)**
CB4	can take responsibility for managing the professional development and direct mentoring of individuals and groups	**(d)**
Self-development		
CC1	can self-evaluate and take responsibility for contributing to professional practice, and undertake regular professional development and/ or further learning can manage learning	**(i)**
CC2	can manage learning tasks independently and professionally, in complex and sometimes unfamiliar learning contexts	**(i)**
CC3	can contribute to and observe ethical standard.	**(f)**

Admission Requirements

Admission to the biomedical engineering program requires a UAE secondary school certificate (science major) or its equivalent with a minimum grade of 70 percent. For more information please refer to the university admissions policy.

Career Opportunities

Graduates will be qualified to work in the following areas:

- Healthcare facilities: biomedical engineering graduates are ideally suited to work as design and maintenance engineers for healthcare facilities such as hospitals and clinics
- Manufacturer's representatives and sales engineers: biomedical graduates have the technical knowledge required to communicate with a variety of health-care professionals, which enables them to act as representatives for manufacturers and suppliers of medical equipment and services
- Design and development: biomedical engineering graduates can work in companies on the design, development and testing of medical devices and systems.

- Management: program engineering graduates background in technology will allow them to be trained as managers in organizations dealing with healthcare and biological products
- Consultancy: biomedical engineering graduates are able to join consultancy agencies which provide advice for healthcare authorities regarding standards and quality evaluation of clinical facilities and services.

Graduation Requirements

The Bachelor of Science Degree is awarded upon the fulfillment of the following:

- Successful completion of all courses in the curriculum
- Successful completion of the equivalent of four months of engineering training
- Cumulative Grade Point Average CGPA of at least 2.

Degree Requirement

The B.Sc. degree in biomedical engineering requires the completion of 141Cr. Hrs. classified as follows:

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Required Courses	30
4. Specialization Required Courses	68
4. Specialization Elective Courses	9
5 Biomedical Design Projects I & II	6
6. Engineering Training	4
Total Credit Hours	141

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses (15 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
101000	Orientation	1	0	0	0	-
102110	Islamic Culture	3	0	1	3	-
102140	Communication Skills in Arabic Language	3	0	0	3	-
103110	Statistics	2	2	0	3	-
104110	Computer Applications	2	2	0	3	-
103120	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses (9 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Koran	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-

115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-
103130	Research Methodology	3	0	0	3	

1. College Required Courses (34 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
210400	Engineering Training	4	0	0	4	
213235	Logic Design	3	2	2	4	104110
217101	Engineering Mathematics I	3	0	2	3	----------
217102	Engineering Mathematics II	3	0	2	3	217101
217121	Engineering Physics I	3	2	2	4	----
217122	Engineering Physics II	3	2	2	4	----
217141	Chemistry for Engineers	2	2	0	3	-------
217203	Engineering Mathematics III	3	0	2	3	217102
217204	Engineering Mathematics IV	3	0	2	3	217203
217321	Report Writing and Presentation	3	0	1	3	218151-6

(b) Specialization Required Courses (74 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
218118	Biochemistry	2	2	0	3	217 141
218141	Biology	3	2	0	4	
218151	Introduction to Biomedical Engineering	1	0	2	1	
218221	Computer Programming	3	0	2	3	104 110
218229	Circuit Analysis	3	2	2	4	217 101, 217 122
218233	Electronic Circuits	3	2	2	4	218 229
218242	Human Anatomy	2	2	0	3	218 141
218245	Human Physiology	2	2	0	3	218 242, 2181180
218337-1	Microcontrollers and Computer Interfacing	3	2	0	4	213 235, 2182210
218346	Electrophysiology	2	2	0	3	218 245
218355	Biomaterials Basics and Applications	3	0	2	3	217 141, 218 242
218356	Bio-mechanics	3	0	2	3	217 121, 218 242
218361	Medical Electronics	2	2	2	3	218 233, 218 245
218365	Medical Instrumentation I	3	0	0	3	218 361, 218 346
218375-6	Signals and Systems	3	0	2	3	217 203
218392	Biomedical Design	2	2	0	3	218 361, 2173210, 2183371
218466	Medical Instrumentation II	3	2	0	4	218 3460
218471	Biomedical Imaging Systems. I	3	0	2	3	2182450
218472	Biomedical Imaging Systems. II	3	2	0	4	2184760
218476	Bio-Signal Processing	3	2	2	4	2183756
218496	Directed Study in Biomedical Engineering	3	0	2	3	Senior Standing
218498	Biomedical Design Project I	1	4	0	3	2183920, 218 3650
218499	Biomedical Design Project II	1	4	0	3	218 498

c) Specialization Electives Courses (9 Cr. Hrs.)

The student will take two of the following Specialization Electives as approved by the academic advisor.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
218512	Physiological Modeling and Control Systems	2	2	0	3	218 344
218515	Bio-fluid Mechanics	3	0	0	3	218 356
218513	IT and Computer Networks in Health-care	3	0	2	3	218 337-1
218516	Artificial Neural Networks and Fuzzy Logic	3	0	2	3	217 204
218517	Biomedical Image Processing	2	2	0	3	218 375-6
218511	Artificial Organs	3	0	0	3	218 344
218519	Selected Topics in Biomedical Engineering	3	0	0	3	Senior Standing
218514	Rehabilitation Engineering	3	0	0	3	218 365

Course Sequence

First Year

First Semester:

Course Code	Course Title	Credit Hrs	Lec. Hrs	Lab. Hrs	Tut. Hrs	Prerequisite
101 000	Orientation	0	1	0	0	--
217 101	Engineering Mathematics I	3	3	0	2	--
217 121	Engineering Physics I	4	3	2	2	--
217 141	Chemistry for Engineers	3	2	2	0	--
218 141	Biology	4	3	2	0	-
104 110	Computer Applications	3	2	2	0	-
		17	14	8	4	

Second Semester

Course Code	Course Title	Credit Hrs	Lec. Hrs	Lab. Hrs	Tut. Hrs	Prerequisite
103 130	Environmental science	3	3	0	0	--
217 102	Engineering Mathematics II	3	3	0	2	217 101
217 122	Engineering Physics II	4	3	2	2	--
218 118	Biochemistry	3	2	2	0	217 141

218 151	Introduction to Biomedical Engineering	1	1	0	2	--
		14	12	4	6	

Summer Semester

Course Code	Course Title	Credit Hrs	Lec. Hrs	Lab. Hrs	Tut. Hrs	Prerequisite
xxx xxx	University Elective I	3	3	0	0	Advisor's Approval
		3	3	0	0	

SECOND YEAR

First Semester

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
103 110	Statistics	3	2	2	0	--
213 235	Logic Design	4	3	2	2	104 110
217 203	Engineering Mathematics III	3	3	0	2	217 102
218 229	Circuit Analysis	4	3	2	2	217 122 217 101
218 242	Human Anatomy	3	2	2	0	218 141
		17	13	8	6	

Second Semester

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
212 221	Signals and Systems	3	3	0	2	217 203
213 145	Computer Programming	3	3	0	2	104 110
217 204	Engineering Mathematics IV	3	3	0	2	217 203
218 233	Electronic Circuits	4	3	2	2	218 229
218 243	Human Physiology	3	2	2	0	218 242
		16	14	4	8	

THIRD YEAR

First Semester:

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
102 110	Islamic Culture	3	3	0	1	--
102 140	Communication Skills in Arabic Language	3	3	0	0	---
218 344	Electrophysiology	3	2	2	0	218 243

218 356	Bio-mechanics	3	3	0	2	217 121 218 242
218 361	Medical Electronics	3	2	2	2	218 233 218 243
	University Elective I	3	3	0	0	
		18	16	4	5	

INTERNAL TRAINING (2 Weeks in Spring Break)

Second Semester:

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
218 354	Biomaterials Basics and Applications	3	3	0	2	217 141 218 242
218 365	Medical Instrumentation I	3	3	0	0	218 361 218 344
213 334	Microcontrollers and Computer Interface	4	3	2	0	213 235
218 391	Biomedical Design	3	2	2	0	218 361
xxx xxx	University Elective II	3	3	0	0	Advisor's Approval
		16	14	4	2	

210 400: ENGINEERING TRAINING I (6 Weeks in Summer)

FOURTH (FINAL) YEAR

First Semester

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
218 466	Medical Instrumentation II	4	3	2	0	218 365
218 471	Biomedical Imaging System I	3	3	0	2	218 243
218 476	Bio-Signal Processing	4	3	2	2	212 221
218 498	Biomedical Design Project I	3	1	4	0	218 391
xxx xxx	BME Elective I	3	3	0	0	Advisor's Approval
		17	13	8	4	

Second Semester

Course Code	Course Title	Credit Hrs.	Lec. Hrs.	Lab. Hrs.	Tut. Hrs.	Prerequisite
218 472	Biomedical Imaging System II	4	3	2	0	218 471
218 499	Biomedical Design Project II	3	1	4	0	218 498
218 497	Directed Studies in Biomedical Engineering	3	3	0	2	Department approval
xxx xxx	BME Elective II	3	3	0	0	Advisor's Approval
xxx xxx	BME Elective III	3	3	0	0	Advisor's Approval
		16	13	6	2	

210 400: ENGINEERING TRAINING II (6 Weeks in summer)

Course Descriptions

218 141 Biology (3-2-0,4)
Cell biology, cell membrane, mediated transport system, bulk transport, cytoplasm and nuclear cell biology, cell cycle and cell division, meiosis and gameto-genesis, primary tissues, connective tissues, muscle tissues, nerve tissues.

218 151 Introduction to Biomedical Engineering (1: 0: 2, 1)
History of biomedical engineering, disciplines of biomedical engineering, role of biomedical engineers in health care sector, challenges and future directions in biomedical engineering, moral and ethical issues in biomedical engineering, visits to hospitals, student seminars Pre-

218 229 Circuit Analysis (3: 2: 2,4)
Basic circuit variables, elements and Kirchoff's law, resistive circuit analysis and theorems, network theorems, time domain analysis, AC analysis, frequency characteristics of electric circuits, magnetic coupled circuits and two port elements. Pre-requisite: Engineering Physics II

104 110 Computer Application (2: 2: 0,3)
Introduction to information technology, operating systems, information systems, graphics and multimedia, networks and their uses, internet and information retrieval, electronic mail and news, computers and society, ethical issues, computer security issues.

213 235 Logic Design (3: 2: 2,4)
Basic theorems and properties of Boolean Algebra and boolean functions. Simplification of Boolean Functions: Karnaugh Map and Tabulation (Quine-McCluskey) Method. Product of Sums (POS) and Sum of Products (SOP) forms. Combinational logic circuits: design and analysis procedures. Decoders, encoders, multiplexers, demultiplexers, ROM, PLA and PAL. Sequential logic circuits: Flip Flops (RS, D, JK, T), design procedure for clocked sequential circuits, counters. Registers and shift registers. Pre-requisite: Computer Applications

218 221 Computer Programming (3: 0: 2,3)
Flow charts and problem solving, data types, input output statements, C++ basics, functions, arrays and strings, pointers structures and unions, C++ preprocessor, MATLAB programming. Pre-requisite: Computer Applications

218 242 Human Anatomy (2: 2: 0,3)
An Introduction to the human body, the skeletal system, the axial skeleton and ribs, the appendicular skeleton, joints, the muscular system, thorax, abdomen, upper limb, lower limb Pre-requisite: Biology

218 243 Human Physiology (2: 2: 0,3)
Cell physiology, nervous system, muscles, cardiovascular systems, respiratory system, digestive system, urinary system, endocrine system. Pre-requisite: Human Anatomy

218 344 Electrophysiology (2: 2: 0,3)
Basics of electro-physiology, membrane models, resting potential, action potential, bio electrodes, the electrophysiology of bio potential signals- ECG, EEG, EMG, EOG, ERG etc. Pre-requisite: Human Physiology I

218 233 Electronics Circuits (3,2: 2,4)
Semiconductors and PN Junction, bipolar junction transistor (BJT) DC analysis, bipolar Junction Transistor (BJT) AC analysis, junction field effect transistor (JFET), biasing and amplifiers circuits. Pre-requisite: Circuit Analysis

218 337 Microprocessors and Microcontrollers (3: 2: 0,4)

The 8086 architecture and programming modes, assembly programming, the 8086 microprocessor instruction set, memory interface and I/O interface, interrupt processing, microcontrollers and applications. Pre-requisite: Logic Design

218 361 Medical Electronics (2: 2: 2,3)

Amplifiers and filters, bio-potential amplifiers, design of power system in medical electronics, oscillator circuits, Analog to digital converter (ADC), digital to analog converter (DAC) and data acquisition circuits. Pre-requisite: Electronic Circuits, Human Physiology I

218 356 Biomechanics (3: 0: 2,3)

Basics of anatomy and mechanics, applications involving forces and moments, statics and dynamics, Applications to human joints, Properties of deformable bodies, kinematics and kinetics, applications from real-life problems, contemporary issues: Motion analysis. Pre-requisite: Engineering Physics I, Human Anatomy

218 118 Biochemistry (2: 2: 0,3)

Structural organization and function of the major components of living cells, metabolism and energy production, and biosynthesis of small molecular weight compounds and macromolecules. Pre-requisite: Chemistry for Engineers

218 375 Signals and Systems (3: 0: 2,3)

Continuous- and discrete-time signals and systems. Basic system properties. Linear Time-Invariant (LTI) systems. Properties of LTI systems. Convolution sum. Fourier series of periodic signals. Amplitude, phase, and power spectra. Fourier transform of non-periodic signals. Laplace transform, analysis of continuous-time LTI systems using Laplace transform. Z-Transform. Pre-requisite: Engineering Mathematics III

218 365 Biomedical Instrumentation I (3: 0: 0,3)

Introduction to biomedical instrumentation, biomedical sensors and transducers, basic concepts of measurements and instrumentation, bio potential electrodes, clinical laboratory instrumentation. Pre-requisite: Medical Electronics, Human Physiology II

218 254 Biomaterials (3: 0: 2,3)

Introduction to biomaterials, structure and properties of materials, crystalline and non-crystalline materials, properties of biologic materials, biocompatibility, Metallic implant materials, ceramic implant materials, polymeric implant materials, composite implant materials. Pre-requisite: Chemistry for Engineers, Human Anatomy

218 376 Bio-signal Processing (3: 2: 2,4)

Nature of biomedical signals, frequency response, DFT, FFT, DCT, design of digital filters, nonlinear models of biomedical signals, DSP applications of bio-signals. Pre-requisite: Signals and Systems, Human Physiology II

218 466 Medical Instrumentation II (3: 2: 0,4)

Design procedure of medical equipment, bio-potential recording systems, blood pressure, flow and volume instrumentation systems, blood gas analyzers, pace-makers and defibrillators, electro-surgical, physiotherapy instruments, respiratory systems instruments Pre-requisite: Medical Instrumentation I

218 391 Biomedical Design (2: 2: 2,3)

Amplifiers and filters, bio-potential amplifiers, design of power supplies, oscillator circuits, and biomedical data acquisition circuits, mini projects related to biomedical engineering applications. Pre-requisite: Medical Electronics

218 498 Biomedical Design Project I (1: 4: 0,3)

Teams of three to four students shall design, implement, test and demonstrate their graduation project in two semesters. Biomedical design Project I is to be completed in one semester and includes a literature survey, action plan, design of complete project taking into account realistic constraints, computer simulation (if applicable). Pre-requisite: Completion of 100 Credit Hours

218 499 Biomedical Design Project II (1: 4: 0,3)

It is continuation of biomedical design project I in the second semester. Students will complete the implementation and testing of remaining part of their design. They will integrate the complete project, test it, and prepare a PCB. Report writing, oral presentation, poster presentation, and project demonstration. Pre-requisite: Biomedical Design Project I

218 471 Biomedical Imaging System I (3: 0: 2,3)

Radioactivity, X -ray physics and imaging techniques, Computed tomography (CT imaging), introduction to SPECT and PET imaging techniques, biological effects of radiation and safe handling. Pre-requisite: Engineering Physics II, Human Anatomy

218 472 Biomedical Imaging System II (3: 2: 0,4)

Medical ultrasound imaging techniques, modes of operation, magnetic resonance imaging techniques (MRI), principles of operation, components of MRI machines, computer based reconstruction, biological effects of magnetic fields, static magnetic fields, radio frequency fields, gradient magnetic fields. Pre-requisite: Medical Imaging System I

218 458 Biomedical Safety (2: 0: 2,2)

Introduction to the types of hazards in hospitals and clinics, electrical hazards safety requirements of power distribution in hospitals, biological, safety codes and standards for biomedical equipments and facilities, test instruments for checking safety parameters of medical instruments. Pre-requisite: Medical Instrumentation II

210 400 Engineering Training: 4Cr. Hrs

Pre-requisite: Approval of Academic Advisor

218 512 Physiological Modeling and Control (2: 2: 0,3)

Physiological modeling, static analysis of physiological systems, time domain analysis, frequency domain analysis, stability analysis. Pre-requisite: Human Physiology II

218 518 Tissue Engineering (3: 0: 0, 3)

Tissue engineering principles, cell, Intracellular signaling, control of cell growth, scaffolds, cell traction and migration, tissue regeneration and replacement, artificial organs, orthopedic tissue engineering, bioreactors and bio expansion. Pre-requisite: Biomaterials

218 511 Artificial Organs (3: 0: 0, 3)

Major types of artificial organs, artificial blood. artificial skin and dermal equivalents. artificial pancreas. Prosthetics and orthotics; artificial limbs, major joint implants, dental implants. Pre-requisite: Human Physiology II

218 515 Bio-fluid Mechanics (3: 0: 0, 3)

Fundamentals of fluid mechanics. Flow properties of blood, applications describing flow of air in the airways and flow of blood in large arteries. Pre-requisite: Biomechanics

218 513 IT and Computer Networks in Health-care (2: 2: 0,3)

Types and classification of computer networks, networks topology and wiring type, OSI layering model, design process of computer network, hospital information system, and modern application of computer networks in health-care. Pre-requisite: Microprocessors and Computer Interfacing

218 514 Rehabilitation Engineering (3: 0: 0, 3)

Introduction to rehabilitation engineering, disability, rehabilitation engineering technology, assistive devices, physiological and biomedical measurement techniques, disability assessment, application of rehabilitation engineering, prosthetics and orthotics. Pre-requisite: Medical Instrumentation I

218 516 Artificial Neural Networks and Fuzzy Logic (3: 0: 0,3)

Fuzzy logic fundamentals, fuzzy sets, types of membership functions, linguistic variables, creation of fuzzy logic rule base, fuzzy logic operations, neural network fundamentals, neural type learning process, single layer perception, artificial neural networks architectures, training algorithms, genetic algorithms and evolution computing, neuro-fuzzy technology, fuzzy control systems and applications related to biomedical engineering. Pre-requisite: Engineering Mathematics I

218 517 Biomedical Image Processing (2: 2: 0,3)

Digital image fundamentals, image transforms image enhancement, image restoration, image segmentation, representation and description, recognition and interpretation, image compression. Pre-requisite: Signals and Systems

Bachelor of Science in Architectural Engineering

Mission

Architecture is the science and art of shaping the built environment and establishing habitable and enjoyable communities. The architectural engineering program is a five-year course designed to equip students with a sound knowledge and understanding of building design, landscape design, structure, construction, history of architecture, heritage conservation as well as many other related subjects.

Goals

- The main goals of the architectural engineering curriculum are to provide its students with:
- a strong foundation in basic skills to apply in their design process and presentations
- a broad theoretical and practical knowledge related to their practice of architectural design and building construction
- the skills and abilities for required for data collection, analysis, design and evaluation of architectural design projects
- the information and ability required to produce building construction drawings and working details
- the ability to utilize modern technology, for example computer aided design and other software application packages for architectural design, working drawings and presentation purposes in the field of architecture, urban design and urban planning
- good oral and written communication skills
- the ability to work effectively as members of a multidisciplinary team
- the ability to compete professionally and function successfully in the diverse and fast-developing architectural engineering environment of the UAE
- the knowledge to preserve both the built and natural environments, and the sensibility to understand the impact of architecture on its broader physical and cultural contexts, fulfilling both their professional as well as their ethical responsibilities
- the ability for critical thinking and lifelong self-learning, so that they are capable of updating their technical knowledge while working as professional architects
- **: Program Learning Outcomes**
-

No.	Architectural Engineering Program Outcomes
Knowledge	
K1	Demonstrate basic philosophy and ideology of architecture.
K2	Coordinate environmental studies in design proposals.
K3	Comprehend and apply and the knowledge of social and cultural studies in design proposals.
K4	Comprehend and apply the knowledge of science, mathematics and technology
K5	Comprehend and apply the knowledge of architectural practice and management.
Skills	
S1	Conceptualize, conceive and coordinated design in realm of contemporary issues and challenges of built environment.
S2	Communicate, demonstrate and implement the architectural solutions clearly
S3	Propose the architectural design in context of modern technology and engineering
S4	Design and evaluate the architectural design solutions through computers
S5	Analyze the design critically and foresee its consequences at occupational stage
Competencies Autonomy and responsibility	
C1	Apply the problem solving approach in conducting experiments, analyzing and interpreting data in proposed architectural design.
C2	Work independently as well as in teams across technical or professional activities .
Role in context	
C3	Team with multidisciplinary professions engaged in building design and construction process.
C4	Identify , formulate and solve design management problems
Self-development	
C5	Comprehend and apply the professional and ethical responsibilities in architectural practice
C6	Identify and adopt the market trends to compete in professional market.

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2. MAPPING THE ARCHITECTURAL PROGRAM OUTCOMES

- **UAE's Qualifications Frameworks/ Learning Outcomes Strands**

Strand			Description
Strand 1 Knowledge			specialised factual and theoretical knowledge and an understanding of the boundaries in a field of work or discipline, encompassing a broad and coherent body of knowledge and concepts, with substantive depth in the underlying principles and theoretical concepts; an understanding of allied knowledge and theories in related fields of work or disciplines and in the case of professional disciplines including related regulations, standards, codes, conventions; understanding of critical approach to the creation and compilation of a systematic and coherent body of knowledge and concepts gained from a range of sources;
			a comprehensive understanding of critical analysis, research systems and methods and evaluative problem-solving techniques;
			familiarity with sources of current and new research and knowledge with integration of concepts from outside fields.
Strand 2 Skill			technical, creative and analytical skills appropriate to solving specialised problems using evidentiary and procedural based processes in predictable and new contexts that include devising and sustaining arguments associated with a field of work or discipline; evaluating, selecting and applying appropriate methods, procedures or techniques in processes of investigation towards identified solutions evaluating and implementing appropriate research tools and strategies associated with the field of work or discipline;
			highly developed advanced communication and information technology skills to present, explain and/or critique complex and unpredictable matters.
Aspects of Competence	**Strand 3 Autonomy and Responsibility**		can take responsibility for developing innovative and advanced approaches to evaluating and managing complex and unpredictable work procedures and processes, resources or learning can manage technical, supervisory or design processes in unpredictable, unfamiliar and varying contexts; can work creatively and/or effectively as an individual, in team leadership, managing contexts, across technical or professional activities; can express an internalised, personal view, and accept responsibility to society at large and to socio-cultural norms and relationships.
	Strand 4 Role in Context		can function with full autonomy in technical and supervisory contexts and adopt para-professional roles with little guidance can take responsibility for the setting and achievement of group or individual outcomes and for the management and supervision of the work of others or self in the case of a specialisation in field of work or discipline can participate in peer relationships with qualified practitioners and lead multiple, complex groups can take responsibility for managing the professional development and direct mentoring of individuals and groups
	Strand 5 Self development		can self-evaluate and take responsibility for contributing to professional practice, and undertake regular professional development and/or further learning can manage learning tasks independently and professionally, in complex and sometimes unfamiliar learning contexts can contribute to and observe ethical standards

- **Table. 2: The Mapping of Program Learning Outcomes and UAE's Qualifications Frameworks**

No.	Architectural Engineering Program Outcomes	UAE Qualifications Framework Strands of Learning Outcomes				
		Strand 1	Strand 2	Strand 3	Strand 4	Strand 5
1	Demonstrate basic philosophy and ideology of architecture.	X				
2	Coordinate environmental studies in design proposals.	X				
3	Comprehend and apply and the knowledge of social and cultural studies in design proposals.	X				
4	Comprehend and apply the knowledge of science, mathematics and technology	X				
5	Comprehend and apply the knowledge of architectural practice and management.	X				
6	Conceptualize, conceive and coordinated design in realm of contemporary issues and challenges of built environment.		X			
7	Communicate, demonstrate and implement the architectural solutions clearly		X			
8	Propose the architectural design in context of modern technology and engineering		X			
9	Design and evaluate the architectural design solutions through computers		X			
10	Analyze the design critically and foresee its consequences at occupational stage		X			
11	Apply the problem solving approach in conducting experiments, analyzing and interpreting data in proposed architectural design.			X		
12	Work independently as well as in teams across technical or professional activities			X		
13	Team with multidisciplinary professions engaged in building design and construction process.				X	
14	Identify , formulate and to solve the design management problems				X	
15	Comprehend and apply the professional and ethical responsibilities in architectural practice					X
16	Identify and adopt the market trends to compete in professional market.					X

Admission Requirements

Admission to the Architectural Engineering program requires a UAE secondary school certificate (science major), or its equivalent, with a minimum acceptable grade of 70 percent. For more information please refer to the university admissions policy.

Career Opportunities

Because of the multidisciplinary nature of the curriculum, graduates are qualified for employment in a variety of areas. They can work, for example, as designers and construction managers, or join city planning or community agencies and governmental authorities. Alternatively they can become building contractors. As graduates are trained in problem-solving they are able to adapt to a range of jobs in both the public and private sector.

Graduation Requirements

The Bachelor of Science in Architectural engineering is awarded upon fulfillment of the following:

- Successful completion of all courses in the prescribed curriculum
- Successful completion of four months' engineering training
- The Cumulative Grade Point Average CGPA is at least 2.0.

Degree Requirement

The B.Sc. degree in Architectural Engineering requires the completion of 170 Cr. Hrs. circulated according to the following plan:

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Required courses	9
4. Specialization required courses	118
4. Specialization Elective courses	9
5 Graduation projects I & II	10
Total Credit Hours	170

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses (15 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
101000	Orientation	1	0	0	0	-
1021100	Islamic Culture	3	0	1	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1031101	Statistics	2	2	0	3	-
1041100	Computer Applications	2	2	0	3	-

1031200	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses (9 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Koran	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-

120115	Legal Culture	3	0	0	3	-

College Required Courses (9 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2711000	Engineering Graphics	2	2	0	3	---
2171010	Engineering Mathematics I	3	0	2	3	---
2701011	Building Sciences	3	0	0	3	---

(b) Specialization Required Courses & Graduation Projects (128 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2001010	Introduction to Design	1	4	0	3	
2001020	Perspective, Shade & Shadows	1	4	0	3	2711000
2103000	Engineering Training	4	0	0	4	
2701020	Architectural Design I	2	4	0	4	2001010
2702030	Architectural Design II	2	4	0	4	2701020
2702040	Architectural Design III	2	6	0	5	2702030
2702151	Ancient Architecture	3	0	0	3	
2702152	Islamic Architecture	3	0	0	3	2702151
2702340	CAAD I	1	4	0	3	1041100 & 2711000
2703350	CAAD II	1	4	0	3	2702340
2703051	Architectural Design IV	2	6	0	5	2702040
2703060	Architectural Design V	2	6	0	5	2703051
2703153	Modern & Contemporary Architecture	3	0	0	3	2702151
2703460	Housing Design & Theory	3	0	0	3	2702040
2703560	Landscape Architecture	2	2	0	3	2702030
2704070	Architectural Design VI	2	6	0	5	2703060
2703475	Active Thermal Control	2	0	2	3	2701011
2704580	Urban Planning	3	0	0	3	2703560
2704590	Urban Design	2	6	0	5	2704070
2704601	Environmental Behavior	3	0	0	3	
2704680	Heritage Conservation	3	0	0	3	2702152
2735110	Sustainable Architecture	3	0	0	3	2703475
2705590	Architectural Practice	3	0	0	3	

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2705890	Graduation Project I	3	4	0	5	2703460 & 2704590
2705900	Graduation Project II	1	8	0	5	2705890
2712230	Building Construction I	2	2	0	3	2711000
2712240	Building Construction II	2	2	0	3	2712230
2713251	Advanced Building Technology	3	0	0	3	2712240&2752040
2713260	Working Drawing I	1	4	0	3	2713251
2713271	Building Services	3	0	0	3	2713251
2714270	Working Drawing II	1	4	0	3	2713260
2714480	Lighting & Acoustics	3	0	0	3	2701011 & 2713271
2705600	Project Management	3	0	0	3	2714270
2752030	Surveying for Architects	1	2	0	2	
2752040	Structural Design for Architects I	3	0	0	3	2701011 &2171010
2753050	Structural Design for Architects II	3	0	0	3	2752040
2711010	Freehand Drawing	2	4	0	4	

(c) Specialization Electives courses (9 Cr.Hrs.)

The student will take three of the following Specialization Electives as approved by the academic advisor.

The registration in these courses is conditioned by having passed and earned 100 Cr.Hrs.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
273500	Selected Topics in Architecture	3	0	0	3	
273501	Interior Design & Coloring	1	4	0	3	
273502	Real Estate Development	3	3	0	3	
273504	Photography	1	4	0	3	
273506	Advanced CAAD Applications	1	4	0	3	2703350
273507	Research & Design Methods	3	0	0	3	
273508	Geographic Information Systems	1	4	0	3	2703350
273509	Contemporary Arab Architecture	3	0	0	3	2703153
273510	Interior Architecture	1	4	0	3	

Course Sequencing Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
	Orientation	1	0	0	0	
2001010	Introduction to Design	1	4	0	3	
2711010	Freehand Drawing I	2	4	0	4	
2711000	Engineering Graphics	2	2	0	3	
2701011	Building Sciences	3	0	0	3	
1021400	Communication Skills in Arabic Language	3	0	0	3	
1041100	Computer Applications	2	2	0	3	
TOTAL		14	12	0	19	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2701020	Architectural Design I	2	4	0	4	200101
2711020	Perspective Shades & Shadow	1	4	0	3	201102
1031200	Environmental Sciences	3	0	0	3	
2171010	Engineering Math. I	3	0	2	3	
xxxxxx	University Elective I	3	0	0	3	
1021100	Islamic Culture	3	0	0	3	
TOTAL		15	8	2	19	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2702030	Architectural Design II	2	4	0	4	270102
2702151	Ancient Architecture	3	0	0	3	
2712230	Building Construction I	2	2	0	3	201102
2752030	Surveying for Architects	1	2	0	2	
2702340	CAAD I	1	4	0	3	201102&104110
---------	University Elective II	3	0	0	3	
TOTAL		12	12	0	18	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2702040	Architectural Design III	2	6	0	5	270203
2702152	Islamic Architecture	3	0	0	3	270213

2712240	Building Construction II	2	2	0	3	271223
2752040	Structural Design for Architects I	3	0	0	3	270101&217101
2703350	CAAD II	1	4	0	3	270234
TOTAL		11	12	0	17	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2703051	Architectural Design IV	2	6	0	5	270204
2703153	Modern & Contemporary Architecture	3	0	0	3	2702151
2713251	Advanced Building Technology	3	0	0	3	2712240 2752040
2753050	Structural Design for Architects II	3	0	0	3	2752040
2703475	Active Thermal Env.Control	2	2	0	3	2701011
TOTAL		13	8	0	17	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2703060	Architectural Design V	2	6	0	5	2703051
2703460	Housing Design & Theory	2	2	0	3	2702040
2713271	Building Services	3	0	0	3	2713251
2735110	Sustainable Architecture	3	0	0	3	2703475
2703560	Landscape Architecture	2	2	0	3	2702030
TOTAL		12	10	0	17	

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2704070	Architectural Design VI	2	6	0	5	2703060
2704580	Urban Planning	3	0	0	3	2703560
2713260	Working Drawing I	1	4	0	3	2713251
1031101	Statistics	2	2	0	3	
xxxxxxxx	University Elective	3	0	0	3	
TOTAL		11	12	0	17	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2704590	Urban Design	2	6	0	5	2704070

2714480	Lighting & Acoustics in Architecture	3	0	0	3	2701011 & 2713271
2714270	Working drawing II	1	4	0	3	2713260
2704680	Heritage Conservation	3	0	0	3	2702152
xxxxxx	University Elective III	3	0	0	3	
TOTAL		14	6	0	17	

NINTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2705890	Graduation Project I	3	4	0	5	2703460 2704590
2705590	Architectural Practice	3	0	0	3	2713271
2705600	Project Management	3	0	0	3	2704270
xxxxxx	Specialization Elective I	/	/	/	3	
TOTAL		12	4	0	14	

TENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr.Hrs.	
2705900	Graduation project II	1	8	0	5	2705890
	Specialization Elective II	/	/	/	3	
	Specialization Elective III	/	/	/	3	
2103000	Engineering Training	/	/	/	4	
TOTAL		/	/	/	15	

Course Descriptions

(B.Sc. in Architectural Engineering)

200 1010 Introduction to Design (1, 4, 0: 3)

pre-requisite: none

The course covers the development of the sensory perception of abstract form and its ultimate conversion into specific architectonic configurations, relevant to a variety of solutions to a specific problem and leading to the process of selection and decision making. Basic principles of aesthetics through the study of form, space, proportion, texture analysis of color theory conditioned by different media and materials are also covered.

200 1020 Perspective, Shades and Shadows (1, 4, 0: 3)

pre-requisite: 2711000

The course covers one point and two points exterior and interior perspectives, and fundamentals of drawing shades and shadows as presented in two-dimensional and three-dimensional parallel-line drawings by applying projection.

2711000 Engineering Graphics (2, 2, 0: 3)
pre-requisite: none

The course covers the basics of 2-D and 3-D architectural drawing and presentation. Parallel-line drawings and orthogonal projections are covered. Drawing of all architectural elements, renderings (abstraction, textures, and materials), and lettering are also practiced.

270 1011 Building Sciences (3, 0, 0: 3)
pre-requisite: none

This course aims to familiarize students with the basic principles and means of measurement and design of technical aspects of building science. It also covers incorporating structural design, environmental principles, material science and human factors and how these topics rely upon and influence one another in architectural design.

270 1020 Architectural Design I (2, 4, 0: 4)
pre-requisite: 2001010

The course covers elements and principles of architectural design; form, space/volume, and function and their interrelationships, in addition to basic design requirements through a small-scale project(s) (e.g. single family house, studio).

270 2030 Architectural Design II (2, 4, 0: 4)
pre-requisite: 270 1020

The course covers simple and single-use architectural project(s); aspects of spatial arrangements, site, climate and traditions are to be examined. (e.g., kindergarten, small clinic, art workshop).

270 2040 Architectural Design III (2, 6, 0: 5)
pre-requisite: 270 2030

Design process, conceptualization, and creativity are practiced by students. The problem of space formation, and form/function interaction are also covered. Students handle design problems related to large span single-use spaces; issues of structural systems and light weight material are applied. Contextual design elements of site, topography, climate and traditional architecture are identified, and conceptual design solution(s) analyzed.

270 2151 Ancient Architecture (3, 0, 0: 3: 3)
pre-requisite: none

The course provides an overview of the prehistoric, early historic and classical periods. Emphasis is laid upon design concepts shaping both secular and religious buildings that made up the built environment. Comparative analysis of several buildings is presented in their contextual settings reflecting socioeconomic aspects, culture and traditions, climatic conditions, religious beliefs and building needs of societies.

The course provides an overview of the architecture of major periods of Western history, ranging from the Early Christian Period to the Renaissance. The course introduces students to the ancient philosophies relating to space, urban space and conceptual meaning in architectural design. Also presented are the concepts underlying heritage, ranging from the Early Christian era and passing through the Byzantine, Romanesque, Gothic and Renaissance eras.

271 2230 Building Construction I (2, 2, 0: 3)
pre-requisite: 2711000

The course provides an overview of basic concepts and properties of building structural components and their materials. The course discusses elements and types of superstructure, substructure and foundations. It covers linear and planner, vertical and horizontal, structural systems and their members such as short–medium span roofing, flooring, walls, columns, girders and beams.

275 2030 Surveying for Architects (1, 2, 0: 2)
pre-requisite: none

The course covers basic surveying, errors in surveying operations, distance measurements, chain surveying, angles measurements and bearings, coordinate geometry, leveling of profiles and cross section contour lines, areas and volume computations. Lab work includes the use of the theodolite and planimeter for area measurement.

271 2240 Building Construction II (2, 2, 0: 3)
pre-requisite: 271 2230

Topics covered include wood systems and carpentry and means of vertical circulation (stairs, elevators and escalators). The course provides an insight of materials and detailing of walls, floors, false ceilings, doors, windows, thermal insulation, sound isolation, water proofing and building joints.

275 2040 Structural Design for Architects I (3, 0, 0: 3)
pre-requisites: 270 1011 & 217 1010

The course provides an introduction to the statics of structures and structural members and deals with supports and springs. It discusses the analysis of determinate and indeterminate structures.

270 2340 CAAD I (1, 4, 0: 3)

pre-requisites: 104 1100 & 2711000
The course covers the advantages of CAAD over the traditional design process, mastering AutoCAD 2000 software as a tool of CAAD design, and places emphasis on the 2D AutoCAD, with an introduction of 3D AutoCAD.

270 3152 Islamic Architecture (3, 0, 0: 3)
pre-requisite: 270 2151

The course presents the social, political, economic and religious values that have helped the evolution of the built environment and the ensuring of significant architectural development. Examples of historical Islamic buildings of various countries are selected to analyze their unique design concepts. A study and comparative analysis is made of key elements of Islamic architecture: cities and buildings such as mosques, market, places and housing.

270 3051 Architectural Design IV (2, 6, 0: 5)
pre-requisite: 270 2040

The course offers a comprehensive approach to context in response to vital aspects in design process, site analysis/selection, environmental/climatic impacts, culture and tradition. Problem-solving techniques in terms of complexity, form of the circulation path, configuration of path-space interaction, structural system, and building form are manipulated by students throughout the course (e.g., recreational facilities, local library, bank).

271 3251 Advanced Building Technology (3, 0, 0: 3)
pre-requisites: 271 2240 & 275 2040

The course covers advanced building systems and technologies, and means of deploying them in buildings. Emphasis is placed on prefabrication, modular coordination, mechanization, super structures and long spans in concrete, steel and wood.

275 3050 Structural Design for Architects II (3, 0, 0: 3)
pre-requisite: 275 2040

The course covers the strength of materials, the design of tension and compression members, beams and columns, with a major concentration on steel design.

270 3350 CAAD II (1, 4, 0: 3)

Pre-requisite: 270 2340

The course covers AutoCAD orders and tools, integrating presentation work through sharing (importing, exporting) drawing files with other presentation programs such as 3d Max and Photoshop. 3D Max and its implementation to basic architectural concepts is presented, including modeling and presentation, modeling tools, creating objects, primitives, compound objects, surfaces, modifiers, helpers, materials, textures, environmental controls, light and cameras. In addition maneuvering these capabilities and the creation of realistic images and scenes are also covered.

270 3060 Architectural Design V (2, 6, 0: 5)

pre-requisite: 270 3051

The course introduces the manipulation of a complex multiuse/mixed-used project(s), and experimentation with the vocabulary of architectural form, space and order. Aspects of the interrelationship of architectural form and function are analyzed and evaluated to be applicable to the potential design concept. Expression in the context of traditional architecture is a considerable aspect for developing design solution(s).

270 3153 Contemporary Architecture (3, 0, 0: 3)

pre-requisite: 270 2151

New theories in Architecture, based on revolutionary design concepts, unique built forms, the use of new materials and techniques are introduced. Emphasis is placed on understanding the process of design and building through the masterpieces of pioneering architects of selected historic eras. A review of the various early 19C revivals of historic forms and eclecticism, which triggered the rise of modern architecture, is presented. Post-modern theories and the current evolution of architectural theories are also explored.

271 3260 Working Drawings 1 (1, 4, 0: 3)

pre-requisite: 271 3251

The course covers the preparation of working drawings for an architectural project applying all theoretical and practical knowledge gained during the study of engineering graphics, building construction and related courses.

270 3460 Housing Theory & Design (3, 0, 0: 3)

pre-requisite: 270 2040

The course covers the major processes, design considerations and computations for accomplishing residential housing development projects. Other topics include phases of the development process, site evaluation considerations include those relating to boundary surveys, topographic evaluation, soil analysis, traffic evaluation, hydrographic analysis, plus environmental, aesthetic and cultural considerations.

270 3560 Landscape Architecture (2, 2, 0: 3)

pre-requisite: 270 2030

The course offers an introduction to the history and development of landscape architecture, and the technology and methods of landscape design. The processes of landscape design as applied to complex projects in landscape architecture, including proposal, programming, analysis, concept development and presentation are also covered.

2713271 Building Services (3, 0, 0: 3)

pre-requisite: 2713251

This course provides students with the knowledge of various aspects of building technical installations required. The course will cover various technical issues such as mechanical and sanitary in buildings, water and air quality, waste, fire protection and safety. In addition it will cover air conditioning systems, and electrical installations in buildings.

270 4070 Architectural Design VI (2, 6, 0: 5)
pre-requisite: 270 3060

The course covers process of developing a program for functional/environmental requirements of the determined project, setting up solutions for the concerned design problem and selecting the relevant site for the developed program. Taking into account the real needs of local society, students are also introduced to the process of analysis and synthesis, and evaluation of large scale design problems.

271 4270 Working Drawings 2 (1, 4, 0: 3)
pre-requisite: 271 3260

The course covers plans, layouts, schedules and details. Building systems such as architectural, structural, mechanical, electrical and telephone systems are also covered.

2703475 Active Thermal Environmental Control (2, 2, 0: 3)
pre-requisite: 270 1011

The course covers the basics of active thermal systems and their technology, energy demand limits, heat loss and gain, calculations, measurements and applications, and offers a link up with architectural design.

271 4480 Lighting & Acoustics in Architecture (3, 0, 0: 3)
pre-requisite: 270 1011 & 2713271

The course introduces lighting and acoustic terms and means of measurement and design, characteristics of light and sound, building standards and materials.

270 4580 Urban Planning (3, 0, 0: 3)
pre-requisite: 270 3560

Course topics include the evolution of city form and structure, the development of order and organization in cities, theories of planning, the politics of planning, social and cultural contexts, the planning process and models, and planning management and implementation.

270 4590 Urban Design (2, 6, 0: 5)
pre-requisite: 270 4070

The course introduces urban design concepts and urban scale architecture, urban design structure and elements, the urban design process; surveying, analysis and evaluation. Project management and presentation are also covered.

270 4601 Environmental Behavior (3,0,0:3)
Pre-requisite: None

The course teaches the students how to apply the psychological and aesthetic factors in the design projects. The course covers the psychological relationship between people and design. Introduction to psychology, perception in architectural elements, color psychology, space psychology, and the impact of psychology in balance, harmony, rhythm, and emphasis.

270 4680 Heritage Conservation (3, 0, 0: 3)
pre-requisite: 270 2152

The course introduces the history of the conservation movement, international and local conservation programs, regulatory instruments, methods and techniques. Case studies are presented, and conservation experience in the UAE is covered.

270 5890 graduation project 1 (3, 4, 0: 5)
pre-requisites: 270 4590 & 270 3460

Students carry out a substantial work of design research presented as a short thesis report, entailing practical application to a researched topic of a specific building type (a complex multi-use design problem). Project selection is based on the real needs of UAE society. Methodology in architectural design through a process of programming is covered, together with a literature review, data collection, statistics, case study critique, developed architectural program and schematic design concepts.

270 5590 Architecture Practice (3, 0, 0: 3)

Pre-requisite: 2713271

An overview to the professional practice in architecture in general with special emphasis on the UAE. Professionalism, the architect's role in the building process in real life, how architects work and get work, becoming and being an architect are also covered. Course topics also include code of ethics, team work, design and design approvals, decision making field investigation, engineers and other consultants, construction contractors, building contracts, bill of quantities and book of specifications, phases of construction and construction management process.

270 5900 Graduation Project ii (1, 8, 0: 5)

Pre-requisite: 270 5890

The course covers the development of the schematic concept formulated during Graduation Project I, the development of design preliminary drawings in accordance with the architectural design program formulated in Graduation Project I, rendering and presentation of the design final drawings, and the use of advanced CAAD application.

2735110 Sustainable Architecture (3, 0, 0, 3)

Pre-requisite: 2703475

This course aims to introduce students to basic concepts of sustainable design and its application in architecture considering environment and lifecycle of buildings, and also to provide students with comprehensive understanding of many ecological approaches.

2705600 Project Management (3, 0, 0, 3)

The course will assist the student to understand the position of a manager on site. The in depth study will train the student to apply various aspects of project management such as; organization planning, implementation, controlling tasks, project scheduling, cost controlling, and performance evolution.

273 500 Selected topics in Architecture (3, 0, 0: 3)

Pre-requisite: None

Selected topics are researched and discussed according to the educational needs of the students involved.

273 501 Interior Design and Coloring (1, 4, 0: 3)

Pre-requisite: None

The course covers interior design and coloring with emphasis on water color technique, poster color and pencil color and interior space coloring.

273 506 Advanced CAAD Application (1, 4, 0: 3)

Pre-requisite: 270 3350

The course concentrates on scientific study basics of the architectural graphic program (ArchiCAD). Principles of electronic drafting and its capabilities comparing most available drawing programs, especially AutoCAD and ArchiCAD is also covered, as are philosophy and characters in achieving general two- and three-dimensional engineering drawings.

273 507 Design AND Research Methods (3, 0, 0: 3) Pre-requisite: None

The course covers a comprehensive survey of qualitative and quantitative research methods and their method-specific hypothesis formulation, data acquisition, verification and analysis.

273508 geographic information systems (1, 4, 0: 3)

pre requisite 2703350

The development and history of GIS, present applications of the technology. Essential elements of a Geographic Information System. Basic concepts and principles of Geographic Information Systems.

273504 photography (1, 4, 0: 3)

pre requisite none

This is an introductory course to photography. It deals with the principles of photography such as light exposures, compositions, and film developing. Types and uses of cameras, lenses, flashes, filters, and other accessories are discussed and applied. The course also involves photographing buildings and students' projects, portfolio design, and the use of digital cameras.

273509 Contemporary Architecture in the Arab World (3, 0, 0: 3)

pre requisite 2703153

This course will introduce students with recent architectural trends and developments in the Arab World during the 20th century and the present time. Architectural changes and transformations from tradition to modernity during the 20th century are to be investigated The different architectural trends and attitudes in Arab countries are explored through analyzing examples of the pioneers of contemporary Arab architecture, such as Fathy, Badran, Makkiyyeh and Chadirji.

273510 Interior Architecture (1, 4, 0: 3)

pre requisite none

This course will enhance students' skills in interior space drawing and coloring, identify color theories and how to apply in interior spaces, color plans with different techniques, develop basic color skills for residential and public spaces, and produce 3d's drawing using water color and poster color.

273502 Real Estate Development (3, 0, 0: 3)

pre requisite none

The course will conduct market surveys and analysis studies, site consideration and selection, financial feasibility and documentation for real estate development. The students will be introduced to carry forth a real estate development project from the proposal (project formation) stage into final proposal. Manage project more effectively. Keep a project notebook, or digital file. Develop a scope of work, diagram workflow on a timeline, and use it to plan and manage activities effectively. Also, draw upon what they have learned in other courses.

2735070 Research and design Methods (3, 0, 0: 3)

Pre-Requisite: 2703060.

This course aims to introduce students to basic theories, concepts and methods of scientific research and their relevance to architectural design and programming.

Bachelor in Interior Design

Mission

The mission of the Department of Interior Design is to produce graduates equipped with the theoretical knowledge and practical skills necessary for pursuing a successful professional career in the field of interior design. The Interior Design program also aims to prepare its students for postgraduate study.

Goals

- The main goal of the Interior Design program is to prepare graduates for employment. It aims at developing critical thinking and lifelong learning skills in students as well as helping them attain their personal and professional goals. It places strong emphasis on the quality of teaching and bridging the gap between the academic realm and the business community. Graduates should gain different skills from the main domain of study as following;
- Design Domain; Skills and capabilities to design; supervise and implement interior projects through research and analysis of interior space needs.
- Interior Design Foundation and Technical Data; Basic skills to be apply in the interior design process with special emphasis on technical information, codes, technical presentation and drawings.
- Professional and soft skills; The skills necessary to perform professionally and be a good team member.
- Environmental and Graduates Associated Studies; To recognize the local and international sustainable design issues as well as the cultural and traditional aspects that are associated with it.

Alignment of Program Outcomes to QFEmirates

Program Outcomes	Stand 1 Knowledge	Stand 2 Skills	Stand 3 Autonomy & Responsi-bility	Stand 4 Role in Context	Stand 5 Self-Development
1. Explain the basic concepts and principles of interior design drawings and techniques	X				
2. Apply a systematic method in data collection in the process in project design and technical details	X				
3. Implement broad knowledge in the field of interior design through, construction details, working drawings, technical specifications and project documents	X				
4. Communicate effectively in multidisciplinary teams and work effectively with other professionals in the ID industry	X				

5. Clarify specialized knowledge and its applications in Interior Design and their integration within the sustainable built environment	X				
6. Employ and adjust communication professionally in design, conduct development stages, analyze and interpret satisfactory results		X			
7. Direct knowledge in practice, through critical thinking and life- long self-learning		X			
8. Evaluate, select, and apply modern media as well as software package and information technology		X			
9. Communicate effectively, visually, orally and in written format, and deploy up-to-date presentation techniques to present and explain project		X			
10. Evaluate the critical thinking in the interior design theories to develop the interior design outcomes associated with the field of work.		X			
11. Work independently as well as part of a team in a variety of design project process			X		
12. Take responsibility for developing appropriate solutions to problems in unfamiliar and unreliable approach			X		
13. Demonstrate professional quality appropriate to the design project				X	

14. Manage the achievement of desired outcomes individually or within the teamwork				X	
15. Express the ability to follow contemporary issues and describe the impact of different interior design solutions in local and international community frameworks				X	
16. Enhance knowledge in professional career through various experience and resources					X
17. Observe ethical standards in professional practice					X

Admission Requirements

Admission to the Interior Design program requires a UAE Secondary School Certificate, or its equivalent, with a minimum acceptable grade of 60 percent. For more information please refer to the university admissions policy

Career Opportunities

As a creative, imaginative and artistic professional, the interior designer can expect to be working with clients, design and architectural firms or other professionals to develop design solutions that are safe, functional and attractive, and also meet the needs of the people who will use the space. To succeed, hard work prevails. Excellence will be the result of being energetic, technically proficient, visionary and dedicated to the profession.

Graduation Requirements

The Bachelor in Interior Design will be awarded upon the fulfillment of the following:

Successful completion of all courses in the program curriculum (130 Credit Hours)

Successful completion of four Credit Hours of Engineering Training

A minimum cumulative GPA of 2.0

Degree requirement

The Bachelor degree in Interior Design requires the completion of 134 Cr. Hrs. distributed according to the following plan:

Type of Courses	Credit hours
1. University General Education Requirements	
(a) University Required Courses	15

(b) University Elective Courses	9
2. College Required courses	3
4. Specialization required courses	98
5. Specialization Elective courses	9
Total Credit Hours	134

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses (15 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
101000	Orientation	1	0	0	0	-
102110	Islamic Culture	3	0	1	3	-
102140	Communication Skills in Arabic Language	3	0	0	3	-
103110-	Statistics	2	2	0	3	-
104110	Computer Applications	2	2	0	3	-
103120	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses (9 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Koran	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
112140	Introduction to Art	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-

115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-

College Required Courses (3Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
110140	Math for Management	2	0	2	3	---

(b) Specialization Required Courses & Graduation Projects (98 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2901010	Introduction to Interior Design	1	4	---	3	---
290209	Psychology of Design	3	---	---	3	2902010
2901100	CAD I For Interiors	1	4	----	3	1041200
2902050	CAD II For Interiors	1	4	----	3	2901100
2901052	Technical writing for ID	3	---	---	3	---
2901032	Freehand Drawing I	1	4	----	3	---
2901080	Freehand Drawing II	1	4	-----	3	2901032
2901020	Engineering Graphics for Interiors	2	2	0	3	---
2901040	Materials Technology	2	---	---	2	---
2901060	Interior Design I	1	6	----	4	2901010
2902020	Model Building	1	4	----	3	2901020 2901040
2902010	Interior Design II	1	6	----	4	2901060
2902060	Interior Design III	1	6	----	4	2902010

2902030	History of Interior Design I	3	---	---	3	2901060
2902080	History of Interior Design II	3	---	---	3	2902030
2901070	Color in Interior Design	2	2	----	3	---
2902070	Interior Construction I	2	2	----	3	2901020 2901040
2901090	Furniture Design	1	4	-----	3	2901010 2901020
2902040	Lighting & Acoustics in Interior Design	2	2	----	3	2901060
2903010	Interior Design IV	1	8	----	5	2902060
2903040	Interior Design V	1	8	----	5	2903010
2903020	Interior Construction II	2	2	----	3	2902070
2903030	Interiors in the UAE	3	---	----	3	2902060
2903050	Working Drawings I	2	2	----	3	2903020
290323	Practice in Interior Design	3	--	--	3	290213
2903060	Sustainability for ID	3	---	---	3	2903010
2904020	Working Drawings II	1	2	----	2	2903050
2904010	Graduation Project I	2	2	----	3	2903040
2904030	Graduation Project II	1	8	----	5	2904010
2904100	ID Practical Training	---	---	---	4	2903040

(c) Specialization Electives Courses (9 Cr.Hrs.)

The student will take three of the following Specialization Electives as approved by the academic advisor.

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
2905010	Selected Topics in Fur. Des	3	---	---	3	2901090 2903010
2905020	Islamic Interiors	3	---	---	3	2903010
2905030	Theory of Interior Design	3	---	---	3	2903010
2905040	Selected Topics in Interior Design	3	---	---	3	2903010
2905060	Architectural Design for Interiors	3	---	---	3	2903010

Course Sequencing Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
	Orientation	1	0	0	0	---
2901010	Introduction to Interior Design	1	4	…..	3	---
2901020	Engineering Graphics for Interiors	2	2	0	3	---
2901032	Freehand Drawing I	1	4	…..	3	---
2901040	Materials Technology	2	---	---	2	---
2901052	Technical writing for ID	3	---	---	3	---
104110	IT Fundamental	2	2	0	3	---
TOTAL		12	12	0	17	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2901060	Interior Design I	1	6	----	4	2901010
2901070	Color in Interior Design	2	2	----	3	---
2901080	Freehand Drawing II	1	4	-----	3	2901032
2901090	Furniture Design	1	4	-----	3	2901010 2901020
2901100	CAD I For Interiors	1	4	----	3	1041200
102110	Islamic Culture	3	0	1	3	---
TOTAL		9	20	1	19	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2902010	Interior Design II	1	6	----	4	2901060
2902020	Model Building	1	4	----	3	2901020 2901040
2902030	History of Interior Design I	3	---	---	3	2901060
2902040	Lighting & Acoustics in Interior Design	2	2	----	3	2901060
2902050	CAD II For Interiors	1	4	----	3	2901100
130130	Statistics	2	2	0	3	---
TOTAL		10	18	0	19	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2902060	Interior Design III	1	6	----	4	2902010
2902070	Interior Construction I	2	2	----	3	2901020 2901040
2902080	History of Interior Design II	3	---	---	3	2902030
290209	Psychology of Design	3	---	---	3	2902010
----------	University Elective I	3	0	0	3	---
102140	Communication Skills in Arabic Language	3	0	0	3	---
TOTAL		15	8	0	19	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2903010	Interior Design IV	1	8	----	5	2902060
2903020	Interior Construction II	2	2	----	3	2902070
2903030	Interiors in the UAE	3	---	----	3	2902060
103120	Environmental Sciences	3	0	0	3	---
110140	Math for Management	2	0	2	3	---
TOTAL		12	10	2	17	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2903040	Interior Design V	1	8	----	5	2903010
2903050	Working Drawings I	2	2	----	3	2903020
2903060	Sustainability for ID	3	---	---	3	2903010
----------	Special Elective I	3	0	0	3	---
----------	University Elective II	3	0	0	3	---
TOTAL		12	10	0	17	

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2904010	Graduation Project I	2	2	----	3	2903040
2904020	Working Drawings II	1	2	----	2	2903050
----------	Special Elective II	3	0	0	3	---
xxxxxx	University Elective III	3	0	0	3	----
TOTAL		9	4	0	11	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Lab	Tut	Cr. Hrs.	
2904030	Graduation Project II	1	8	----	5	2904010
290323	Practice in Interior Design	3	--	--	3	290213
----------	Special Elective II	3	0	0	3	---
2904100	ID Practical Training	---	---	---	4	2903040
TOTAL		7	8	0	15	

Course Descriptions

290 1010 Introduction to Interior Design (1 / 4 / 0 = 3)

Pre-requisite: None

This course aims to familiarize students with principles of design, visual aspects of shape and form, their perception, the design vocabulary and their design applications. It introduces the student to the fundamental concepts and elements of interior design by applying the fundamental concept and elements of design.

290 1020 Engineering Graphics for Interiors (2 / 2 / 0 = 3)

Pre-requisite: None

This course aims to familiarize students with principles of Parallel-line drawings, orthogonal projections and rendering, and preparing set of architectural and interiors elements drawings to enable students to realize the essential drafting principles of 2-D and 3-D parallel-line and orthographic drawings to be apply in interior design projects

290 1030 Freehand Drawing I (1 / 4 / 0 = 3)

Pre-requisite: None

The aim of the course is to introduce and train the students in free hand drawing. The emphasis will be focuses to the entire space, the model, and the relationship of the figure in the space. This course would then enable the students to become creative and imaginative whilst improving their sketching and conceptual skills.

2901040 Materials Technology (2 / 0 / 0 = 2)

Pre-requisite: None

The aim of this course is to provide the interior design students the necessary information related to the materials selection and technology. It serves as guide to learning about, evaluating the selected materials that will look good, and their technologies to work well, and respect the human and its environment needs and regulations.

290 1052 Technical Writing for Interior Design (3 / 0 / 0 = 3)

Pre-requisite: None

This course intend to develop Students' proficiency and communicative competence in technical/professional writing and oral presentation skills.

290 1060 Interior Design I (1 / 6 / 0 = 4)

Pre-requisite: Introduction to Interior Design – 2901010

This course introduces the students to residential interior design and its requirements, including interior space planning, furniture arrangements and design treatments. Students should be introduce to the basics of interior design concept, gathering data of several client's needs and types. Classify the residential activities and functions to arrange the elements of interiors, as furniture, accessories, and floor wall ceiling materials, in unify design.

70 Color in Interior Design (2 / 2 / 0 = 3)

Pre-requisite: None

This course would aid students in producing successful design project by understanding color theory, applications and color impact physiological and psychological.

290 1080 Freehand Drawing II (1 / 4 / 0 = 3)

Pre-requisite: Freehand Drawing I - 290 1030

The aim of the course is to follow-up the acquired techniques by developing the cognitive processes associated with the drawing exploration understanding of space in multiple relationships. This course will explore ideas, from technical or visual aspects to communication sketches, which will help document students' drawings. Introduce and train the students in free hand drawing. This course will enable the students to become creative and imaginative whilst improving their sketching, presentation and conceptual skills.

290 1090 Furniture Design (1 / 4 / 0 = 3)

Pre-requisite: Introduction to Interior Design - 290 1010

The aim of the course is to introduce and train the students in furniture design. This course would then enable the students to become creative and imaginative whilst developing an understanding for manufacturing techniques through materials knowledge. Students will use basic concept of furniture design and furniture historical background to integrate them in interior projects.

290 1100 CAD I for Interiors (1 / 4 / 0 = 3)

Pre-requisite: IT Fundamentals – 104110

This course aims to introduce students to Computer Aided Drafting for Interiors, process with 2 Dimensional drawings and to introduce students to Multi-Media Computer Graphics programs and Principles of 3 Dimensional composition design to understanding basic modeling 2D and 3D conceptual concepts in AutoCAD.

290 2010 Interior Design II (1 / 6 / 0 = 4)

Pre-requisite: Interior Design I - 290 1060

The aim of the course is to introduce the students to commercial interiors. This course would then enable the students to successfully design interior spaces for public areas such as; retail, cafés, restaurants and hair salons. It will also permit students to arrange and classify types and requirements based on commercial functions, including lighting design.

20 Model Building (1 / 4 / 0 = 3)

Pre-requisites: Engineering Graphics for Interiors – 2901020 &

Materials Technology – 2901040

The aim of this course is to strengthen the students' model making skills. Students should know the various techniques of constructing 3D models, develop skills in dealing with various types of timber joint details, and prepare sample/material boards.

290 2030 History of Interior Design I (3 / 0 / 0 = 3)

Pre-requisite: Interior Design I – 290 2010

The aim of this course is to enhance the students' historical knowledge of interior design, through examining the historical elements of interior design developments throughout history

290 2040 Lighting & Acoustics for Interior Design (2 / 2 / 0 = 3)

Pre-requisite: Interior Design I - 290 1060

The aim of the course is to introduce the basics of interior lighting systems and interior acoustics elements for interior design students. The course should enhance the interior design students' Knowledge of interior lighting design as well as the interior acoustic design for interior functions and applications through designing interior lighting concept to suit the interior design application, as well as understand & Monitoring the interior acoustic behaviors to solve the interior acoustic problems to fit with the interior design project.

290 2050 CAD II for Interiors (1 / 4 / 0 = 3)

Pre-requisite: CAD I for Interiors – 2901100

This course aims to teach students an advance three dimensional, rendering and presentation software packages. In addition, the students will utilize this course to enhance their projects and design analyses outcome, as well as generative types of CAAD concepts.

290 2060 Interior Design III (1 / 6 / 0 = 4)

Pre-requisite: Interior Design II - 290 2010

The aim of the course is to introduce the students to the design of office interiors. This course would then enable the students to successfully designing interior spaces for administrative buildings with emphasis being place on planning, furniture arrangement, and circulation and design treatments. The students will recognize the organization charts and the nature of business to success the interior design spaces.

290 2070 Interior Construction I (2 / 2 / 0 = 3)

Pre-requisites: Engineering Graphics for Interiors – 290 1020 & Interior Design II 290 2010 & Materials Technology – 290 1040

This course would help the student, both in exploring the finishing materials, and in understanding, the principle involved in selecting materials for interior spaces. They will identify the elements of interior structure, and recognize physical and visual properties, dimensional characteristics of common used finishes for interior spaces by using the graphic material symbols in their drawings.

290 2080 History of Interior Design II (3 / 0 / 0 = 3)

Pre-requisite: History of Interior Design I - 290 2030

The aim of this course is to enhance the students' knowledge of contemporary factors of interior design, focusing on their movements and developments, through study and analysis.

290 2090 Psychology of Design (3 / 0 / 0 = 3)

Pre-requisite: Interior Design II - 290 2010

The aim of this course is to teach students the interior environment components, the human perceiving theories, the interaction and response beside interior environment and human behavior. Students should be able to apply psychological and aesthetic factors in interior design projects.

290 3010 Interior Design IV (1 / 8 / 0 = 5)

Pre-requisite: Interior Design III - 290 2060

The aim of the course is to introduce the students to hotel interior design. This course would then enable the students to design interior spaces for hotels, motels and resorts, with emphasis being place on planning, furniture arrangement, and circulation and design treatments.

Its offers an overview to hospitality interior, analysis the emerging trends, essential design, planning, and development criteria.

290 3020 Interior Construction II (2 / 2 / 0 = 3)

Pre-requisite: Interior Construction I – 290 3020

This course would assist the students in exploring the interior structure elements, including interior construction details, based on information gathered within the previous pre-request course interior construction I. In addition, enhancing skills on custom design elements. This course is a basic course for understanding the followed course which is the working drawing I, for interior project design.

290 3030 Interiors in the UAE (3 / 0 / 0 = 3)

Pre-requisite: Interior Design III - 290 2060

The aim of the course is to allow the students to research and study the various UAE, traditional and contemporary residential interiors. This course would then enable the students to develop knowledge for the culture, customs and materials of the UAE, which would help them to utilize this in their future residential design projects.

290 3040 Interior Design V (1 / 6 / 0 = 5)

Pre-requisite: Interior design IV - 290 3010

The aim of this course is to guide interior design students to a new type of interior design profession. The exhibition design is a topic with many facets. It involves wide range of interiors, starting from museum, trade shows, private exhibition, showrooms, and display windows. It opens new areas of work to the interior design graduates.

290 3050 Working Drawings I (2 / 2 / 0 = 3)

Pre-requisite: Interior Construction II - 290 3020

The aim of this course is to strengthen the students' implementation of working drawings for any given interior design project. Understanding the several set of drawing is a main aims of this course, as well as differentiate between construction method for any interior custom design pieces or elements.

290 3060 Sustainability for Interior Design (3 / 0 / 0 = 3)

Pre-requisite: Interior Design IV - 2903010

The aim of this course is to introduce the new methodology of sustainability to the interior design student. The environmental issues are an important part from our live and more important for our future. The interior designer is concerned about the welfare of the people and their interior, so they need a good knowledge of sustainability to be a part of all types of design. This course should have a primary objective of explaining and recognizing the basic meaning of sustainability as philosophy, concept, and principles to guide our students from the first level of these issues.

2984010 Graduation Project I (2 / 2 / 0 = 3)

Pre-requisite: Interior Design V - 290 3040

The aim of this course is to help the students in the preparation of an analytical and technical report of their individually chosen graduation project, and would be able to gather data successfully of any chosen project, to collect and analyze needed information for the chosen project, develop in aesthetics and functional needs in interior design spaces.

290 4020 Working Drawings II (1 / 2 / 0 = 2)

Pre-requisite: Working Drawings I - 290 3050

The aim of this course is to assure a follow-up to the Working Drawings I course and give the students a finalize step to understanding of a working drawings set. This course focus on the specification and bidding related to the working drawing of the given interior design project done in the previous course, based on the standards and international codes for interior materials constructions and specifications.

290 4030 Graduation Project II (1 / 8 / 0 = 5)

Pre-requisite: Graduation Project I - 2904010

The course gives the student an opportunity to explore his/her ability and knowledge of dealing with actual existing project in interior design. By using the suitable furnishing requirements, student can create an aesthetic and functional interior design through two main objectives, theoretical and practical to define the different functions applications and its positive and negative points.

290 4040 Practice in Interior Design (3 / 0 / 0 = 3)

Pre-requisite: Working drawing II - 290 4020

The aim of this course is to incorporate the basic business theories into the practice of Interior Design. It covers the various principles, which constitute the pillars of business science, to the Interior Design professional. The course develop the skills required in the field of interior design marketing and prepares the students both for employment as well as for future opportunities to set up their own design office as a professional business.

290 5010 Selected Topics in Furniture Design (3 / 0 / 0 = 3)

Pre-requisite: Furniture Design - 290 1090 and Interior design IV - 290 3010

The aims of the course is to make students more familiar with programming and conceptual design expressed in sketches, and models, as well as with shop drawings and presentation drawings, understanding the aesthetic and functional/ ergonomic aspects of furniture as well as the technological aspects of producing furniture. This course should help students understand some sociological factors that influence the methodologies of educational investigation in interior and furniture design. This project will assess their presentation skill, imagination and creativity.

290 5020 Islamic interiors (3 / 0 / 0 = 3)

Pre-requisite: Interior Design IV – 290 3010

The aim of the course is to allow the students to search and understand the philosophy of Islamic interiors, with emphasis on decorative elements and accessories. At the end of the course students would be able to implement the basic rules of Islamic interiors depend on the chosen style, using basically the decorative components of Islamic interiors such as; pattern, color, trims and accessories.

290 5030 Theory of Interior Design (3 / 0 / 0 = 3)

Pre-requisite: Interior design IV - 290 3010

The aim of this course is to strengthen the students' theoretical background throughout analyze, criticize, and methods of solving problems in the interior design field.

290 5040 Selected Topics in Interior Design (3 / 0 / 0 = 3)

Pre-requisite: Interior design IV - 290 3010

The aim of this course is to enable the students to develop in research, analysis and criticism capability in the interior design project not covered in design courses. It aims also to explore and present selected topics in interior design. Guiding study and exploration of subjects not covered by other courses in the discipline and successfully analyze, criticize interior design spaces through recognize the program design for divers' project type.

290 5060 Architectural Principles for Interiors (3 / 0 / 0 = 3)

Pre-requisite: Interior design IV - 290 3010

The aim of the course is to enhance the interior design students' skills in creating and solving special problem related to the function of interior spaces; re-designing partitions based on structure information, adding new spaces to success the interior design function, to integrate the interior design with the architectural building. As well as to complete the interior design curriculum by designing the landscape spaces with its need of light building structures as an artistically sculpted structures to fit the aesthetical need of this area.

290 4100 Interior Design Practical Training (4 Credit Hours)

Pre-requisite: Interior design V – 290 3040

The aim of this training is to enable students gaining basic professional interior design knowledge, such as; interior finishing materials, suppliers, materials specification, bill of quantity, cost estimation.

Faculty members

Name	Rank	Specialization	Degree	Year	University
Prof. Fahar G. Hayati, Dean	Ph.D	Electronics	Professor	1971	University of Edinburgh
Prof. Dr. Ali Abou- Elnour	Ph.D.	Microwave Electronics	Professor	1994	Technical University Hamburg-Harburg (Germany)
Prof. Mustahsan Mir	Ph.D.	Electrical Engineering	Professor	1983	University of Michigan, USA
Dr. Mohamed Nasor	Ph.D.	Biomedical Engineering	Assistant Professor	1998	Uni. of Dublin, Trinity Col. Dublin, Ireland
Dr. Jehad Awad	Ph.D.	Urban Design	Associate Professor	1996	University of Stuttgart , Germany
Dr. Mohsen El Fadl	Ph.D.	Interior Environment	Assistant Professor	1993	Helwan University, Egypt
Dr. Mohamed Akmal	Ph.D.	Communication	Assistant	2011	(UK)
Dr. Abdulmounim Taha	Ph.D.	Interior Design & Decoration	Associate Professor	1989	Pennsylvania Uni. USA
Dr. Ayman Tawfiq	Ph.D.	Electrical Engineering, Communication	Associate Professor	1995	Ph.D. University of Victoria, Canada
Dr. Mohammed Arar	Ph.D.	Architecture “Urban Environmental Studies”	Associate Professor	1995	Rensselaer Polytechnic Institute, New York , USA
Dr. Ahmed Imran	Ph.D.	Biomechanics	Assistant Professor	1998	University of Oxford, UK
Dr. Sahar Kharrufa	Ph.D.	Architectural Eng.	Professor	1985	Bath University ,UK
Dr. Jamal El Sayed	Ph.D.	Interior Design – Exhibition Design	Associate Professor	2000	Channel France & Egypt, France
Dr. Zulfiqar Ali Memon	Ph.D.	Electrical Engineering, Robotics	Assistant Professor	1991	Brunel University of West London, UK
Dr. Majeed Pournizam	Ph.D.	Bioengineering	Assistant Professor	1994	University of Strathclyde, UK
Dr. Bassim Saleh	Ph.D.	Architecture Environmental Passive Control	Assistant Professor	1985	Strathclyde Glasgow, Uk

Dr. Najlaa Sami	Ph.D.	Interior Design – Lighting & Acoustic Design	Assistant Professor	2001	Helwan Univ. / Egypt
Dr. Rabah Saoud	Ph.D.	Architectural Eng.	Assistant Professor	1996	University of Manchester, UK
Dr. Mohammed Sherzad	Ph.D.	Desert Architecture	Assistant Professor	2006	Oxford Brookes University, UK
Dr. Hasan Zidan	Ph.D.	Electrical Engineering, Control	Assistant Professor	2001	Kyushu Institute of Technology (KIT), Japan
Mr. Mujeeb Al Rahman	M.Sc.	Biomedical Instrumentation	Lecturer	2002	VTU, India
Dr. Bouzaid Boudiaf	Ph.D.	Architectural Eng.	Assistant Professor	2010	Wolverhampton University ,UK
Mr. Emanuela Corti	M.Sc.	Furniture & Textile Design	Lecturer	2005	Milan's Polytechnic / Italy
Mr. Wael Hamdan	M.Sc.	Interior Design	Lecturer	1993	Jordanian Univ.
Mr. Sahar Makki	M.Sc.	Architectural Eng.	Lecturer	2006	Sudan University
Mr. Ivan Parati	M.Sc.	Product Design	Lecturer	2007	Politecnico Di Milano / Italy
Mr. Mona Salama	M.Sc.	Architectural Eng.(Urban & Regional Planning)	Lecturer	2004	Al Najah National University, Nablus, Palestine
Mrs. Manju Bala	M.A.	Interior & Spatial Design	Lecturer	2012	Univ. of Hertfordshire
Mr. Taher ElDanaf	M.Sc.	Interior Design / Sustainable Build Environment -Indoor Air Quality	Lecturer	2013	British Univ. Dubai
Mrs. Hadeel AlBustami	M.Sc.	Interior Design / Sustainable Build Environment	Lecturer	2014	British Univ. Dubai
Mrs. Dina Ibrahim	M.Sc.	Interior Design / Sustainable Build Environment	Lecturer	2015	British Univ. Dubai
Mr. Moayad Al-Habbobi	Mr. Moayad Al-Habbobi	Mr. Moayad Al-Habbobi	Mr. Moayad Al-Habbobi	Mr. Moayad Al-Habbobi	Mr. Moayad Al-Habbobi
Konstantinos Aidinis	Ph.D.	Electrical Engineering, Control	Assistant Professor	1987	Imperial College – London
Nedal Odah	M.Sc.	Electrical Engineering	Lecturer	1994	Ajman university
Moayad Al Habbobi	M.Sc.	Interior Design	Lecturer	1985	Wayne State University U.S.A

Nahla Al Qasimi	Ph.D.	Architectural Eng.	Assistant Professor	2008	Cairo University
Afaq Haider	Ph.D.	Architecture “Urban Environmental Studies”	Associate Professor	2011	National University – Malaysia
Gisela Loehlein	Ph.D.	Architectural Eng.	Associate Professor	2002	University of Cardiff U.K
Alessandro Cece	Ph.D.	Architectural Eng.	Assistant Professor	2006	Secoupa University Napoli
Nashwa Shiqwarah	M.Sc.	Architectural Eng.	Lecturer	2016	Arab Academy for Sciences
Firas S Noori	M.Sc.	Architectural Eng.	Lecturer	2014	Alexandria University - Egypt

College of Information Technology

Introduction

The rapid growth in the development of computer hardware, software, information technology and the widespread applications in all aspects of life created a considerable demand for computer graduates in all specializations. The College of Information Technology has the reputation of offering quality teaching and training programs to prepare its students for a much needed career in the dynamic and rapidly evolving computing industry of today.

Mission Statement

- Participate in the overall mission of the University with commitment to high standards of teaching and training.
- Provide our graduates with the knowledge, training and skills to tackle emerging Information Technology (IT) problems.
- Break the barriers between academia and the market.
- Prepare students for graduate studies in different disciplines of computing.
- Contribute to the development of the UAE society and the region in the area of IT.

Degree Programs

The College offers five different Bachelor degree programs, which provide the student with an excellent foundation for satisfying his/her career requirements, or future study. They also provide the student with a sound theoretical and practical background. All programs are accredited by the Ministry of Higher Education and Scientific Research.

Programs offered are:

1. Bachelor in Information Technology / Networking & Security (4 y)
2. Bachelor in Information Technology / Database & Web systems (4 y)
3. Bachelor in Information Systems / Project Management (4 y)
4. Bachelor in Information Systems / E-Business Management (4 y)
5. Bachelor in Computer Engineering (4 y)

Facilities

The College is equipped with the state-of-the-art computing facilities which are among the best in the region. These facilities are regularly upgraded. All University computers are connected through local and wide area networks. Multimedia facilities are provided in all University labs. Other facilities include electronics, microprocessor and computer network labs. All staff and students computers are linked to the Internet. A dedicated Internet lab is also available on each campus of the university. The laboratories as well as the computer equipment provide students with an excellent support in their lower and upper level undergraduate courses. The College also maintains a library of computer textbooks. This library is regularly updated with the latest books in the field, for the benefit of both students and faculty members.

Department of Computer Science

Introduction

The Department of Computer Science at Ajman University offers a Bachelor of Science in Information Technology which is a 4-years program accredited by the Ministry of Higher Education & Scientific Research and requires the completion of 123 credit hours. Students enrolled in the Bachelor of Science in Information Technology can choose one of two concentrations: Networking & Security or Database & Web Systems.

Bachelor of Science in Information Technology

Mission

The mission of the Information Technology program is to provide quality education in the field of information technology based on internationally recognized standards for undergraduate programs; produce information technology professionals who can deploy efficiently IT technologies and implement IT solutions according to market and society needs, particularly in the UAE and Gulf region; and prepare individuals for lifelong learning and research.

Program Educational Objectives

The Bachelor of Science in Information Technology program has the following goals:

1) Provide students with current core and specialized knowledge and skills of IT methodologies and practices that allow them to get entry-level positions in the IT job market or pursue postgraduate studies.
2) Provide technical skills as well as general education knowledge that allow graduates of the program to provide IT solutions that satisfy market and societal needs.
3) Offer broad and in-depth curriculum that prepare students to engage in life-long learning and professional development in diverse areas of IT.
4) Expose students to the ethical and professional issues of working in an IT environment.
5) Train students to develop effective communication skills that allow them to communicate effectively orally and in writing; and work as productive members of a team.

Program Outcomes

Common Outcomes (All concentrations)

GRADUATES WILL BE ABLE TO:

C1**.** ***Demonstrate*** general education knowledge in diverse fields.

C2. ***Demonstrate*** an analytical and critical thinking ability for problem solving.

C3. ***Demonstrate*** knowledge of fundamental concepts, principles and techniques of information technology.

C4. ***Analyze***, ***identify,*** and ***define*** the computing requirements that must be addressed to provide a solution to an IT problem.

C5. ***Manage*** the information technology resources of an IT-based entity.

C6. ***Demonstrate*** ethical and professional behaviour in an information technology environment.

C7. ***Communicate*** effectively both orally and in writing.

C8. ***Function*** independently and as an effective member of a team.

Concentration Specific Outcomes

Networking & Security

GRADUATES WILL BE ABLE TO:

NS1. ***Design*** and ***implement*** basic network functionalities.

NS2. ***Maintain*** and ***administer*** network systems.

NS3. ***Analyze*** and ***evaluate*** network configurations and security needs.

NS4. ***Provide*** solutions for network security needs.

Databases & Web Systems

GRADUATES WILL BE ABLE TO,

DW1. Design and implement database-driven applications.
DW2. Design and implement web-based client/server systems.
DW3. Use Big Data analytical techniques and front-end tools.
DW4. Analyze un-modelled, multi-structured data using Big Data technologies such as Hadoop, MapReduce & Spark.

Program Learning Outcomes and Alignment to UAE Qualification Framework (UAEQF)

Common Program Learning Outcomes	UAEQF Strands
C1. ***Demonstrate*** general education knowledge in diverse fields.	Knowledge
C2. ***Demonstrate*** an analytical and critical thinking ability for problem solving.	Skill
C3. ***Demonstrate*** knowledge of fundamental concepts, principles and techniques of information technology.	Knowledge
C4. ***Analyze***, ***identify,*** and ***define*** the computing requirements that must be addressed to provide a solution to an IT problem.	Knowledge
C5. ***Manage*** the information technology resources of an IT-based entity.	Autonomy and Responsibility
C6. ***Demonstrate*** ethical and professional behavior in an information technology environment.	Self-Development
C7. ***Communicate*** effectively both orally and in writing.	Skill
C8. ***Function*** independently and as an effective member of a team.	Role in Context

Concentration Specific Learning Outcomes

Networking and Security Concentration Learning Outcomes	UAEQF Strands
NS1. ***Design*** and ***implement*** basic network functionalities.	Knowledge & Skill
NS2. ***Maintain*** and ***administer*** network systems.	
NS3. ***Analyze*** and ***evaluate*** network configurations and security needs.	
NS4. ***Provide*** solutions for network security needs.	

Databases and Web Systems Learning Outcomes	UAEQF Strands
DW1. Design and implement database-driven applications.	Knowledge & Skill
DW2. Design and implement web-based client/server systems.	
DW3. Use Big Data analytical techniques and front-end tools.	
DW4. Analyze un-modelled, multi-structured data using Big Data technologies such as Hadoop, MapReduce & Spark	

Admission Requirements

The normal entry requirement for an applicant is the U.A.E secondary school certificate (scientific section) or an equivalent qualification with a minimum average grade of 70% in addition to the English proficiency requirements.

Career Opportunities

Graduates of the Information Technology program can undertake a variety of job positions at both the managerial and technical levels. Job opportunities may include but not limited to: IT resources management; IT project management; professional IT consultant; professional teacher or trainer; marketing of software and hardware; and pursuing postgraduate study and research. For those specializing in networks and security, additional job opening may include: network administration and management; network security management; and building and designing networks. Graduate of Databases and Web Systems may find additional job opportunities in database administration and management; developing database applications; and developing web applications.

Graduation requirements

Students at Ajman University (AU) are eligible for a Bachelor in Information Technology in either concentration after the completion of 123 credits hours, which normally takes eight semesters or less (not counting summer semesters). Students must undertake 12 weeks of internship in a summer session, which is equivalent to 3 credit hours. The minimum accumulative grade point average for graduation is 2.0.

Degree Requirements

The B.Sc. degree in Information Technology with its two concentrations requires the completion of 123 Cr. Hrs. distributed according to the following plan for the two concentrations:

Type of Courses	Credit/hour
1. University General Education Requirements	
(a) University Compulsory Courses	15
(b) University Elective Courses	9
2. Information Technology Program Common Compulsory Courses	
(a) General Courses	12
(b) Information Technology Core Courses	51
(c) Internship	3
3. Information Technology Program Concentration Courses	21
4. Information Technology Program Elective Courses	12
Total Credit Hours	123

University General Education Requirements

(a) University Required Courses *(15 Cr. Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
101000	Orientation	1	0	0	0	-
102110	Islamic Culture	3	0	1	3	-
102140	Communication Skills in Arabic Language	3	0	0	3	-
103110	Statistics	2	2	0	3	-
104110	Computer Applications	2	2	0	3	-
117140	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses *(9 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Qur'an	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-

118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-

MAJOR REQUIREMENTS

(a) Major Requirements - General Education Courses
(12 Credit Hours.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3151010	Calculus for Information Technology	3	0	2	3	-
4002926	Principles of Accounting I	3	0	0	3	-
3152080	Computerized Accounting	2	2	0	3	4002926
4002910	Introduction to Management	3	0	0	3	-

(b) Major Requirements - Core Courses & Internship
(54 Cr. Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3151020	Algorithms and Problem Solving	2	2	0	3	-
3151030	Information Technology in Business	2	2	0	3	1041100
3152010	Object Oriented programming	2	2	0	3	3151020
3152020	Discrete Mathematics	3	0	0	3	3151010
3152030	Computer Organization	3	0	0	3	1041100
3152040	Data Structures and Algorithms	2	2	0	3	3152010, 3152020
3152050	Fundamentals of Data Communications and Networking	2	2	0	3	3152030
3152060	Human Computer Interaction	2	2	0	3	3152010
3153010	Operating Systems	2	2	0	3	3152030
3153020	Database Management Systems	2	2	0	3	3152010
3153030	Fundamentals of Information security	3	0	0	3	3152050
3153040	Fundamentals of Web Systems	2	2	0	3	3152010
3153050	Fundamentals of Software Engineering	2	2	0	3	3152040
3153060	Computer Ethics and Professional Practices	3	0	0	3	3153030

3153070	Information Technology Project Management	2	2	0	3	3153050
3153080	Enterprise Systems	3	0	0	3	3153020
3154010	Information Technology Project	1	4	0	3	3153070
3154020	Information Technology Internship				3	90 Cr. Hrs

(c) Major Requirements - Concentration Courses *(21 Cr. Hrs.)*

Networking and Security Concentration

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3153110	Advanced Computer Networks	2	2	0	3	3152050
3153120	Network Security	2	2	0	3	3153030
3154110	Network Design and Implementation	2	2	0	3	3153110
3154120	Wireless and Mobile Computing	2	2	0	3	3153120
3154130	Network Operating Systems	2	2	0	3	3153010
3154140	Enterprise Security	3	0	0	3	3153080
3154150	Network Management	2	2	0	3	3153110

Databases and Web Systems

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3153210	Database Administration	2	2	0	3	3153020
3153220	Web Technologies	2	2	0	3	3153040
3154210	Web Application Design and Development	2	2	0	3	3153220
3154220	Information Architecture	2	2	0	3	3153020
3154230	Advanced Database Design and Implementation	2	2	0	3	3153020
3154240	E-Commerce	2	2	0	3	3153220
3154250	Distributed and Object Oriented Databases	2	2	0	3	3154230

(d) Major Requirements (Both Concentrations) - Elective Courses *(12 Cr. Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
308 2090	Business Process Management	3	0	2	3	3153050
3153090	Cloud Computing	3	0	0	3	3153020
3154030	Selected Topics in Information Technology	3	0	0	3	3153070
3154040	Individual Project	2	2	0	3	3153070
3154050	Knowledge Based Systems	2	2	0	3	3153050

3154060	Computer Modeling and Simulation	2	2	0	3	3152010
3154160	Data Compression	2	2	0	3	3153030
3154170	Distributed Systems	3	0	0	3	3153110
3154180	Wireless Network Security	3	0	0	3	3153120
3154260	Knowledge Management	3	0	0	3	3153080
3154270	Advanced Web Topics	2	2	0	3	3153220
3154280	Data Warehousing and Data Mining	3	0	0	3	3153080
3154290	Mobile Applications	2	2	0	3	3153010, 3153020

Proposed Sequence of Study

FIRST SEMESTER (Both Concentrations)

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
1010000	Orientation	1	0	0	0	-
1021100	Islamic Culture	3	0	1	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1031200	Environmental Sciences	3	0	0	3	-
1041100	Computer Applications	2	2	0	3	-
xxxxxxx	University Elective I	3	0	0	3	-
TOTAL		**15**	**2**	**1**	**15**	

SECOND SEMESTER (Both Concentrations)

Course Code	Course Name	Lec	Lab	Tut	Cr.Hrs.	Prerequisite
3151010	Calculus for Information Technology	3	0	2	3	-
3151020	Algorithms and Problem Solving	2	2	0	3	-
3151030	Information Technology in Business	2	2	0	3	1041100
xxxxxx	University Elective II	3	0	0	3	-
xxxxxx	University Elective III	3	0	0	3	-
TOTAL		**13**	**4**	**2**	**15**	

THIRD SEMESTER (Both Concentrations)

Course Code	Course Name	Lec	Lab	Tut	Cr.Hrs.	Prerequisite
1031101	Statistics	2	2	0	3	-
3152010	Object Oriented Programming	2	2	0	3	3151020
3152020	Discrete Mathematics	3	0	0	3	3151010

3152030	Computer Organization	3	0	0	3	1041100
4002926	Principles of Accounting I	3	0	0	3	-
TOTAL		**13**	**4**	**0**	**15**	

FOURTH SEMESTER (Both Concentrations)

Course Code	Course Name	Lec	Lab	Tut	Cr.Hrs.	Prerequisite
3152040	Data Structures and Algorithms	2	2	0	3	3152010, 3152020
3152050	Fundamentals of Data Communications and Networking	2	2	0	3	3152030
3152080	Computerized Accounting	2	2	0	3	4002926
3153040	Fundamentals of Web Systems	2	2	0	3	3152010
4002910	Introduction to Management	3	0	0	3	-
TOTAL		**11**	**8**	**0**	**15**	

FIFTH SEMESTER (Both Concentrations)

Course Code	Course Name	Lec	Lab	Tut	Cr.Hrs.	Prerequisite
3153010	Operating Systems	2	2	0	3	3152030
3153020	Database Management Systems	2	2	0	3	3152010
3153030	Fundamentals of Information Security	3	0	0	3	3152050
3153050	Fundamentals of Software Engineering	2	2	0	3	3152040
3153110	Advanced Computer Networks	2	2	0	3	3152050
TOTAL		**11**	**8**	**0**	**15**	

SIXTH SEMESTER

1. Networking and Security Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr.Hrs.	Prerequisite
3152060	Human Computer Interaction	2	2	0	3	3152010
3153060	Computer Ethics and Professional Practices	3	0	0	3	3153030
3153070	Information Technology Project Management	2	2	0	3	3153050
3153080	Enterprise Systems	3	0	0	3	3153020
3153120	Network Security	2	2	0	3	3153030
TOTAL		**12**	**6**	**0**	**15**	

2. Databases and Web Systems Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
3152060	Human Computer Interaction	2	2	0	3	3152010

3153060	Computer Ethics and Professional Practices	3	0	0	3	3153030
3153070	Information Technology Project Management	2	2	0	3	3153050
3153080	Enterprise Systems	3	0	0	3	3153020
3153210	Database Administration	2	2	0	3	3153020
TOTAL		**12**	**6**	**0**	**15**	

SEVENTH SEMESTER

1. Networking and Security Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
3154110	Network Design and Implementation	2	2	0	3	3153110
3154120	Wireless and Mobile Computing	2	2	0	3	3153120
3154130	Network Operating Systems	2	2	0	3	3153010
xxxxxxx	Major Elective I	x	x	0	3	xxxxxxx
xxxxxxx	Major Elective II	x	x	0	3	xxxxxxx
TOTAL		**x**	**x**	**0**	**15**	

2. Databases and Web Systems Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
3154210	Web Application Design and Development	2	2	0	3	3153220
3154220	Information Architecture	2	2	0	3	3153020
3154230	Advanced Database Design and Implementation	2	2	0	3	3153020
xxxxxxx	Major Elective I	x	x	0	3	xxxxxxx
xxxxxxx	Major Elective II	x	x	0	3	xxxxxxx
TOTAL		**x**	**x**	**0**	**15**	

EIGHTH SEMESTER

1. Networking and Security Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
3154010	Information Technology Project	1	4	0	3	3153070
3154140	Enterprise Security	3	0	0	3	3153080
3154150	Network Management	2	2	0	3	3153110
xxxxxxx	Major Elective III	x	x	0	3	xxxxxxx
xxxxxxx	Major Elective IV	x	x	0	3	xxxxxxx
TOTAL		**x**	**x**	**0**	**15**	

2. Databases and Web systems Concentration

Course Code	Course Name	Lec	Lab	Tut	Cr. Hrs.	Prerequisite
3154010	Information Technology Project	1	4	0	3	3153070
3154240	E-Commerce	2	2	0	3	3153220
3154250	Distributed and Object Oriented Databases	2	2	0	3	3154230
xxxxxxx	major elective iii	x	x	0	3	xxxxxxx
xxxxxxx	major elective iv	x	x	0	3	xxxxxxx
TOTAL		**x**	**x**	**0**	**15**	

Department of Computer Engineering

Introduction

The Department of Computer Engineering offers a B.Sc. degree in Computer Engineering accredited by the Ministry of Higher Education & Scientific Research. The program is designed so that students have a balanced background in computer hardware, software, and networking technology. The curriculum includes general and specialized courses, field practical internship, and senior graduation projects. The program enables graduates to be competitive in the marketplace and can pursue graduate studies.

Bachelor of Science in Computer Engineering

Mission

The mission of the Computer Engineering program is to:

1. Produce computer engineers who are able to apply the theories and principles of science and mathematics to the design of computer hardware, software and networks in the emerging IT fields.
2. Produce computer engineers capable of building prototypes, working both with hardware and software aspects of systems design and development.
3. Prepare students for professional careers and to pursue advanced studies in Computer Engineering.

Program Educational Objectives

The Bachelor of Science in Computer Engineering program has the following goals:

1. Provide knowledge and skills in hardware and software design & implementation.
2. Provide an understanding of how to implement and manage computer networks.
3. Develop an ability to communicate effectively orally and in writing.
4. Develop self-learning skills.

Program Outcomes

On successful program completion, graduates are able to:

1. Design and implement digital circuits and systems.
2. Analyze and explain the organization and interaction among various parts of a computer system.
3. Develop a software component and implement it using a programming language.

4. Describe how computers communicate in a network.
5. Demonstrate skills in implementing client/server based local area networks.
6. Identify information and networks security threats and select appropriate countermeasures.
7. Communicate and explain a solution to a technical problem orally and in writing.
8. Search for information and acquire knowledge independently.
9. Demonstrate general education knowledge in diverse fields.
10. Demonstrate ethical and professional behavior in engineering and information technology environments.
11. Demonstrate specialized knowledge in math and in engineering related area.

Program Learning Outcomes and Alignment to UAE Qualification Framework (UAEQF)

Program Outcome	
PLO1: Design and implement digital circuits and systems.	Skills Autonomy & Responsibility
PLO2: Analyze and explain the organization and interaction among various parts of a computer system.	Knowledge Skills
PLO3: Develop a software component and implement it using a programming language.	Skills
PLO4: Describe how computers communicate in a network.	Knowledge
PLO5: Demonstrate skills in implementing client/server based local area networks.	Skills
PLO6: Identify information and networks security threats and select appropriate countermeasures.	Role in Context
PLO7: Communicate and explain a solution to a technical problem orally and in writing.	Skills
PLO8: Search for information and acquire knowledge independently.	Self-Development
PLO9: Demonstrate general education knowledge in diverse fields	Knowledge Skills
PLO10: Demonstrate ethical and professional behavior in engineering and information technology environments.	Self-Development
PLO11: Demonstrate specialized knowledge in math and in engineering related area.	Knowledge Skills

Admission Requirements

The normal entry requirements for applicants are the UAE secondary certificate (Grade 12), with a minimum overall score of 70% (scientific section) or an equivalent qualification certified by the Ministry of Education, UAE. For further information, please refer to the university admissions policy.

Career Opportunities

Graduates of the computer engineering program can work in a wide range of industries and services, including but not limilted to the following:

- Industries engaged in the field of computer hardware and software development.
- Companies operating in the area of information systems and computer networks.
- Computer services of public administration.

Graduation requirements

Students at Ajman University (AU) are eligible for a Bachelor Degree in Computer Engineering after completion of 140 credit hours.

Degree requirement

The B.Sc. degree in Computer Engineering requires the completion of 140 Credit Hours distributed according to the following plan:

Type of Courses	Credit hours
1. University General Education Courses	
(a) University Required Courses	18
(b) University Elective Courses	6
2. Major Requirements	
(a) Major General Education Requirements	6
(b) Major Compulsory Courses	94
(c) Internship	4
(d) Major Electives	12
Total Credit Hours	140

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses *(18 Cr. Hrs.)*

Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1010000	Orientation	1	0	0	0	-
1021100	Islamic Culture	3	0	1	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1031101	Statistics	2	2	0	3	-
1031200	Environmental Sciences	3	0	0	3	-
1041200	IT Fundamentals	2	2	0	3	-
1141300	Innovation and Entrepreneurship	2	2	0	3	-

(b)University Electives (*Humanities or Arts*) *(3 Cr.Hrs.)*

Course No.	Course Title	Th	Lab		Tut	Cr. Hrs	Prerequisite
1201150	Legal Culture	3	0		0	3	-
1121400	Introduction to Art	3	0		0	3	-
1071300	Introduction to Digital Photography	3	0		0	3	-
1091100	Introduction to Aesthetics	3	0		0	3	-
1091200	French Language	3	0		0	3	-
1151500	The Art of Written Expression	3	0		0	3	-
1191400	Academic Writing	3	0		0	3	-
1191500	The Art of public Speaking	3	0		0	3	-
1021500	Introduction to Hadeeth and Sunna	3	0		0	3	-

(c)University Electives (*Social Behavioral Sciences*) *(3 Cr.Hrs.)*

Course No.	Course Title	Th	Lab		Tut	Cr. Hrs	Prerequisite
1141100	Economic Concepts	3	0	0	3	-	1141100
1151600	Emirates Society	3	0	0	3	-	1151600
1151300	General Psychology	3	0	0	3	-	1151300
1191100	English Communication Skills	3	0	0	3	-	1191100
1191600	Communication Between Cultures	3	0	0	3	-	1191600
1131400	Library Information System	3	0	0	3	-	1131400
1071400	Critical and Analytical Thinking	3	0	0	3	-	1071400

MAJOR REQUIREMENTS

(a) Major General Education Courses *(6 Cr. Hrs.)*

No.	Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1	2171010	Engineering Mathematics I	3	0	2	3	-
2	2171020	Engineering Mathematics II	3	0	2	3	2171010

(b) Major Requirements - College Courses *(73 Cr. Hrs.)*

No.	Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1	3121120	Computer Programming	2	2	0	3	1041100
2	3122110	Programming for Engineers	2	2	0	3	3121120
3	3122150	Circuit Analysis	3	2	2	4	2171010, 2171220
4	3122421	Digital Logic Design	3	2	2	4	1041100
5	3122460	Computer Organization & Architecture	3	0	0	3	3122421
6	3122510	Electronics I	3	2	2	4	3122150
7	3123030	Electronics II	2	2	0	3	3122510
8	3123210	Digital System Design	3	2	0	4	3122421
9	3123221	Instrumentation & Measurements	2	2	0	3	3122510
10	3123480	Microprocessor Systems	3	2	0	4	3122460
11	3123490	Embedded Systems	3	2	0	4	3123480
12	3124310	Project I	1	4	0	3	90 Cr. Hrs.
13	3124320	Project II	1	4	0	3	3124310
14	3124400	Digital Integrated Circuits	3	0	2	3	3122510, 3122421
15	3124460	Engineering Ethics	1	0	0	1	70 Cr. Hrs.
16	3152020	Discrete Mathematics	3	0	0	3	2171010
17	3152040	Data Structures and Algorithms	3	0	0	3	3122110
18	3152050	Fundamentals of Data Communications & Networking	2	2	0	3	1041100 & 40 Cr. Hrs
19	3153010	Operating Systems	2	2	0	3	3122460
20	3153020	Database Management Systems	2	2	0	3	3122110
21	3153030	Fundamentals of Information security	3	0	0	3	3152050
22	3153050	Fundamentals of Software Engineering	2	2	0	3	3152040
23	3153110	Advanced Computer Networks	2	2	0	3	3152050

(c) Major Requirements - Internship *(4 Cr. Hrs.)*

No.	Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1	3123006	Training (Computer Eng.)	-	-	-	4	106 Cr. Hrs

(d) Major Requirements – courses offered by other colleges *(21 Cr. Hrs.)*

No.	Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1	2122210	Signals & Systems	3	0	2	3	2172030
2	2123150	Principles of Communication	3	2	2	4	2122210
3	2171210	Engineering Physics I	3	2	2	4	-
4	2171220	Engineering Physics II	3	2	2	4	-
5	2172030	Engineering Mathematics III	3	0	2	3	2171020
6	2172040	Engineering Math. IV	2	2	0	3	2172030

(e) Major Electives - Any four courses *(12 Cr.Hrs.)*

No.	Course No.	Course Title	Th	Lab	Tut	Cr. Hrs	Prerequisite
1	2124340	Digital Signal Processing	3	0	0	3	2122210
2	3124300	Selected Topics in Computer Engineering	3	0	0	3	70 Cr. Hrs.
3	3124530	Parallel Processing	3	0	0	3	3122460
4	3124700	Fuzzy Logic and Neural Networks	3	0	0	3	70 Cr. Hrs.
5	3144770	Game Programming	2	2	0	3	3122110 or 3152010
6	3152060	Human Computer Interaction	2	2	0	3	3122110
7	3153040	Fundamentals of Web Systems	2	2	0	3	3121120
8	3153070	Information Tech. Project Management	2	2	0	3	3153050
9	3153090	Cloud Computing	3	0	0	3	3153020
10	3153120	Network Security	2	2	0	3	3153030
11	3154060	Computer Modeling and Simulation	2	2	0	3	70 Cr. Hrs
12	3154110	Network Design and Implementation	2	2	0	3	3153110
13	3154120	Wireless and Mobile Computing	2	2	0	3	3153120
14	3154150	Network Management	2	2	0	3	3153110

15	3154160	Data Compression	2	2	0	3	3153030
16	3154170	Distributed Systems	3	0	0	3	3153110
17	3154290	Mobile Applications	2	2	0	3	3153020, 3153010

Course Sequencing Plan

FIRST SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
1010000	Orientation \CS*	1	0	0	0	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1041100	Computer Applications	2	2	0	3	-
1031200	Environmental Sciences	3	0	0	3	-
2171010	Engineering Mathematics I	3	0	2	3	-
2171210	Engineering Physics I	3	2	2	4	-
Total		14	4	4	16	

** Non-credit course*

SECOND SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
102110	Islamic Culture	3	0	1	3	-
1031101	Statistics	2	2	0	3	-
2171020	Engineering Mathematics II	3	0	2	3	2171010
2171220	Engineering Physics II	3	2	2	4	-
xxxxxx	University Elective I	3	0	0	3	-
Total		14	4	5	16	

THIRD SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
2172030	Engineering Mathematics III	3	0	2	3	2171020
3122150	Circuit Analysis	3	2	2	4	2171010, 2171220
3121120	Computer Programming	2	2	0	3	1041100

3152020	Discrete Mathematics	3	0	0	3	2171010
3122421	Digital Logic Design	3	2	2	4	1041100
Total		14	6	6	17	

FOURTH SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
2172040	Engineering Mathematics IV	3	0	2	3	2172030
3122460	Computer Organization & Architecture	3	0	0	3	3122421
3122110	Programming for Engineers	2	2	0	3	3121120
3122510	Electronics I	3	2	2	4	3122150
3152050	Fundamentals of Data Communications & Networking	2	2	0	3	1041100 & 40 Cr. Hrs
xxxxxx	University Elective II	3	0	0	3	-
Total		16	6	4	19	

FIFTH SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
3123030	Electronics II	2	2	0	3	3122510
3123210	Digital System Design	3	2	0	4	3122421
3123480	Microprocessor Systems	3	2	0	4	3122460
3153020	Database Management Systems	2	2	0	3	3122110
3153110	Advanced Computer Networks	2	2	0	3	3152050
1141300	Innovation and Entrepreneurship	3	0	0	3	-
Total		15	10	0	20	

SIXTH SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
2122210	Signals and Systems	3	0	2	3	2172030
3123221	Instrumentation & Measurements	2	2	0	3	3122510
3152040	Data Structures and Algorithms	2	2	0	3	3152020, 3122110
3123490	Embedded Systems	3	2	0	4	3123480
3124400	Digital Integrated Circuits	3	0	2	3	3122510, 3122421
xxxxxx	Major Elective I	3	0	0	3	70 Cr. Hrs.
Total		16	6	4	19	

Summer session: Internship training (1 credit hour)

SEVENTH SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
2123150	Principles of Communication	3	2	2	4	2122210
3124310	Project I	1	4	0	3	90 Cr. Hrs.
3153010	Operating Systems	2	2	0	3	3122460
3153030	Fundamentals of Information Security	3	0	0	3	3152050
3153050	Fundamentals of Software Engineering	2	2	0	3	3152040
xxxxxx	Major Elective II	3	0	0	3	70 Cr. Hrs.
Total		14	10	2	19	

SUMMER SESSION: Internship training (3 credit hours)

EIGHTH SEMESTER

Course No.	Course Title	Contact Hours				Prerequisite
		Th	Lab	Tut	Cr. Hrs.	
3124320	Project II	1	4	0	3	3124310
3124460	Engineering Ethics	1	0	0	1	70 Cr. Hrs
xxxxxx	Major Elective III	3	0	0	3	70 Cr. Hrs.
xxxxxx	Major Elective IV	3	0	0	3	70 Cr. Hrs.
Total		8	4	0	10	

Department of Information Systems

Introduction

The Department of Information Systems offers a Bachelor of Science in Information Systems degree which is a 4-years program that requires the completion of 123 credit hours The Information Systems curriculum comprises two concentrations: Project Management and E-Business Management. The program is accredited by the Ministry of Higher Education.

Bachelor of Science in Information Systems

Mission

The mission of the Information Systems program is to provide quality education in the field of Information Systems based on internationally recognized standards for undergraduate programs; produce Information Systems professionals who can manage computer and communications technologies and information resources within organizations in the UAE and Gulf region; and prepare individuals for lifelong learning and research.

Program Educational Goals

The Bachelor of Science in Information Systems program has the following goals:

1. Provide students with up-to-date coverage of both core and specialized knowledge of IS methodologies and practices in order to get entry-level positions in organizations or pursue postgraduate studies and research.
2. Provide cutting-edge technical skills in order to propose IT solutions that meet market and societal needs in enhancing organizational competiveness and improving decision-taking processes.
3. Expose students of the program to ethical and professional principles within an IT environment.
4. Enhance students' communication and leadership skills.

Program Learning Outcomes

There are nine Learning Outcomes related to the Information Systems major and one learning outcome associated to each concentration.

Graduates will be able to:

IS1. **Use** general education knowledge of diverse fields particularly the business domain in understanding and building IS applications.

IS2. **Apply** knowledge of core concepts, techniques and practices to IS applications.

IS3. **Use** analytical and critical thinking skills to solve IS problems.

IS4. **Address** information requirements and **provide** solutions that reflect current business needs and changes.

IS5. **Select** and **adopt** emerging technologies for computerized business information systems.

IS6. **Manage** information systems components to maintain business sustainability.

IS7. **Make** decisions and **conduct** social responsibilities in an ethical and professional manner.

IS8. **Communicate** effectively both orally and in writing.

IS9. **Function** independently and as an effective member or a leader of a team.

Concentration in Project Management

IS-PM. **Use** and **apply** Project Management theories and practices in IS environment.

Concentration in E-Business Management

IS-eBM. **Evaluate** IT technologies to **support** an e-business solution.

Program Learning Outcomes and Alignment to UAE Qualification Framework (UAEQF)

Common Program Learning Outcomes	UAEQF Strands
IS1: **Use** general education knowledge of diverse fields particularly the business domain in understanding and building IS applications.	Knowledge
IS2: **Apply** knowledge of core concepts, techniques and practices to IS applications.	Knowledge
IS3: **Use** analytical and critical thinking skills to solve IS problems.	Skill
IS4: **Address** information requirements and **provide** solutions that reflect current business needs and changes.	Autonomy & responsibility
IS5: **Select** and **adopt** emerging technologies for computerized business information systems.	Self-development
IS6: **Manage** information systems components to maintain business sustainability.	Autonomy & responsibility
IS7: **Make** decisions and **conduct** social responsibilities in an ethical and professional manner.	Role in context
IS8: **Communicate** effectively both orally and in writing.	Skill
IS9: **Function** independently and as an effective member or a leader of a team.	Autonomy & responsibility

Concentration Specific Learning Outcomes

Common Program Learning Outcomes	UAEQF Strands
IS-PM**: Use** and **apply** Project Management theories and practices in IS environment.	Role in context
IS-eBM**: Evaluate** IT technologies to **support** an e-business solution.	Autonomy & responsibility

Admission Requirements

Admission to the program of Bachelor of Science in Information Systems with its two concentrations requires the U.A.E secondary certificate or an equivalent qualification with a minimum average grade of 60% for scientific section and a minimum of 65% for Art section.

Career Opportunities

Information system graduates are required to meet the demands of various stakeholders including industry, commerce, education, health, and government. Some graduates are employed in companies and research organizations, others in resource centers in schools, colleges and universities. There are opportunities in finance, in computing and telecommunications industries, as well as in the medical sector.

Graduation requirements

Students at Ajman University (AU) are eligible for a bachelor in Information Systems after completion of 123 credits hours, which normally takes eight semesters. The minimum cumulative grade point average for graduation is 2.0 for 123 total credits hours.

Degree requirement

The B.Sc. degree in Information Systems requires the completion of a 123 Cr. Hrs. distributed according to the following plan:

Type of Courses	Credit/hour
1. University General Education Courses	
(a) University Compulsory Courses	15
(b) University Elective Courses	9
2. Information Systems Program Compulsory Common Core Courses	
(a) General Compulsory Common Courses	24
(b) Information Systems Compulsory Common Core Courses	57
(c) Internship	3
3. Information Systems Program Concentration Courses	
(a) Compulsory Concentration Courses	9
(b) Elective Concentration Courses	6
Total Credit Hours	123

- The student must score a minimum cumulative grade point average CGPA of 2.0.
- The study plan is designed so that the normal duration for completing the degree requirements is 4 years but should not exceed 8 years.
- A student transferring from other institutions must complete at least 50% of the program requirements at AU.
- Any other requirements as per University and Ministry regulations enforce at the time of enrolment.

Information Systems / Project Management Program

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses *(15 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1010000	Orientation \CS	1	0	0	0	-
1021100	Islamic Culture	3	0	1	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1031101	Statistics	2	2	0	3	-
1041100	Computer Applications	2	2	0	3	-
1031200	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses *(9 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Qur'an	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-

118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-

INFORMATION SYSTEMS COMPULSORY COMMON CORE COURSES

(a) General Compulsory Common Courses *(24 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3082020	Business Statistics	3	0	0	3	1031101
3082060	Communication Management	2	0	2	3	1041100
4002910	Introduction to Management	3	0	0	3	-
4002926	Principles of Accounting I	3	0	0	3	-
4003950	Principles of Marketing	3	0	0	3	4002910
4003960	Fundamentals of Finance	3	0	0	3	4002926
4004090	Organizational Behavior	3	0	0	3	4002910
4106020	Human Resources Management	3	0	0	3	4004090

(b) Information Systems Compulsory Common Core Courses *(57 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3082010	Information Systems Management	3	0	0	3	3151030
3082030	Fundamentals of Computer Systems	2	0	2	3	50 Cr. Hrs
3082050	Systems Analysis and Design	2	0	2	3	50 Cr. Hrs
3082090	Business Process Management	3	2	0	3	60 Cr. Hrs
3083070	Change Management	3	0	0	3	60 Cr. Hrs
3083090	Knowledge Management	3	0	0	3	60 Cr. Hrs
3084020	Business Intelligence and Data Warehousing	3	0	0	3	3153020
3084040	Information Systems Strategy and Acquisition	3	0	0	3	99 Cr. Hrs
3084050	Information Systems Project	1	0	4	3	99 Cr. Hrs
3084060	IT Resource Management	3	0	0	3	99 Cr. Hrs
3151020	Algorithms & Problem Solving	2	0	2	3	-
3151030	Information Technology in Business	2	0	2	3	1041100 & 4002910
3152050	Fundamentals of Data Communications and Networking	2	0	2	3	3151020

3153020	Database Management Systems	2	0	2	3	50 Cr. Hrs
3153030	Fundamentals of Information Security	3	0	0	3	3152050
3153040	Fundamentals of Web Systems	2	0	2	3	3151020
3153060	Computer Ethics and Professional Practices	3	0	0	3	60 Cr. Hrs
3153070	IT Project Management	2	0	2	3	60 Cr. Hrs
3153080	Enterprise Systems	3	0	0	3	70 Cr. Hrs

(c) Internship *(3 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3084070	Information Systems Internship	0	0	0	3	90 Cr. Hrs

INFORMATION SYSTEMS CONCENTRATION COURSES

(a) Compulsory Concentration Courses (9 *Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3084110	IT Services and Operations Management	3	0	0	3	3082090
3084120	Project Planning, Scheduling and Cost Control	3	0	0	3	3153070
3084130	Project Quality and Risk Management	3	0	0	3	3153070

(b) Elective Concentration Courses *(6 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr.Hrs.	Prerequisite
3084080	Selected Topics in Information Systems	2	0	2	3	99 Cr. Hrs
3084090	Individual Project	1	0	4	3	99 Cr. Hrs
3084140	Customer Relationship Management	3	0	0	3	4003950
3084150	Enterprise Architecture	3	0	0	3	3153080
3084170	Selected Topics in IT Project Management	3	0	0	3	99 Cr. Hrs
3084220	E-Marketing	3	0	0	3	4003950
3084270	Selected Topics in E-Business	3	0	0	0	99 Cr. Hrs
3152060	Human Computer Interaction	2	0	2	3	3082050
3152080	Computerized Accounting	2	0	2	3	4002926
3153210	Database Administration	2	0	2	3	3153020
3153220	Web Technologies	3	0	2	3	3153040
3154220	Information Architecture	2	0	2	3	3153020
3154230	Advanced Database Design and Implementation.	2	0	2	3	3153020

3154240	E-Commerce	2	0	2	3	3153040
3154290	Mobile Applications	2	0	2	3	3153020 3082030
3153090	Cloud Computing	3	0	0	3	3153020

Students are allowed to register a maximum of one elective course outside the proposed list after the approval of the Department Head.

Course Sequencing Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
1010000	Orientation	1	0	0	0	-
1021100	Islamic Culture	3	1	0	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1041100	Computer Applications	2	0	2	3	-
1171400	Environmental Sciences	3	0	0	3	-
4002910	Introduction to Management	3	0	0	3	-
TOTAL		**15**	**1**	**2**	**15**	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	University Elective I	3	0	0	3	-
xxxxxxx	University Elective II	3	0	0	3	-
1031100	Statistics	2	0	2	3	-
3151020	Algorithms and Problem Solving	2	0	2	3	-
3151030	Information Technology in Business	2	0	2	3	1041100 4002910
TOTAL		**12**	**0**	**6**	**15**	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	University Elective III	3	0	0	3	-
3082010	Information Systems Management	3	0	0	3	3151030
4002926	Principles of Accounting I	3	0	0	3	-
4003950	Principles of Marketing	3	0	0	3	4002910
4004090	Organizational Behavior	3	0	0	3	4002910
TOTAL		**15**	**0**	**0**	**15**	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3082020	Business Statistics	3	0	0	3	1031100
3082060	Communication Management	2	0	2	3	1041100
4003960	Fundamentals of Finance	3	0	0	3	4002920
3152050	Fundamentals of Data Communications and Networking	2	0	2	3	3151020
3153040	Fundamentals of Web Systems	2	0	2	3	3151020
TOTAL		**12**	**0**	**6**	**15**	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3082030	Fundamentals of Computer Systems	2	0	2	3	50 Cr. Hrs
3082050	System Analysis and Design	2	0	2	3	50 Cr. Hrs
3153020	Database Management Systems	2	0	2	3	50 Cr. Hrs
3153030	Fundamentals of Information Security	3	0	0	3	3152050
4106020	Human Resources Management	3	0	0	3	4004090
TOTAL		**12**	**0**	**6**	**15**	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3083070	Change Management	3	0	0	3	60 Cr. Hrs
3083090	Knowledge Management	3	0	0	3	60 Cr. Hrs
3153060	Computer Ethics and Professional Practices	3	0	0	3	60 Cr. Hrs
3153070	IT Project Management	2	0	2	3	60 Cr. Hrs
3082090	Business Process Management	3	2	0	3	60 Cr. Hrs.
TOTAL		**14**	**2**	**2**	**15**	

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	Concentration Elective I	x	x	0	3	xxxxxxx
3084020	Business Intelligence and Data warehousing	3	0	0	3	3153020

3084110	IT Services and Operations Management	3	0	0	3	3082090
3084120	Project Planning, Scheduling and Cost Control	3	0	0	3	3153070
3153080	Enterprise Systems	3	0	0	3	70 Cr. Hrs
TOTAL		**x**	**x**	**0**	**15**	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	Concentration Elective II	x	x	0	3	xxxxxxx
3084040	Information Systems Strategy and Acquisition	3	0	0	3	99 Cr. Hrs
3084050	Information Systems Project	1	0	4	3	99 Cr. Hrs
3084060	IT Resource Management	3	0	0	3	99 Cr. Hrs
3084130	Project Quality and Risk Management	3	0	0	3	3153070
TOTAL		**x**	**x**	**4**	**15**	

SUMMER SESSION: INDUSTRIAL TRAINING

Information Systems / E-Business Management Program

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses *(15 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
1010000	Orientation \CS	1	0	0	0	-
1021100	Islamic Culture	3	0	1	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1031101	Statistics	2	2	0	3	-
1041100	Computer Applications	2	2	0	3	-
1031200	Environmental Sciences	3	0	0	3	-

(b)University Elective Courses *(9 Cr.Hrs.)*

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The Miraculousness of the Holy Qur'an	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-

113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130-	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-

INFORMATION SYSTEMS COMPULSORY COMMON CORE COURSES

(a) General Compulsory Common Courses *(24 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3082020	Business Statistics	3	0	0	3	1031101
3082060	Communication Management	2	0	2	3	1041100
4002910	Introduction to Management	3	0	0	3	-
4002926	Principles of Accounting I	3	0	0	3	-
4003950	Principles of Marketing	3	0	0	3	4002910
4003960	Fundamentals of Finance	3	0	0	3	4002926
4004090	Organizational Behavior	3	0	0	3	4002910
4106020	Human Resources Management	3	0	0	3	4004090

(b) Information Systems Compulsory Common Core Courses *(57 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3082010	Information Systems Management	3	0	0	3	3151030
3082030	Fundamentals of Computer Systems	2	0	2	3	50 Cr. Hrs
3082050	Systems Analysis and Design	2	0	2	3	50 Cr. Hrs
3082090	Business Process Management	3	2	0	3	60 Cr. Hrs
3083070	Change Management	3	0	0	3	60 Cr. Hrs
3083090	Knowledge Management	3	0	0	3	60 Cr. Hrs
3084020	Business Intelligence and Data Warehousing	3	0	0	3	3153020
3084040	Information Systems Strategy and Acquisition	3	0	0	3	99 Cr. Hrs
3084050	Information Systems Project	1	0	4	3	99 Cr. Hrs
3084060	IT Resource Management	3	0	0	3	99 Cr. Hrs
3151020	Algorithms & Problem Solving	2	0	2	3	-
3151030	Information Technology in Business	2	0	2	3	1041100 & 4002910
3152050	Fundamentals of Data Communications and Networking	2	0	2	3	3151020
3153020	Database Management Systems	2	0	2	3	50 Cr. Hrs
3153030	Fundamentals of Information Security	3	0	0	3	3152050
3153040	Fundamentals of Web Systems	2	0	2	3	3151020
3153060	Computer Ethics and Professional Practices	3	0	0	3	60 Cr. Hrs
3153070	IT Project Management	2	0	2	3	60 Cr. Hrs
3153080	Enterprise Systems	3	0	0	3	70 Cr. Hrs

(c) Internship *(3 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3084070	Information Systems Internship	0	0	0	3	90 Cr. Hrs

INFORMATION SYSTEMS CONCENTRATION COURSES

(a) Compulsory Concentration Courses (9 *Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr. Hrs.	Prerequisite
3084220	E-Marketing	3	0	0	3	4003950
3153220	Web Technologies	2	0	2	3	3153040
3154240	E-Commerce	2	0	2	3	3153040

(b) Elective Concentration Courses *(6 Cr. Hrs.)*

Course No.	Course Title	Th.	Tut.	Lab.	Cr.Hrs.	Prerequisite

3084080	Selected Topics in Information Systems	2	0	2	3	99 Cr. Hrs
3084090	Individual Project	1	0	4	3	99 Cr. Hrs
3084110	IT Services & Operations Management	3	0	0	3	3082090
3084120	Project Planning Scheduling & Cost Control	3	0	0	3	3153070
3084130	Project Quality & Risk Management	3	0	0	3	3153070
3084140	Customer Relationship Management	3	0	0	3	4003950
3084150	Enterprise Architecture	3	0	0	3	3153080
3084170	Selected Topics in IT Project Management	3	0	0	3	99 Cr. Hrs
3084270	Selected Topics in E-Business	3	0	0	0	99 Cr. Hrs
3152060	Human Computer Interaction	2	0	2	3	3082050
3152080	Computerized Accounting	2	0	2	3	4002926
3153210	Database Administration	2	0	2	3	3153020
3154210	Web Application Design and Dev.	2	0	2	3	3153220
3154220	Information Architecture	2	0	2	3	3153020
3154230	Advanced Database Design and Implementation.	2	0	2	3	3153020
3154270	Advanced Web Topics	2	0	2	3	3153220
3154290	Mobile Applications	2	0	2	3	3153020 3082030
3153090	Cloud Computing	3	0	0	3	3153020

Students are allowed to register a maximum of one elective course outside the proposed list after the approval of the Department Head.

Course Sequencing Plan

FIRST SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
1010000	Orientation	1	0	0	0	-
1021100	Islamic Culture	3	1	0	3	-
1021400	Communication Skills in Arabic Language	3	0	0	3	-
1041100	Computer Applications	2	0	2	3	-
1171400	Environmental Sciences	3	0	0	3	-
4002910	Introduction to Management	3	0	0	3	-

TOTAL	**15**	**1**	**2**	**15**	

SECOND SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	University Elective I	3	0	0	3	-
xxxxxxx	University Elective II	3	0	0	3	-
1031100	Statistics	2	0	2	3	-
3151020	Algorithms and Problem Solving	2	0	2	3	-
3151030	Information Technology in Business	2	0	2	3	1041100 4002910
TOTAL		**12**	**0**	**6**	**15**	

THIRD SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	University Elective III	3	0	0	3	-
3082010	Information Systems Management	3	0	0	3	3151030
4002926	Principles of Accounting I	3	0	0	3	-
4003950	Principles of Marketing	3	0	0	3	4002910
4004090	Organizational Behavior	3	0	0	3	4002910
TOTAL		**15**	**0**	**0**	**15**	

FOURTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3082020	Business Statistics	3	0	0	3	1031100
3082060	Communication Management	2	0	2	3	1041100
4003960	Fundamentals of Finance	3	0	0	3	4002920
3152050	Fundamentals of Data Communications and Networking	2	0	2	3	3151020
3153040	Fundamentals of Web Systems	2	0	2	3	3151020
TOTAL		**12**	**0**	**6**	**15**	

FIFTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3082030	Fundamentals of Computer Systems	2	0	2	3	50 Cr. Hrs
3082050	System Analysis and Design	2	0	2	3	50 Cr. Hrs
3153020	Database Management Systems	2	0	2	3	50 Cr. Hrs

3153030	Fundamentals of Information Security	3	0	0	3	3152050
4106020	Human Resources Management	3	0	0	3	4004090
TOTAL		**12**	**0**	**6**	**15**	

SIXTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
3083070	Change Management	3	0	0	3	60 Cr. Hrs
3083090	Knowledge Management	3	0	0	3	60 Cr. Hrs
3153060	Computer Ethics and Professional Practices	3	0	0	3	60 Cr. Hrs
3153070	IT Project Management	2	0	2	3	60 Cr. Hrs
3082090	Business Process Management	3	2	0	3	60 Cr. Hrs.
TOTAL		**14**	**2**	**2**	**15**	

SEVENTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	Concentration Elective I	x	x	0	3	xxxxxxx
3084020	Business Intelligence and Data warehousing	3	0	0	3	3153020
3084220	E-Marketing	3	0	0	3	4003950
3153080	Enterprise Systems	3	0	0	3	70 Cr. Hrs
3153220	Web Technologies	2	0	2	3	3153040
TOTAL		**x**	**x**	**2**	**15**	

EIGHTH SEMESTER

Course Code	Course Name	Credit Hours				Prerequisite
		Lec	Tut	Lab	Cr. Hrs.	
xxxxxxx	Concentration Elective II	x	x	0	3	xxxxxxx
3084040	Information Systems Strategy and Acquisition	3	0	0	3	99 Cr. Hrs
3084050	Information Systems Project	1	0	4	3	99 Cr. Hrs
3084060	IT Resource Management	3	0	0	3	99 Cr. Hrs
3154240	E-Commerce	2	0	2	3	3153040
TOTAL		**x**	**x**	**6**	**15**	

SUMMER SESSION: INDUSTRIAL TRAINING

MINOR IN COMPUTER SCIENCE

Study Plan-A

The study plan of the Minor in Computer Science for sudents of the College of Engineering is as follows:

(a) Compulsory Courses (9 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3152010	Object Oriented Programming	2	2	0	3	3151020*
3152030	Computer Organization	3	0	0	3	1041100
3152040	Data Structures and Algorithms	2	2	0	3	3152010

** Or equivalent prerequisite.*

(b) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3152050	Fundamentals of Data Communications and Networking	2	2	0	3	3152030
3153020	Database Management Systems	2	2	0	3	3152010
3153050	Fundamentals of Software Engineering	2	2	0	3	3152040

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

1. Only registered students of the Colleges of Engineering, Business Administration, and Scientific majors of the College of Education at AU can register for the minor in Computer Science. Students of the College of Information Technology are not eligible to register in this minor.
2. Students accepted for a Minor in Computer Science must successfully complete 15 credit hours from the courses described in the minor's study plan.
3. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN COMPUTER SCIENCE

Study Plan-B

The study plan of the Minor in Computer Science for other colleges except College of Engineering is as follows:

(c) Compulsory Courses (12 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3151020	Algorithms and Probem Solving	2	2	0	3	1041100
3152010	Object Oriented Programming	2	2	0	3	3151020
3152030	Computer Organization	3	0	0	3	1041100
3152040	Data Structures and Algorithms	2	2	0	3	3152010

(d) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3152050	Fundamentals of Data Communications and Networking	2	2	0	3	3152030
3153020	Database Management Systems	2	2	0	3	3152010
3153050	Fundamentals of Software Engineering	2	2	0	3	3152040

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

4. Only registered students of the Colleges of Business Administration, Law, Information and Mass Communications and scientific majors of the College of Education at AU can register for the minor in Computer Science. Students of the College of Information Technology are not eligible to register in this minor.
5. Students accepted for a Minor in Computer Science must successfully complete 18 credit hours from the courses described in the minor's study plan.
6. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN INFORMATION SYSTEMS

Study Plan

The Minor in Information Systems provides a range of courses to suit requirements of students of different majors. The study plan of the Minor in Information Systems is as follows:

(e) Compulsory Courses* (9 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs	Prerequisite
3082050	Systems Analysis and Design	2	2	0	3	50 Cr. Hrs
3084020	Business Intelligence and Data Warehousing	3	0	0	3	3153020
3153020	Database Management Systems	2	2	0	3	50 Cr. Hrs

** A compulsory course which is part of the student's major must be replaced by another optional course.*

(f) Optional Courses** (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs	Prerequisite
3082090	Business Process Management	3	0	2	3	60 Cr. Hrs
3084040	Information Systems Strategy and Aquisition	3	0	0	3	99 Crr. Hrs
3153070	IT Project Management	2	2	0	3	60 Cr. Hrs

***An optional course which is part of the student's major cannot be taken.*

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

1. Only registered students of majors offered by colleges at AU other than the Information Technology College can apply for a Minor in Information Systems.
2. Students accepted for a Minor in Information Systems must successfully complete 15 credit hours from the courses described in the minor's study plan.
3. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN INFORMATION TECHNOLOGY

Study Plan-A

The study plan of the Minor in Information Technology for students of the College of Engineering is as follows:

(g) Compulsory Courses (9 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3152010	Object Oriented Programming	2	2	0	3	3151020*
3153020	Database Management Systems	2	2	0	3	3152010
3153040	Fundamentals of Web Systems	2	2	0	3	3152010

** Or equivalent prerequisite.*

(h) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3084020	Business Intelligence and Data Warehousing	3	0	0	3	3153020
3153220	Web Technologies	2	2	0	3	3153040
3154240	E-Commerce	2	2	0	3	3153220

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

4. Only registered students of majors offered by colleges at AU other than the Information Technology College can apply for a Minor in Information Technology.
5. Students accepted for a Minor in Information Technology must successfully complete 15 credit hours from the courses described in the minor's study plan.
6. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN INFORMATION TECHNOLOGY

Study Plan-B

The study plan of the Minor in Information Technology for students of all other colleges except the College of Engineering is as follows:

(i) Compulsory Courses (12 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3151020	Algorithms and Problem Solving	2	2	0	0	1041100
3152010	Object Oriented Programming	2	2	0	3	3151020
3153020	Database Management Systems	2	2	0	3	3152010
3153040	Fundamentals of Web Systems	2	2	0	3	3152010

(j) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3084020	Business Intelligence and Data Warehousing	3	0	0	3	3153020
3153220	Web Technologies	2	2	0	3	3153040
3154240	E-Commerce	2	2	0	3	3153220

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

7. Only registered students of majors offered by colleges at AU other than the Information Technology College can apply for a Minor in Information Technology.
8. Students accepted for a Minor in Information Technology must successfully complete 18 credit hours from the courses described in the minor's study plan.
9. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN NETWORKING and SECURITY

Study Plan

The study plan of the Minor in Networking and Security for students of the College of Engineering is as follows:

(k) Compulsory Courses (9 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3153030	Fundamentals of Information security	3	0	0	**3**	3152050*
3153110	Advanced Computer Networks	2	2	0	**3**	3152050*
3153120	Network Security	2	2	0	**3**	3153030

** Or equivalent prerequisite.*

(l) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3154110	Network Design and Implementation	2	2	0	3	3153110
3154120	Wireless and Mobile Computing	2	2	0	3	3153120
3154140	Enterprise Security	3	0	0	3	3153120
3154150	Network Management	2	2	0	3	3153110

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

10. Only registered students of the College of Engineering at AU can register for the minor in Networking and Security. Students of the College of Information Technology are not eligible to register in this minor.
11. Students accepted for a Minor in Networking and Security must successfully complete 15 credit hours from the courses described in the minor's study plan.
12. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN WEB DEVELOPMENT

Study Plan-A

The study plan of the Minor in Web Development for the students of the College of Engineering is as follows:

(m) Compulsory Courses (9 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3152010	Object Oriented Programming	2	2	0	**3**	3151020*
3153040	Fundamentals of Web Systems	2	2	0	**3**	3152010
3153220	Web Technologies	2	2	0	**3**	3153040

** Or equivalent prerequisite.*

(n) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3153020	Database Management Systems	2	2	0	**3**	3152010
3154210	Web Application Design and Development	2	2	0	**3**	3153220
3154270	Advanced Web Topics	2	2	0	**3**	3153220

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

13. Only registered students of majors offered by colleges at AU other than the Information Technology College can apply for a Minor in Web Development.
14. Students accepted for a Minor in Web Development must successfully complete 15 credit hours from the courses described in the minor's study plan.
15. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

MINOR IN WEB DEVELOPMENT

Study Plan-B

The study plan of the Minor in Web Development for students of other colleges except the College of Engineering is as follows:

(o) Compulsory Courses (12 Credit Hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3151020	Algorithms and Problem Solving	2	2	0	**3**	1041100
3152010	Object Oriented Programming	2	2	0	**3**	3151020
3153040	Fundamentals of Web Systems	2	2	0	**3**	3152010
3153220	Web Technologies	2	2	0	**3**	3153040

(p) Optional Courses (6 credit hours)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
3153020	Database Management Systems	2	2	0	**3**	3152010
3154210	Web Application Design and Development	2	2	0	**3**	3153220
3154270	Advanced Web Topics	2	2	0	**3**	3153220

Admission and Completion Requirements

The admission and completion requirements are specified in AU's Minor Programs Policy. Specific requirements of the College of Information Technology are:

16. Only registered students of majors offered by colleges at AU other than the Information Technology College can apply for a Minor in Web Development.
17. Students accepted for a Minor in Web Development must successfully complete 18 credit hours from the courses described in the minor's study plan.
18. Any course taken or to be taken by the student as part of his major study plan cannot count towards the minor and must be replaced by another course from the list of options available for the minor.

Courses Descriptions

3082010 Information Systems Management (3-0-0-3)

Information systems management is the planning, acquisition, development and use of these systems. This course is designed to give students managerial view of information systems and its role in modern organizations to allow them to evaluate, adopt, and manage existing and new information systems. Topics include leadership issues, the CIO's responsibilities, information systems planning, essential technologies, managing operations, systems development, decision-making, collaboration, and knowledge work.

PREREQUISITE: 3151030

3082020 Business Statistics (3-0-0-3)

The first part of this course is a quick review of some basic concepts in probability and statistics. The second part deals with a deeper development in estimation and hypothesis testing of parameters, topics covered include interpretation of confidence intervals and hypothesis testing results, testing in paired samples, one and two-way analysis of variance. The third part develops statistical techniques that involve normalized data. The fourth part deals with nonparametric statistics, Simulation. The fifth part is an introduction to time series analysis and modeling.

PREREQUISITE: 1031101

3082030 Fundamentals of Computer Systems (2-0-2-3)

This course covers concepts of computer organization and architecture, main types of memory ; central processing unit, memory addressing; principles and concepts of modern operating systems; operating system services: processes and process management, memory management; file systems; multitasking and multithreading; operating system security and configuration; Input/output devices and control; virtualization of computing services.

PREREQUISITE: 50 CR. HRS.

3082050 System Analysis and Design (3-0-0-3)

System analysis and design are processes in which technical, organizational, and human aspects of information system are analyzed and changed with the intent of creating better systems to make businesses more productive, efficient, and competitive. All information systems projects require analysts to gather requirements, model the business needs, and create blueprints for how the system should be built. This course is designed to provide students with a core set of skills that all analysts need to know. Systems analysis and design using UML will be discussed.

PREREQUISITE: 50 CR. HRS.

3082060 Communication Management (2-0-2-3)

Communication is a major success factor in business, especially with the enormous leap in communication technology recently enabled by IT and the growing complexity of today's business. This course focuses on the understanding of the role of communication, and how it can be enhanced using different IT approaches and technologies. The course will address communication on two main fronts, improving communication skills for people, and using technology to leverage these skills. Students will learn how to communicate effectively from outside the organization as in job hunting, and resume writing, as well as from inside organizations as in message and report writing. Students will apply communication-related technology to implement their ideas.

PREREQUISITE: 1041100

3082090 Business Process Management (3-0-0-3)

The course introduces the methods and techniques required to analyze, design, implement, automate, and evaluate business processes. Structured along the phases of the Business Process Management (BPM) life cycle, students learn to analyze organizational performance from a process perspective, redesign processes using value-focused techniques, design workflows and implement them in BPM systems, simulate new process designs, and create process analytics applications. The course leads students from process

discovery through conceptual and technical process design through the implementation of workflows to the structure of process-aware information systems.

PREREQUISITE: 60 CR. HRS.

3083070 Change Management (3-3-0-3)

Continuous change is inevitable in all organizations for technical, financial, or human reasons. Change management can make the difference between chaos and order, depending on how we understand and manage it. This course focuses on IT-related change ranging from small, systematic upgrades or improvements to the introduction of completely disruptive and innovative technologies leading to a paradigm shift. The students are introduced to the three main approaches of change management: individual perspective school, the group dynamics school, and the technical systems school. It identifies different elements of change and discusses how to effectively evaluate and control them. Besides theoretical component, students will be given case studies to build concrete understanding of real-life examples.

PREREQUISITE: 60 CR. HRS.

3983090 Knowledge Management (3-0-0-3)

The aim of this course is to introduce basic concepts, terminology, and techniques of Knowledge Management (KM). Topics covered include: the origins and units of organizational knowledge; evolution of knowledge management; implementation and utilization of knowledge management systems, and how to measure their impact, outputs, and benefits.

PREREQUISITE: 60 CR. HRS.

3084020 Business Intelligence and Data Warehousing (3-0-0-3)

Today's IT deals with gigantic amount of information. The success of any organization greatly depends on its ability to process and understand its information and extract essential knowledge to help managers take well informed decisions. This course teaches students how to deal with information and how to build and maintain effective warehouse to extract important knowledge from it. The students are introduced to fundamentals of BI and DW and will learn effective modeling techniques and use them to extract business intelligence and present them to users.

PREREQUISITE: 3153020

3084040 Information Systems Strategy & Acquisition (3-0-0-3)

This advanced course examines how IT enables organizations to conduct business in radically different and more effective ways. The course defines high-level IT infrastructure and Information Systems that support the operational and strategic needs of organizations. It develops also a framework that will allow IS leaders to assess existing IT infrastructures and emerging technologies as well as how these enabling technologies might affect organizational strategy.

PREREQUISITE: 99 CR. HRS.

3084050 Information Systems Project (1-4-0-3)

The course aims to give students the opportunity to work in a guided but independent fashion to investigate a problem by making use of information technology knowledge, techniques, and methodologies acquired in the previous semesters to provide a suitable solution to an IT problem. The course also aims to enhance teamwork and communication skills, both oral and written.

PREREQUISITE: 99 CR. HRS.

3084060 IT Resource Management (3-0-0-3)

This course addresses the tactical/operational responsibilities and roles of the IT Management, and the governance considerations that link the IS-business organizations. The focus is on current/emerging issues in creating and coordinating the key activities necessary to manage the day-to-day operations of the IS function, and coordinating the skills and organizational IS infrastructure. Topics include: IT Value, Role of

the CIO, IT Governance, Key IT Processes, Strategic Alignment Maturity, Managing Emerging Technologies, Organizational Considerations, and Outsourcing.

PREREQUISITE: 99 CR. HRS.

3084070 Information Systems Internship (3-0-0-3)

Internship familiarizes students with actual working environments. It gives students the opportunity to integrate their knowledge and skills learned in the course by applying it to real world problems encountered in business and industry. Internship also gives the student a feeling of what is involved in working on actual information technology problems and develop communication and teamwork skills as well as ethical issues relation to IT.

PREREQUISITE: 90 CR. HRS.

3084080 Selected Topics in Information Systems (2-2-0-3)

This course aims to introduce students to new developments in the area of information systems not specifically covered in the curriculum and in which a faculty member has developed interest and proficiency. The intention is to provide a rapid response to current trends and to widen student's knowledge in different areas if IS. Specific content of the course will depend on the particular area taught at the time.

PREREQUISITE: 99 CR. HRS.

3084090 Individual Project (1-4-0-3)

This course aims to give students the opportunity to work ***alone*** in a guided but independent fashion to investigate a problem by making use of information systems knowledge, techniques, and methodologies acquired in the previous semesters to provide a suitable solution to an IT problem. The course also aims to develop communication skills, both oral and written.

PREREQUISITE: 99 CR. HRS.

3084110 IT Services and Operations Management (3-0-0-3)

This course provides a detailed, modular introduction to the concepts, terms, definitions, benefits, objectives, and relationships within core IT service management processes and functions, according to the ITIL best practice framework. It is based on principles described in ITIL's Service Support and Service Delivery Standards. It provides a practical understanding of ITIL key concepts, principles, processes, and functions.

PREREQUISITE: 3082090

3084120 Project Planning, Scheduling and Cost Control (3-0-0-3)

Most failures of projects are related to either *schedule delays*, or *cost overrun* or both. A balanced cost and time management is in the core of project management, and successful projects will need extensive attention to budget performance, which is strongly coupled to schedule. This course will explore recent methods and techniques, which integrate technical, schedule, and cost objectives to enhance control on projects and ensure their success and timely termination. The course will allow students to get deep understanding of the many factors that affect project time and cost performance, and teaches them how to employ best practices, well-known templates, methods and techniques to observe and control them.

PREREQUISITE: 3083070

3084130 Project Quality and Risk Management (3-0-0-3)

Project Quality and Risk management are forward looking disciplines, which try to identify potential future problems and plan for effective mitigation or avoidance techniques, leading to greater success in projects and business in general. While it covers all aspects of an organization, this course will introduce students to analytical and mathematical models to enable them measure and evaluate risks and quality related to IS projects.

PREREQUISITE: 3083070

3084140 Customer Relationship Management (3-0-0-3)

This course examines customer relationship management (CRM) as a key strategic process within all organizations. CRM is defined as the overall process of building and maintaining profitable customer relationships by delivering value and satisfaction to the customer. Focusing on process, strategy and technology, this course leads students from understanding the fundamentals of CRM through the implementation of CRM systems and analysis of customer data. It discusses the CRM philosophy as well as the systems in place that incorporate and integrate information from sales, marketing and service.

PREREQUISITE: 4003950

3084150 Enterprise Architecture (3-0-0-3)

Enterprise architecture is a conceptual blueprint that defines the structure and operation of an organization. The intent of enterprise architecture is to determine how an organization can most effectively achieve its current and future objectives. This course is designed to cover the concepts of enterprise architecture; the purpose and importance of architecture in the enterprise. It discusses current problems with establishing and maintaining architectures, and some methods to overcome these problems.

PREREQUISITE: 3153080

3084160 Information Architecture (3-0-0-3)

Information is the heart of knowledge and one of the main pillars of information systems. This course introduces fundamental concepts and methods of understanding and modeling data as well as extracting information out of it. It also shows how to represent large volume of information and allow users to comprehend and interact with it in an effective way. The course focuses on data modeling and architecture approaches allowing student to build effective information architecture. Then the student will learn how to interact with information using different labeling, navigation, and search strategies. Students will finally learn about information architecture in practice and its applications in large organizations.

PREREQUISITE: 3153020

3084170 Selected Topics in IT Project Management (3-0-0-3)

This course aims to introduce students to new developments in the area of Project Management in general and ICT enabled Project Management in specific, mainly new topics not specifically covered in the curriculum and in which a faculty member has developed interest and proficiency. The intention is to provide a rapid response to current trends and to widen student’s knowledge in areas such as but not limited to: E-government, E-Transformation, Green Computing, Cloud Computing, Mobile Computing, C- Commerce. Specific content of the course will depend on the particular area taught at the time.

PREREQUISITE: 99 CR. HRS.

3084220 E-Marketing (3-0-0-3)

The course describes common strategies for the marketing of goods and services via the Internet range from public relations and corporate communications to advertising and electronic commerce. Students investigate and evaluate various marketing and communication strategies and tactics for the World Wide Web. Emphasis is placed on critical evaluation skills as well as Web site planning, development, design, and other factors which contribute to a Web site's success.

PREREQUISITE: 4003950

3084270 Selected Topics in E-Business Management (3-0-0-3)

This course aims to introduce students to new developments in the area of e-Business management not specifically covered in the curriculum. It also aims to provide students with additional knowledge in the selected topics.

PREREQUISITE: 99 CR. HRS.

12112 Computer Programming (2-2-0-3)

This course provides knowledge of problem solving and programming concepts using pseudocode and a computer programming language. Topics covered: the problem- solving process; data types; variables, constants, and memory locations; simple sequential programs; basic input/output; selection and control structures, file input/output; arrays and strings; and user defined functions.

Prerequisite: 0104110

312211 Programming for Engineers (2-2-0-3)

This course extends the programming concepts developed in earlier course in programming and provides in-depth exposure to advanced programming techniques in Java and the MATLAB programming environment.

Prerequisite: 312112

312215 Circuit Analysis (3-2-2-4)

Basic quantities: charge, current, voltage, resistance, energy and power. Analysis of series, parallel and series-parallel d.c. resistive circuits using Ohm's law, power law and Kirchoff's voltage and current laws. Analysis of more complex circuits using loop and nodal methods, superposition, Thevenin's and Norton theorems. Transient analyses of RC, RL, and RLC circuits.

Prerequisite: 217101 and 217122

312242 Digital Logic Design (3-2-2-4)

This course focuses on the techniques necessary to design digital logic circuits both combinational and sequential. Boolean algebra, k-maps, combinational building blocks such as multiplexors, demultiplexors, decoders. Arithmetic logic circuits such as adders, subtractors, multipliers, dividers and comparator. Timing and hazards in digital logic. Memory elements such as (SR, D, JK, T) latches/FFs. Registers, shifters, counters, RAMs, ROMs, timing issues and finite state machines.

Prerequisite: 104110

312246 Computer Organization & Architecture (3-0-0-3)

Introduction to computer organization, the major components of a microcomputer system and the interaction between them, including CPU, memory, I/O devices and buses. Machine instructions, assembly language programming, CPU performance and metrics, non-pipelined and pipelined processor design, datapath and control unit, pipeline hazards, memory system and cache memory.

Prerequisite: 312242

312251 Electronics I (3-2-2-4)

Basic properties of semiconductor materials. Theory of operation and applications of p-n junction diodes, Zener diodes and photodiodes. Theory of operation, biasing circuits, and small signal analysis of Bipolar Junction Transistor and Junction Field Effect Transistor. Transistor configurations and two-port network representation of transistor, a.c. equivalent circuits. Analysis and design of transistor amplifier circuits.

Prerequisite: 312251

312300 Internship training (1-6-0-4)

Internship familiarizes students with actual working environments. It gives students the opportunity to integrate their knowledge and skills acquired in various courses. Internship also gives the student a feeling of what is involved in working in a practical environment. It also provides an opportunity to develop communication and team-work skills as well as ethical issues relating to the profession.

Prerequisite: 106 Credit Hours

312303 Electronics II (2-2-0-3)

This course covers design and analysis of BJT and FET amplifier circuits, operational amplifiers and their applications in wave shaping, signal generation, filters, A/D and D/A converters. It also covers design of oscillator circuits and signal/waveform generators.

Prerequisite: 312251

312321 Digital System Design (3-2-0-4)

This course introduces design methodologies for implementing digital systems in programmable logic. The course will build on the basics of digital logic from 2nd year. The students will learn how a Hardware Description Language (HDL) is used to describe and implement hardware. The topics will include (behavioral modeling, dataflow modeling and structural modeling and writing test benches for design verification). The students also will learn about computer-aided synthesis and implementation for PLDs and FPGAs design with a focus on FPGA design flow. Laboratory exercises lead the students through the complete programmable logic design cycle. Each student will prototype a digital system starting with VHDL entry, functional and timing simulations, logic synthesis, device programming, and verification.

Prerequisite: 312242

312322 Instrumentation and Measurements (2-2-0-3)

Basic measurement concepts, sources and types of measurement errors, sources of noise and interference. DC and AC Bridges and their applications. Analog DC and AC meters. Oscilloscopes: types, specifications, operation, measurements with oscilloscopes. Electronic voltmeters, digital multimeters, electronic counters. Data acquisition and control using plug-in cards. Development of virtual instruments using LabVIEW. Transducers and their applications.

Prerequisite: 312251

312348 Microprocessor Systems (3-2-0-4)

This course covers microprocessor architecture, system design and development, instruction set and buses. The Intel 80x86 family, real and protected mode, interrupts and interfacing techniques are explained. Advanced microprocessor system architectures such as the Intel Pentium will be discussed.

Prerequisite: 312246

312349 Embedded Systems (3-2-0-4)

This course introduces the Hardware and software design of embedded systems using microcontrollers. Students are introduced to microcontroller programming in both assembly and C. Important subsystems of the microcontroller are covered such as timers, interrupts, serial transmission of data, analog to digital and digital to analog converters. There are a series of exercises introduced into the lectures and labs which give students hands-on experience with working with microcontroller. At the end of the course, each student will choose a design project to work on during the last few weeks.

Prerequisite: 312348

312430 Selected Topics in computer Engineering (3-0-0-3)

This course covers some advanced topics related to computer science and engineering that are not covered in any of the above mentioned courses and are considered useful addition learning material for students majoring in computer engineering. Course contents are approved by the departmental and college curriculum committees.

Prerequisite: 70 credit hours

312431 Project I (1-4-0-3)

The course aims to give students the opportunity to work in a guided but independent fashion to develop a solution to a problem by making use of knowledge, techniques, and methodologies acquired in the previous semesters. The course also aims to enhance team work and communication skills, both oral and written.

Prerequisite: 90 credit hours

312432 Project II (1-4-0-3)

The course aims to give students the opportunity to work in a guided but independent fashion to develop a solution to a problem by making use of knowledge, techniques, and methodologies acquired in the previous semesters. The course also aims to enhance team work and communication skills, both oral and written. Student may continue the work on project-1 subject to the approval of the advisor or define a new project.

Prerequisite: 312431

312440 Integrated Circuit Design (3-0-2-3)

This course covers the, design, operation, and analysis of various digital integrated circuit families, MSI digital circuits, and memories.

Prerequisite: 312251 and 312242

312446 Engineering Ethics (1-0-0-1)

The course is intended to teach students to become effective professionals in the engineering field by examining many of the challenging professional, legal, social and ethical issues surrounding Information Technology and its use. The course address the basic issues in engineering and computer ethics, especially those problems engineers, computer scientists, and IT professionals face in a corporate setup. The course also considers many of the moral and professional issues that those who work in the field might face.

Prerequisite: 70 credit hours

312453 Parallel Processing (3-0-0-3)

This course introduces the underlying concepts of Parallel Processing techniques. Forms of parallelism, parallel algorithms and architectures for various applications, Case studies of parallel machines and their performance measures, software tools for parallel machines.

Prerequisite: 312246

312470 Fuzzy Logic and Neural Networks (3-0-0-3)

Theory and applications of artificial neural networks and fuzzy logic: multi-layer perception, self-organization map, radial basis network, Hopfield network, recurrent network, fuzzy set theory, fuzzy logic control, adaptive fuzzy neural network, genetic algorithm, and evolution computing. Applications to control, pattern recognition, nonlinear system modeling, speech and image processing.

Prerequisite: 70 Credit Hours

315101 Calculus for Information Technology (3-0-2-3)

This course covers the essential mathematical topics, that students specialized in information technology needs. The first part of the course deals with plane analytic geometry. The second part covers the basic knowledge about matrices and determinants. The third part is designed to provide students with notions of real functions: limits, continuity, differentiability, and integration with applications on simple derivatives and integrals.

PREREQUISITE: -

315208 Computerized Accounting (2-2-0-3)

The Computerized accounting information system joins together the skill sets of accounting and information technology. Information technology has created new challenges and opportunities for accountants who also have expertise in information systems. Many traditional accounting functions are now embodied in systems that require a different combination of technical and financial knowledge. The CAIS course is designed to provide this combination of knowledge and skill sets to meet the new challenges and opportunities of the information technology world. The main objective of the course is to introduce students to the design and implementation of a systematic structure for providing information for decision-making.

PREREQUISITE: 315207

315102 Algorithms and Problem Solving (2-2-0-3)

This course provides knowledge of problem solving and programming concepts using pseudocode code and a computer programming language. Topics covered: the problem- solving process; data types; variables, constants, and memory locations; simple sequential programs; basic input/output; selection and control structures, file input/output; arrays and strings; and user defined functions.

PREREQUISITE: -

315103 Information Technology in Business (2-2-0-3)

This course aims to cover a range of general information technology topics that will make the student appreciate the role of IT in business. Topics include: information technology fundamentals; information technologies; business applications; development processes; and ethical, societal and security issues.

PREREQUISITE: 104110

315201 Object Oriented Programming (2-2-0-3)

The primary objective of this course is to introduce the concepts of object-oriented programming: classes, objects, methods, object interaction, encapsulation, inheritance, abstraction, and polymorphism. Core sections of the Java language related to object oriented programming are introduced. This course is *not* meant as a comprehensive introduction to all of Java, the primary objective is to use Java to introduce concepts of object-oriented programming.

PREREQUISITE: 315102

315304 Fundamentals of Web Systems (2-2-0-3)

This course introduces the basics of Web systems and how it differs from desktop systems. Students will learn client-server architecture, and how it evolves to multitier system. The course will allow student to learn and use essential Web languages and technologies including XHTML, CSS, and XML. Students will apply this knowledge to generate essential web components like basic browser controls (buttons, links, and menus), forms and frames. They will also understand how these components are managed on the server side.

PREREQUISITE: 315201

315307 Information Technology Project Management (2-2-0-3)

This course aims cover: characteristics of IT Project management, initiating an IT project; project planning; defining and managing project scope, structuring a project, project schedule and budget, managing project risk, project communication, tracking, and reporting, IT project quality management, ethics and professional practices, and project implementation.

PREREQUISITE: 315305

315308 Enterprise Systems (3-0-0-3)

This course introduces students to the new concept of enterprise systems and shows its role in the industry as used by medium and large enterprises. Students will understand the main architectural components of today's enterprise and its infrastructure. The course also introduce different business domain

concepts and workflow management and will help student make the link between development and implementation issues on one side and practical enterprise applications on the other side.

PREREQUISITE: 315206

315401 Information Technology Project (1-4-0-3)

The course aims to give students the opportunity to work in a guided but independent fashion to investigate a problem by making use of information technology knowledge, techniques, and methodologies acquired in the previous semesters to provide a suitable solution to an IT problem. The course also aims to enhance team work and communication skills, both oral and written.

PREREQUISITE: 315307 & 99 CR. HRS.

315402 Information Technology Internship (3-0-0-3)

Internship familiarizes students with actual working environments. It gives students the opportunity to integrate their knowledge and skills learned in the course by applying it to real world problems encountered in business and industry. Internship also gives the student a feeling of what is involved in working on actual information technology problems and develop communication and team-work skills as well as ethical issues relation to IT.

PREREQUISITE: -117 CR. HRS.

315311 Advanced Computer Networks (2-2-0-3)

This course will cover the principles of networking with a focus on algorithms, protocols, and implementations for advanced networking services. We will examine a variety of ideas that were proposed to enhance the Internet, why some of these enhancements were successful while others were not. The emphasis in this course is on topics such as routing protocols, advanced routing and switching. It covers Internet architecture, congestion control, QoS, IPv6, and voice over IP. The student will use network simulators for some network models.

PREREQUISITE: 315205

315312 Network Security (2-2-0-3)

This course introduces students to main security concepts related to the protection of a network from known threats and attacks. This includes digital signatures, authentication protocols, IP & Web security and e-mail security. It also emphasizes the importance of using firewalls in order to secure a network. Packet-filtering routers, application and circuit-level gateways are presented. Advanced cryptographic algorithms are also discussed in details such AES, MAC & hash operations and cipher modes.

PREREQUISITE: 315303

315411 Network Design & Implementation (2-2-0-3)

The aim of the course is for the student to design a LAN solution detailing structured cabling components, desktop and server hardware, network operating systems, and network administration tools. He can document the design solution with materials and equipment lists, cable installation drawings, telecommunications and server room layouts, software versions and compatibility lists, and budget requirements. Also he demonstrates design feasibility by implementing a LAN prototype with all required functionality including servers, workstations and network infrastructure. This course defines a technical project plan and timeline for implementation, and discussing overall project benefits, possible technical issues and required resources to complete the project.

PREREQUISITE: 315311

315412 Wireless and Mobile Computing (2-2-0-3)

This course presents the student with the latest in wireless technologies. The first part includes wireless networks such as, cellular and short range wireless technologies, protocols for wireless and wireless resources management. The second part includes mobile computing such as, VoIP on wireless, computing & programming over wireless. The student will study the legal and the private issues associated with wireless.

PREREQUISITE: 315312

315413 Network Operating Systems (2-2-0-3)

This course introduces network operating system NOS, which is the software that allows multiple computers to communicate, share files and hardware devices with one another. The course aims to provide the student with theoretical and practical knowledge of network operating systems. The student is exposed to some of the most commonly used network operating systems. The student will reinforce their theoretical knowledge in practical sessions where they will install configure , manage and trouble-shoot network operating systems.

PREREQUISITE: 315301

315414 Enterprise Security (3-0-0-3)

This course aims at introducing students to enterprise security concepts, related risks and cost. It mainly presents a deep coverage of intrusion detection and prevention concepts, including architectures and a survey of most popular IDS implementations and deployments. Students are also introduced to the need of having proper security policies and procedures in order to handle threats properly in addition to forensics techniques to thwart computer attacks.

PREREQUISITE: 315312

315415 Network Management (2-2-0-3)

The course discusses typical architectures for network management including the management console, aggregators and device agents. This course introduces management paradigms and protocols (SNMP). Remote Monitoring (RMON), Network Management Tools and Systems are examined. The Web-Based Management and Network Management Applications are covered. Configuration of basic network resources and management of multiple servers' network and troubleshooting.

PREREQUISITE: 315311

315321 Database Administration (2-2-0-2)

This course prepares students to administer and maintain databases by applying best practices and procedures to any database platform. With general, platform independent approach, students will be able to work as database administrators to any of the major industrial databases including Oracle, IBM BD2, Sybase, Microsoft and MySQL. Students will become familiar with DBA roles and responsibilities, be able to create a database environment with modeling and normalization as well as reporting while maintaining data integrity.

PREREQUISITE: 315302

315322 Web Technologies (2-2-0-3)

This course will introduce students to different Web technologies, languages, and frameworks. The student will review the dynamics of these technologies, their advantages and disadvantages. Students will also learn the applicability of each of these technologies in different Web application settings and environment. Students will also learn how to mix and match these technologies and investigate their compatibility and integration challenges.

PREREQUISITE: 315304

315421 Web Application Design and Development (2-2-0-3)

This course prepares students to apply different web technologies and integrate them into a web application. Topics covered include: Web applications and Rich Internet Applications (RIA), programmable Web applications, working with proxies, Yahoo and Google mash up services, Creating a Web application, model view controller pattern, from design, validation and usability, User Interaction Effects and Animation, and Tagging and Rating the Web Application.

PREREQUISITE: 315322

315422 Information Architecture (2-2-0-3)

Information is the heart of knowledge and one of the main pillars of information systems. This course introduces fundamental concepts and methods of understanding and modeling data as well as extracting

information out of it. It also shows how to represent large volume of information and allow users to comprehend and interact with it in an effective way. The course focuses on data modeling and architecture approaches allowing student to build effective information architecture. Then the student will learn how to interact with information using different labeling, navigation, and search strategies. Students will finally learn about information architecture in practice and its applications in large organizations.

PREREQUISITE: 315302

315423 Advanced Database Design & Implementation (2-2-0-3)

This course builds on top of the first DBMS course by introducing advanced database concepts to allow students to effectively design and implement industrial quality database. The course revisits SQL in a deeper, more practical approach, with a focus on its PL/SQL extension. The student will learn database in a client-server setting, and see how to manage multi-user databases. Students will be able to design and implement functional databases that include major components of an industrial database.

PREREQUISITE: 315302

315425 Distributed and Object Databases (2-2-0-3)

This course discusses new and emerging issues in the field of distributed database. It focuses on principles of db distribution from both data distribution approach and network technologies role in distribution. Students will have in depth coverage of advanced transaction model and workflow as well as parallel databases, distributed object DBMS, push-based technology, and mobile DBMS; all of which are pillars of enterprise information technology of today.

PREREQUISITE: 315423

315403 Selected Topics in Information Technology (3-0-0-3)

This course aims to introduce students to new developments in the area of information technology not specifically covered in the curriculum and in which a faculty member has developed interest and proficiency. The intention is to provide a rapid response to current trends and to widen student's knowledge in areas such as but not limited to: information storage, retrieval, security, processing, or transition. Specific content of the course will depend on the particular area taught at the time.

PREREQUISITE: 315307

315404 Individual Project (2-2-0-3)

This course aims to give students the opportunity to work ***alone*** in a guided but independent fashion to investigate a problem by making use of information technology knowledge, techniques, and methodologies acquired in the previous semesters to provide a suitable solution to an IT problem. The course also aims to develop communication skills, both oral and written.

PREREQUISITE: 315307

315416 Data Compression (2-2-0-3)

The aim of this course is to introduce the theoretical underpinnings of data compression and cover many fundamental algorithms. Topics covered include: fundamentals of digital communication, communication channel, measure of information, encoding of source output, shannon's algorithms. Discrete and continuous channel entropy coding, variable length code, channel noise, compression & codes, lossless compression algorithms, lossy compression algorithms, audio compression, image and video compression.

PREREQUISITE: 315303

315 417Distributed Systems (3-0-0-3)

The aims of this course are to study the fundamental characteristics of distributed systems. Topics covered will include: low-level basics including sockets, internet-based inter-process communications, and threading; remote-procedure-calls and remote-method-invocations; modern synchronous and asynchronous style client server systems and supporting processes; messaging and transactional systems; peer-to-peer and grid technologies; supporting systems such as naming and directory services.

PREREQUISITE: 315311

315418 Wireless Network Security (3-0-0-3)

This course introduces students to modern wireless technologies (802.11, Bluetooth, RFID, ZIGBEE, and Infrared). It covers most aspects related to radio communication and various physical phenomena in a wireless environment. It also surveys most wireless security issues across the OSI layers and technologies (1G, 2G, 2.5G and 3G). Students will also be introduced to basic and advanced security implementations (filtering by MAC, WAP, WAP2, VPN, RADIUS), including setting proper security procedures and policies.

PREREQUISITE: 315312

315426 Knowledge Management (3-0-0-3)

This aim of this course is to introduce basic concepts, terminology, and techniques of Knowledge Management (KM). Topics covered include: the origins and units of organizational knowledge; evolution of knowledge management; implementation and utilization of knowledge management systems, and how to measure their impact, outputs, and benefits.

PREREQUISITE: 315308

315427 Advanced Web Topics (2-2-0-3)

This course introduces students to the latest trends and technologies as used by today's information technology industry. The course focuses on advanced Web technologies that are strongly adapted as the next generation IT. Students will learn the role of Web 2.0 and Web 3.0 with special focus on Web services and Service-Oriented Architecture. The course will allow students to understand the current evolution from Personal Computing (1980s) to Network Computing (1990s) to Internet and Windows (2000s) to today's trends of cloud computing, Web tool kits, mashups, and social networking.

PREREQUISITE: 315322

315428 Data Warehousing and Data Mining (3-0-0-3)

Today's IT deals with gigantic amount of information. The success of any organization greatly depends on ts ability to process and understand its information and extract essential knowledge to help managers take well informed decisions. This course aims to introduce students to concepts and techniques of Data Warehousing and Data Mining. Topics covered include: data warehouse architecture, development life cycle, logical data modeling for a data warehouse, physical data design; Data mining concepts and tasks, data preprocessing and reduction, classification techniques, association analysis and algorithms, clustering analysis and algorithms, anomaly detection methods, and web mining.

PREREQUISITE: 315308

350501 Data Modeling and Databases (3-0-0-3)

This course provides an understanding of the issues in managing database systems as an essential organizational resource. Students learn enterprise data architecture components, data storage configurations, and information retrieval methods. The course expands from the relational model to the multidimensional model, object-relational techniques, and web accessed data.

350502 Software Developments (3-0-0-3)

This course covers the application of system analysis and design processes. Students evaluate and choose appropriate system development methodologies and design a system. They learn the importance of effective communication and integration with users. The course employs current methods and tools, such as rapid application development, prototyping, and visual development.

350503 Data Communications and Networking (3-0-0-3)

This course develops a managerial level of technical knowledge and terminology for data, voice, image, and video communications and computer networks to effectively communicate with technical, operational and managerial personnel in telecommunications in all layers.

350504 Project and Change Management (3-0-0-3)

This course introduces two major and related topics: project management and change management. It covers the management of projects within an organizational context, including the processes related to initiating, planning, executing, controlling, reporting, and closing a project. It also covers project integration, scope, time, cost, quality control, and risk management, and the management of changes in organizations that result from introducing or revising information systems, as well as the change management role of the IS specialist.

350505 Information Technology Policy and Strategy (3-0-0-3)

In this course students develop an understanding of the strategic use of information technology from a business perspective at the enterprise level. They are expected to understand the internal management of information systems services from the point of view of the CIO and to examine alternative strategies and tactics available to management to achieve goals.

350511 E-Commerce Application Developments (3-0-0-3)

This course covers fundamental issues in designing an E-Commerce web-based application. It starts with a review of web and server-side technologies, then moves on to design issues of creating tiered and scalable applications. The last part of the course takes a look at Wireless E-Commerce applications and developing business-to-business applications using XML, SOAP, and Biztalk servers.

350512 Data Warehousing and Data Mining (3-0-0-3)

This course is designed to introduce the students to the areas of Data Mining and Data Warehousing as they apply to the business world. The student should be able to create a Data Warehouse/Data Mart and apply a Data Mining technique to obtain knowledge on hidden pattern from the cleaned data.

PREREQUISITE: 350501

350513 Client-Server Technologies (3-0-0-3)

This course is designed to introduce students to areas of web programming technologies as they apply to the business world. The course prepares the student to build and maintain client and server sides on the web using new languages and new software systems.

PREREQUISITE: 350503

350514 Selected Topics in Databases (3-0-0-3)

The aim of this course is to introduce students to state-of-the-art selected topics in advanced databases.

PREREQUISITE: 350501

350515 Security of Information Systems (3-0-0-3)

This course is designed to develop knowledge and skills for security of information and information systems within organizations. It focuses on concepts and methods associated with planning, designing, implementing, managing, and auditing security at all levels and on all systems platforms, including worldwide networks. The course presents techniques for assessing risk associated with accidental and intentional breaches of security. It covers the associated issues of ethical uses of information and privacy considerations.

PREREQUISITE: 35050

College of Mass Communication & Humanities

Home

The College of Mass Communication & Humanities awards two bachelor's degrees in Arts. The Bachelor of Arts in the Media started in the second semester of the academic year 2008-2009 as one of the scientific programs at the College of Mass Communication and Humanities at Ajman University . Enrolled students of this program should finish (42) courses successfully, which are equivalent to (126) credit hours. The Bachelor of Arts in Sociology and Social Work started in the first semester of the academic year 2011-2012 as one of the scientific programs in the college. The program was launched to build on the initial authorization granted in this regard from the Academic Accreditation Committee of the Ministry of Higher Education and Scientific Research. Students enrolled in this program must complete 42 courses which make 126 credit hours.

Dean's Message

Throughout history, the importance of the intellectual aspect has always been universally acknowledged in building the cultures of great nations. This clarifies the importance of human sciences which deal with the studying of human intellect and its applications since the time of immemorial. Therefore, the quest of the College of Mass Communication & Humanities has been to prepare highly-educated professionals who are creative, able to build and go forward in acquiring educational abilities and high-level skills in Mass Communication with all its various majors, and Sociology & Social Work.

The college has witnessed, in recent years, quantitative and qualitative developments in terms of the number of students, faculty, facilities, laboratories, studios and technical equipment. The college pays special interest in creativity as a pivotal work in the media and sociology. Thus, it takes care of the media talents and works hard to provide means and programs of study in order to keep pace with the information revolution.

The college also takes special interest in the theoretical formation and practical training of the students majoring in; Journalism, Radio and Television, Public Relations, Graphic Design, as well as Sociology & Social Work. This is achieved in accordance to the latest standards in the training and qualification in this field. The college issues "Afaq" newspaper which is prepared by the college students. The college also supervises the production of different TV programs presented by students. Through graduation projects, students make distinctive works such as producing films, organizing exhibitions, scientific sociological projects, issuing magazines and preparing, executing media and public relations campaigns and

organizing scientific trips for Sociology and Social Work to various social and scientific institutions across the UAE.

Moreover, the college exerts every possible effort in developing the programs in accordance with the latest theories and approaches. A boom will take place in the near future, in offering new programs that should keep pace with the requirements of the modern age and the needs of the job market.

May Allah guide us all and keep Ajman University a beacon of knowledge and herald of excellence.

Dr. Hossam Salamah

Dean of College of Mass Communication & Humanities

College (Mission - Vision - Objective)

College Vision:

In today's world, the globalization and modern technology forces increasingly impose a unified social model, which, in many aspects, threatens the world's cultural diversity as well as the diversified human legacy. A dire need, more than ever, emerged for universities and institutions of higher education with a broader vision; a vision that reflects the national ambition for progress and modernity, which should come in line with the national culture and identity as well as preserving the authentic traditions and values.

In the context of the above, the College of Mass Communication and Humanities aims to promote and support the educational process in the society, and seeks to pick these effects, and it adopts the positive aspects of modernity. The college believes that education, research and training require continuous development. Such a development will be achieved only in an environment that is open to innovation and stimulates creativity and encourages the spread of centers of excellence, an environment that has a solid infrastructure, capable of supporting the process of communication and academic interaction.

College Mission:

The College mission is to provide students with solid academic education in both the four media tracks: Print and Electronic Journalism, Radio and Television, Public Relations and Advertisement and Graphic Design, and Sociology and Social Work. That is in line with the best international standards and in order to come up with generations of specialists who are able to cope perfectly, efficiently and professionally with the latest technological developments and advances in all these fields.

College Objectives:

- To introduce the latest and the most important theoretical knowledge in the media program's four tracks: Print and Electronic Journalism, Radio and Television, Public Relations and Advertisement and Graphic Design. That is in order to provide students with strong and modern knowledge background helping them to be familiar with the theoretical side of the field and competent in practice
- Provide students with the needed applied skills to produce different media items and programs in the four tracks of the program by using the college studios and labs or through the field training
- Upgrade their performance in accordance with working legislations and ethics and to promote the role of media in society
- Develop critical and innovative thinking of students helping them to evaluate the local, regional and international media work environment
- Promote media sociological research methods which enable graduates to work in research centers or continue their higher studies

Students who wish to join the BA media program are required to score 450 in TOFEL or its equivalent according to the directions of the Academic Accreditation Commission's letter No. CAA00541D112 on 04-04-2012. As for the sociology program students, they are exempted of the above condition.

Facilities

Educational Technological Resources

In accordance with its efforts to provide the appropriate educational environment and in compliance with the standards adopted by ACC and the educational strategies, the AU has provided the appropriate studying halls to meet all the needs of the teaching process like data show and an easy access to the Internet to expose students to the practical aspects during teaching.

Laboratories

Within its annual plan to develop and support labs, the college tries to meet the required standards. The labs contain modern instruments and programs such as mac lab and multimedia lab.

Studios

- Digital photography studio
  There are two digital photography studios for students of graphic design: one for women students and one for men students. These studios help students understand the materials and the instruments used in photography as well as the different ways of digital photography through which students practice and train in taking photos for various items.

- Radio and Television Camera Studio

- Radio and Television Studio
  This studio is established and designed according to the High Definition digital system (HD) so as to help students be acquainted with the great development and trends that we notice today in the field of audio-visual media. The studio is provided with the latest types of digital cameras for television camera and with instruments used in the process of producing radio and television programs. For safety measures, the studio is provided with fire extinguishing system in J2 building in accordance with the civil defense requirements.

Atelier

A drawing room is established for students of graphic design. It is used to make students aware of the material and tools, and with the different ways of drawing through practicing different ways of simulation for different items and by different materials using pencils.
Students are encouraged to realize the plastic art relations among the elements and the different touches, and between light and shadow through understanding form of designing. The drawing room also emphasizes the principle of creation, and the principle and the concept of designed solutions through drawing simple arithmetic shapes. At the end, there is simulation through drawing the silent nature. The drawing room serves several courses like infographics.

Teaching staff (Ajman Campus)

#	Name	Dept.	Rank	الاسم
1	Hosam Ali Ali Salama	Mass Comm.	Associate Professor	حسام علي علي سلامة
2	Tarek Ismail Mohamed Abdellatif	Mass Comm.	Professor	طارق إسماعيل محمد عبداللطيف
3	Abboodi Jawad Hasan	Mass Comm.	Professor	عبودي جواد حسن
4	Emad Eldin Tag Elsir Fageer Omer	Mass Comm.	Associate Professor	عماد الدين تاج السر فقير عمر
5	Mustafa H. Kadhem	Mass Comm.	Associate Professor	مصطفى حميد كاظم

6	Maha Abdelmegid Salah A. Attia	Mass Comm.	Associate Professor	مها عبدالمجيد صلاح عطية
7	Shaymaa Elsaid Salim Omar	Mass Comm.	Associate Professor	شيماء السيد سالم عمر
8	Khaled Mostafa Ahmed Mohamed	Mass Comm.	Associate Professor	خالد مصطفى أحمد محمد
9	Hesham Mohamed Abdelghaffar Mohamed	Mass Comm.	Associate Professor	هشام محمد عبدالغفار
10	Basma Mortada Mohamed Seifelnasr Fouda	Mass Comm.	Associate Professor	بسمة مرتضى محمد فودة
11	Safa Mahmoud Osman Mohamed Darwish	Mass Comm.	Associate Professor	صفا محمود عثمان درويش
12	Abdu Mohamed Dawood Hafiz	Mass Comm.	Assistant Professor	عبده محمد داوود حافظ
13	Bashier Salih Husain Salih	Mass Comm.	Assistant Professor	بشير صالح حسين صالح
14	Belal M.J. Ibrahim	Mass Comm.	Assistant Professor	بلال محمد جميل إبراهيم
15	Ebrahim Rashed Ali Rashed	Mass Comm.	Assistant Professor	إبراهيم راشد علي راشد
16	Hayam Abdul Kareem Al Maamare	Mass Comm.	Assistant Professor	هيام عبدالكريم المعمري
17	Amal Mohamed Nabil A. A. Badr	Mass Comm.	Assistant Professor	أمل محمد نبيل بدر
18	Nidal Mahmoud Al Said	Mass Comm.	Assistant Professor	نضال محمود السعيد
19	Nasrelden Ali	Mass Comm.	Assistant Professor	نصر الدين عبد القادر عثمان
20	Merhan Mohsen Mohammed Elsayed	Mass Comm.	Assistant Professor	ميرهان محسن طنطاوي
21	Mona Ali Mohammed Abdelrahman	Mass Comm.	Assistant Professor	منى علي محمد عبدالرحمن
22	Sheren Ali Mousa Mohmmed Nawar	Mass Comm.	Assistant Professor	شيرين علي موسى نوار
23	Alya Ali Mouhamed Ali Anter	Mass Comm.	Assistant Professor	علياء علي محمد علي عنتر
24	Dina Al Khattat	Mass Comm.	Assistant Professor	دينا الخطاط
25	Abdul Raouf Abdulla Bin Talab	Mass Comm.	Lecturer	عبدالرؤوف عبدالله بن ثعلب
26	Layal Ayoub	Mass Comm.	Teaching Assistant	ليال أيوب
27	Manar Emad Dhaher	Mass Comm.	Teaching Assistant	منار عماد ظاهر
28	Basem Sami Hashish	Mass Comm.	Teaching Assistant	باسم سامي حشيش

29	Asmaa Altmena	Mass Comm.	Teaching Assistant	أسماء التمنة
30	Fajer Alami	Mass Comm.	Teaching Assistant	فجر العلمي
31	Saeed Amin Mohamed Nasef	Sociology	Professor	سعيد أمين ناصف
32	Omer Ahmed El Garrai	Sociology	Associate Professor	عمر أحمد القراي
33	Osman Siraj Eldeen F. Ahmed	Sociology	Associate Professor	عثمان سراج الدين أحمد
34	Ashraf Mohamed Abouelyzid Alazab	Sociology	Associate Professor	أشرف محمد العزب
35	Alaa Zuhir Abduljawad AlRawashdeh	Sociology	Associate Professor	علاء زهير الرواشدة
36	Amna Abdulla Hamad Abushahab	Sociology	Assistant Professor	آمنة عبدالله أبو شهاب
37	Rasha Mohamed A. Abdel Rahman	Sociology	Assistant Professor	رشا محمد عبدالرحمن
38	Nagwa Babiker Abdalla Yousif	Sociology	Assistant Professor	نجوى يوسف
39	Khetam Husin Tamem	Sociology	Assistant Professor	ختام تميم
40	Asma Rebhi Khaleel Alarab	Sociology	Associate Professor	أسماء ربحي العرب
41	Maha Ezzat Mohammed Aboraya	Sociology	Assistant Professor	مها عزت أبو رية
42	Enaam Mohammed Youssef	Sociology	Lecturer	إنعام يوسف
43	Mahra Al Malek	Sociology	Lecturer	مهرة آل مالك

Teaching Staff-Fujairah Campus

No	Name	الاسم	التخصص	Designation
1	Dr. El Mahi Abdullah Elmahi	د. الماحي عبدالله الماحي	اللغة الإنجليزية	Assistant Prof.
2	Prof. Yas Khudair Al- Bayati	أ.د. ياس خضير البياتي	علم إجتماع وخدمة إجتماعية	Prof.
3	Prof. Mustafa Abdelathem Faramawy	أ.د. مصطفى عبدالعظيم فرماوي	علم إجتماع وخدمة إجتماعية	Prof
4	Dr. Yassine Adam Busati	د. ياسين آدم بساط	علاقات عامة وإعلان	Assistant Prof.
5	Dr. Faisal Ibrahim Matalkah	د. فيصل إبراهيم	علم إجتماع وخدمة إجتماعية	Associated Prof.

6	Dr. Khalid Khalfallah Sulaiman	د. خالد خلف الله سليمان	علاقات عامة وإعلان	Assistant Prof.
7	Dr. Magda Khalfalla Elibed	د. ماجدة خلف الله	علاقات عامة وإعلان	Assistant Prof.
8	Dr. Elsayed Mohamed Abdelrahman	د. السيد محمد عبدالرحيم	علم إجتماع وخدمة إجتماعية	Assistant Prof.

College of Pharmacy and Health Sciences

The College of Pharmacy and Health Sciences (COPHS) was founded in accordance with the university's policy of establishing an innovative medical environment which embraces health sciences, i.e. dentistry, medical technology, etc., in addition to pharmacy. The establishment of COPHS is intended to meet the demand for pharmacists in hospitals and community pharmacies, and to provide manpower for the increasing number of private pharmacies and the growing pharmaceutical industry in the UAE and the region.

Mission

The mission of the College of Pharmacy and Health Sciences is to create an environment that promotes excellence in pharmaceutical education, practice and research. It is committed to the continuous improvement of its programs to keep abreast with the rapid advances in the profession of pharmacy and the provision of pharmaceutical care. It strives to prepare students to become competent, reliable and ethical health care professionals.

Degree Programs

The College offers the following two programs:

Bachelor of Pharmacy (BPharm)

Master of Science in Pharmacy

Facilities

Laboratory Facilities

The college has several laboratories, covering the various branches of pharmaceutical science, which have the latest equipment. These laboratories have the instrumental apparatus which will enable students to gain sound practical skills as well as integrate theoretical study with real practical methods and techniques.

Computer Facilities

The college receives full technical support and assistance from the University Computer Center which provides its services all year round to administrators, staff and students. The computer laboratories at the center are well-equipped and are available for use throughout the day; they are administered by trained staff who assist in solving problems and answering queries.

Bachelor of Pharmacy

Program Objectives

To prepare students for the practice of pharmacy by providing them with the scientific background, clinical and technical skills that they will need to successfully complete their program of study.

To provide an educational environment that enables students to acquire the behavior, and moral and ethical attitudes they will need to practice the profession competently and ethically.

Program Outcomes

The intended outcomes of the program are that students will be able to:

Demonstrate knowledge of the basic and clinical science background of pharmacy practice

Implement the processes of compounding and dispensing medications, interpreting prescription orders and applying calculations related to the compounding and dispensing of medicines

Demonstrate knowledge of the basic skills and techniques involved in drug manufacture and development, drug design and screening and quality assurance of pharmaceutical products

Demonstrate knowledge of the rational use of herbal supplements, fundamentals of phytotherapy and the hazards of poisonous and abused natural products

Participate in patient care by influencing optimal drug choice and dosage through effective communication with health care providers and patients

Display legal, moral and ethical attitudes and behaviors consistent with the standards of the profession

Demonstrate the ability to lead and to function both independently and as a member of a team

Develop self-learning skills, problem solving and critical thinking abilities and the ability to retrieve, evaluate and manage information in the literature

Demonstrate the ability to write clear and organized reports, and to present oral communications

Develop the necessary skills in information use and management to educate health care professionals and the public in optimal drug therapy

Mapping of the B. Pharm PLOs to the UAE's qualification framework.

UAE's Qualifications Frameworks Learning Outcomes Strands		B. Pharm. Program learning outcomes (PLOs)
On successful completion of the B.Pharm program, graduates will be able to:		
Knowledge		K1. Demonstrate knowledge of the basic and clinical science background of pharmacy practice.
		K2. Demonstrate knowledge of the basic skills and techniques involved in drug manufacture and development, drug design and screening and quality assurance of pharmaceutical products.
		K3. Demonstrate knowledge of the rational use of herbal supplements, fundamentals of phytotherapy and the hazards of poisonous and abused natural products.
Skill		S1. Implement the processes of compounding and dispensing medications, interpreting prescription orders and applying calculations related to the compounding and dispensing of medicines.
		S2. Participate in patient care by influencing optimal drug choice, type of dosage form and the design of dosage regimens.
		S3. Develop problem solving and critical thinking abilities and the ability to retrieve, evaluate and manage information in the literature.
		S4. Demonstrate the ability to write clear and organized reports, and to present oral communications.
Aspects of Competence	**Autonomy and responsibility**	C1. Demonstrate the ability to lead and to function both independently and as a member of a team.
	Role in context	C2. Display legal, moral and ethical attitudes and behaviours consistent with the standards of the profession. C3. Develop communication skills in order to effectively counsel patients on their medications. C4. Develop the necessary skills in information use and management to educate health care professionals and the public in optimal drug therapy.
	Self-development	C5. Develop independent study skills for life-long learning and continuous professional development.

Admission Requirements

Prospective candidates seeking admission to the Bachelor of Pharmacy (BPharm) program should fulfill the following requirements:

Secondary school certificate (science section), or its equivalent, with a minimum grade of 70 percent, approved by the UAE Ministry of Education

A score of 500 or higher in the TOEFL English proficiency test, or the equivalent

Personal interview

Demonstration of good conduct and maturity

Please see the university admission requirements for more detail.

Career Opportunities

The curriculum is designed and continuously improved with the aim of preparing graduates to be able to effectively deliver pharmaceutical services in the private sector as well as in governmental agencies. Pharmacy graduates have the opportunity to work in different placements related to pharmacy profession:

- Community pharmacies
- Hospital pharmacies
- Pharmaceutical industry
- Pharmaceutical scientific laboratories
- Wholesale drug stores
- Medical representations
- Pharmaceutical administration
- Food control and analysis
- Pharmaceutical education and research

Graduation Requirements

The degree of Bachelor of Pharmacy (BPharm) will be awarded after successful completion of least one hundred and fifty credit hours (150 Credit Hours), including the university requirement courses. The period of study normally takes eight regular semesters and two-three summer semesters. In addition, every student should have field training in community pharmacies, hospital pharmacies and pharmaceutical industry of not less than 600 contact hours which is equivalent to 15 credit hours. The minimum cumulative grade point average (CGPA) for graduation is 2.0.

Degree Requirements

The pharmacy student will be awarded the degree of Bachelor of Pharmacy (BPharm) after the successful completion of at least 150 Credit Hours, including the university requirement courses, distributed according to the following plan:

Type of Courses	Credit/hour
1. University General Education Requirements	
(a) University Required Courses	15
(b) University Elective Courses	9
2. College Requirements	
(a) College Required Courses	108
(b) College Required Training Courses	15
(c) College Electives Courses	3
Total Credit Hours	150

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(a) University Required Courses (15 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
101000-0	Orientation	1	0	0	0	-
102110-0	Islamic Culture	3	0	1	3	-
102140-0	Communication Skills in Arabic Language	3	0	0	3	-
103110-1	Statistics	2	2	0	3	-
103120	Environmental Sciences	3	0	0	3	-
104110-0	Computer Applications	2	2	0	3	-

(b) University Elective Courses (9 Cr.Hrs.)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
102120	The miraculousness of the holy Koran	3	0	0	3	-
103130	Research Methodology	3	0	0	3	-
112110	Principles of Architecture & Art	3	0	0	3	-
112120	Principles of Interior Design	3	0	0	3	-
112130	Modern Technology and Society	3	0	0	3	-
113110	Internet Concepts	3	0	0	3	-
113120	Introduction to Information Systems	3	0	0	3	-
114110	Economic Concepts	3	0	0	3	-
114120	Entrepreneurship Development	3	0	0	3	-
115110	History of science in Islam	3	0	0	3	-
115120	Scientific pioneering	3	0	0	3	-
115130	General psychology	3	0	0	3	-
115140	Principle of mathematics	3	0	0	3	-
115150	The Art of Expression and writing	3	0	0	3	-
115160	Emirates Society	3	0	0	3	-
115170	Education Technology	3	0	0	3	-
117110	General chemistry	3	0	0	3	-
117120	Fundamental of Human Nutrition	3	0	0	3	-
117130	First Aid	3	0	0	3	-
117140	Energy, Water & Environment	3	0	0	3	-
117150	Applications of Remote sensing	3	0	0	3	-
118110	Principles of Ethics	3	0	0	3	-
118120	General Biology	3	0	0	3	-
118130	Oral Health	3	0	0	3	-
118140	General principles of Epidemiology	3	0	0	3	-
118150	CPR-Cardio Pulmonary Resuscitation	3	0	0	3	-
119110	Communication Skills	3	0	0	3	-
119120	Introduction to Communication Sociology	3	0	0	3	-
119130	Information Society	3	0	0	3	-
120115	Legal Culture	3	0	0	3	-

COLLEGE REQUIREMENTS

(a) Required Courses:

1. Department of Pharmaceutics

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
700111	Introduction to Pharmacy	2	2	0	3	xxxxx
700112	Physical Pharmacy I	2	2	0	3	700111
700212	Physical Pharmacy II	2	2	0	3	700112
700213	Pharmaceutical Dosage Forms I	2	2	0	3	700112
700214	Pharmaceutical Dosage Forms II	2	2	0	3	700213
700311	Biopharmaceutics and Pharmacokinetics I	2	2	0	3	700214+ 700422
700312	Biopharmaceutics and Pharmacokinetics II	2	2	0	3	700311
700413	Pharmaceutical Technology	3	2	0	4	700212 + 700214
700415	Pharmaceutical Technology Training	2	2	0	3	700413

2. Department of Pharmaceutical Chemistry and Pharmacognosy

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
700124	Pharmaceutical Botany	2	2	2	3	xxxxx
700127	General Pharmacognosy	3	2	0	4	700124
700128	Pharmaceutical Organic Chemistry I	2	2	0	3	xxxxx
700129	Pharmaceutical Organic Chemistry II	2	2	0	3	700128
700222	Pharmaceutical Analytical Chemistry I	2	2	0	3	700128
700223	Pharmaceutical Analytical Chemistry II	2	2	0	3	700222
700321	Phytochemistry	3	2	0	4	700127+700425
700323	Medicinal and Pharmaceutical Chemistry I	2	2	0	3	700129+700333
700324	Medicinal and Pharmaceutical Chemistry II	2	2	0	3	700323
700422	Instrumental Analysis I	2	2	0	3	700223
700425	Instrumental Analysis II	2	2	0	3	700422

3. Department of Pharmacology and Toxicology

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
700135	Principles of Human Anatomy and Physiology I	3	2	0	4	xxxxx
700136	Principles of Human Anatomy and Physiology II	2	2	0	3	700135
700231	Biochemistry I	2	2	0	3	700129
700232	Biochemistry II	2	2	0	3	700231
700235	Pharmacology and Therapeutics I	2	2	0	3	700136
700238	Pharmacology and Therapeutics II	2	2	0	3	700235
700331	Pharmacology and Therapeutics III	2	2	0	3	700238
700333	Pharmaceutical Microbiology and Immunology	3	2	0	4	700231
700432	Toxicology and Chemotherapy	3	0	0	3	700331+801318
700434	Bioassays and Drug Screening	2	2	0	3	130130+700331
801318	Pathology / Pharmacy	2	0	0	2	700333

4. Department of Clinical Pharmacy

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
700314	Community Pharmacy Training I	0	0	0	3	Completion of 30 CH
700315	Hospital Pharmacy Training	0	0	0	3	700331
700316	Community Pharmacy Training II	0	0	0	3	700314+700442
700317	Clinical Pharmacy Training	0	0	0	3	700442+700418
700416	Pharmaceutical Legislations	1	0	0	1	700432
700417	Marketing and Sales	1	0	0	1	700442
700418	OTC Drugs and Products	2	2	0	3	700331
700442	Clinical Pharmacy I	2	2	0	3	700312+700331
700443	Clinical Pharmacy II and First Aid	2	2	0	3	700442

(b) College Elective Courses:

Students have to study one course of the following (3 Cr. Hrs)

Course No.	Course Title	Th.	Lab.	Tut.	Cr. Hrs.	Prerequisite
700515	Pharm. Biotechnology	2	2	0	3	700232
700522	Phytotherapy	2	2	0	3	700321
700527	Nuclear Pharmacy	2	2	0	3	700331
700534	Clinical Microbiology	2	2	0	3	700333

700535	Gene Therapy	2	2	0	3	700232 + 700333

Suggested Study Plan

First Year:

Fall Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
104110	Computer Applications	2	2	0	3	xxxxx
700111	Introduction to Pharmacy	2	2	0	3	xxxxx
700124	Pharmaceutical Botany	2	2	2	3	xxxxx
700128	Pharmaceutical Organic Chemistry-I	2	2	0	3	xxxxx
700135	Principles of Human Anatomy and Physiology-I	3	2	0	4	xxxxx
	Total	11	10	0	16	

Spring Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700112	Physical Pharmacy-I	2	2	0	3	700111
700127	General Pharmacognosy	3	2	0	4	700124
700129	Pharmaceutical Organic Chemistry-II	2	2	0	3	700128
700136	Principles of Human Anatomy & Physiology-II	2	2	0	3	700135
700222	Pharmaceutical Analytical Chemistry I	2	2	0	3	700128
	Total	11	10	0	16	

Summer Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
102130	Environmental Sciences	3	0	0	3	-
Xxxxxx	University Elective course I	3	0	0	3	-
	Total	6	0	0	6	

Second Year:

Fall Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700212	Physical Pharmacy II	2	2	0	3	700112
700213	Pharmaceutical Dosage Forms I	2	2	0	3	700112
700223	Pharmaceutical Analytical Chemistry II	2	2	0	3	700222
700231	Biochemistry I	2	2	0	3	700129
700235	Pharmacology and Therapeutics I	2	2	0	3	700136

700314	Community Pharmacy Training-I	0	0	0	3	after 30 Crd.Hrs+700111
	Total	10	10	0	18	

Spring Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700214	Pharmaceutical Dosage Forms II	2	2	0	3	700213
700232	Biochemistry II	2	2	0	3	700231
700238	Pharmacology and Therapeutics II	2	2	0	3	700235
700333	Pharmaceutical Microbiology and Immunology	3	2	0	4	700231
700422	Instrumental Analysis I	2	2	0	3	700223
	Total	11	10	0	16	

Summer Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
103110	Statistics	3	-	0	3	Xxxxx
102110	Islamic Culture	3	0	0	3	Xxxxx
	Total	6	0	0	6	

Third Year:

Fall Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700311	Biopharmaceutics & Pharmacokinetics I	2	2	0	3	700214+ 700422
700323	Medicinal and Pharmaceutical Chemistry I	2	2	0	3	700129+700333
700331	Pharmacology and Therapeutics III	2	2	0	3	700238
700425	Instrumental Analysis II	2	2	0	3	700422
801318	Pathology / Pharmacy	2	0	0	2	700333
xxxxxx	University elective course II	3	0	0	3	Xxxxx
	Total	13	8	0	17	

Spring Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs.	Pre-req.
102140	Communication skills in Arabic Language	3	0	0	3	Xxxxx
700312	Biopharmaceutics and Pharmacokinetics II	2	2	0	3	700311
700321	Phytochemistry	3	2	0	4	700127+700425
700324	Medicinal and Pharmaceutical Chemistry II	2	2	0	3	700323
700413	Pharmaceutical Technology	3	2	0	4	700212 + 700214
	Total	12	10	0	17	

Summer Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
Xxxxxx	University Elective course III	3	0	0	3	Xxxxx
	Total	3	0	0	3	

Fourth Year:

Fall Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700315	Hospital Pharmacy Training	0	0	0	3	700331
700415	Pharmaceutical Technology Training	0	0	0	3	700413
700418	OTC Drugs and Products	2	2	0	3	700331
700432	Toxicology & Chemotherapy	3	0	0	3	700331+801318
700442	Clinical Pharmacy I	2	2	0	3	700312+700331
Xxxxxx	College Elective course	2	2	0	3	after 115 Crd.Hrs
	Total	9	6	0	18	

Spring Semester:

Course No.	Course Title	Th.	Lab.	Tut.	Cr.Hrs	Pre-req.
700316	Community Pharmacy Training-II	0	0	0	3	700314+700442
700317	Clinical Pharmacy Training	0	0	0	3	700442+700418
700416	Pharmaceutical Legislations	1	0	0	1	700432
700417	Marketing & Sales	1	0	0	1	700442
700421	Project	2	2	0	3	after 115 Crd.Hrs
700434	Bioassays and Drug Screening	2	2	0	3	130130+700331
700443	Clinical Pharmacy-II & First Aid	3	0	0	3	700442
	Total	9	4	0	17	

Course Descriptions

Department of Pharmaceutics

700 111 Introduction to Pharmacy (2-2-3)

This course provides students with basic knowledge of pharmaceutical calculations needed for compounding and dispensing of medications. It includes an introduction to prescriptions, general dispensing procedures, dosage forms with special emphasis on pharmaceutical solutions and basic techniques of compounding simple solutions. The course also covers basic skills and abilities needed to identify various pharmaceutical incompatibilities and basic techniques needed for extraction of crude drugs.
Pre-requisite: None

700 112 Physical Pharmacy I (2-2-3)

The course comprises the application of physicochemical principles to pharmaceutical systems. It covers the following basic physical pharmacy concepts: states of matter, phase equilibria and phase rule, nonelectrolyte solutions and their colligative properties and solubility and distribution phenomena.

Pre-requisite: 700 11

700 212 Physical Pharmacy II (2-2-3)

This course aims to provide students with basic physicochemical principles needed to explain characteristics and behavior of pharmaceutical dispersions like colloids, suspensions, emulsions, ointments, creams and aerosols. It also covers rheological properties of both Newtonian and non-Newtonian systems.
Pre-requisite: 700 112

700 213 Pharmaceutical Dosage Form I (2-2-3)

The course comprises principles and techniques involved in the formulation, preparation and evaluation of solid dosage forms. It covers physical properties of powders, preparation of bulk and divided powders, as well as effervescent and non- effervescent granules and method of tablet and capsule manufacture. The course also covers rectal drug absorption, formulation and evaluation of suppositories.

Pre-requisite: 700 112

700 214 Pharmaceutical Dosage Form II (2-2-3)

This course covers basic principles of drug stability, routes of drug degradation and various means of avoiding them. It also covers sterile products including parenteral and ophthalmic preparations; their advantages & disadvantages, formulations, quality control tests and various sterilization procedures. In addition, aseptic techniques applied during the preparations of sterile products shall be covered. The course also includes an introduction to sustained released products, as well as packaging materials.
Pre-requisite: 700 213

700 311 Biopharmaceutics and Pharmacokinetics I (2-2-3)

This course provides the basic principles required for understanding the concentration-time course of a drug in the body and hence prepares students to understand various factors that can influence it. It is important to be aware of the factors, which can influence this concentration–time course and hence modify the effectiveness and safety of the drug. Factors involved include physicochemical, pharmaceutical, physiological or pathological factors related to the patient's condition. It also provides basic methods for assessing bioavailability and bio-equivalency of drug products, which are considered vital tools for quality control tests. Bio-pharmaceutical aspects of new drug delivery systems will also be highlighted.

Pre-requisite: 700 214, 700 422

700 312 Biopharmaceutics and Pharmacokinetics II (2-2-3)

The course will introduce the student to the changes in drug absorption, distribution and elimination with time following one compartment IV bolus, oral absorption and IV infusion. The lectures will provide students with principles of the linear and non-linear pharmacokinetic models and their application. The principles of clinical pharmacokinetics are also introduced in order to be able to formulate or modify drug dose-regimens according to the need of patients.

Pre-requisite: 700 311

700 413 Pharmaceutical Technology (3-2-4)

This course covers theoretical background & practical demonstration of different manufacturing unit processes like; heat transfer, filtration, particle size reduction, and particle size analysis, mechanisms of mixing, powder flow, granulation, and drying that are applied in pharmaceutical industries. The course also comprises the design & operation of clean rooms with special emphasis on quality assurance & good manufacturing practice guidelines.
Pre-requisite: 700 212, 700 214

700 415 Pharmaceutical Technology Training (3-3)

The course provides the student with basic training in large scale manufacturing of

pharmaceutical dosage forms and quality control tests conducted for such dosage forms. It also covers quality assurance and good manufacturing practice guidelines followed during large scale manufacturing of various pharmaceutical dosage forms

Pre-requisite: 700 413

700 515 Pharmaceutical Biotechnology

This course introduces the student to the field of biotechnology with especial emphasis on its applications in the preparation of biopharmaceuticals. The course entails definitions, brief history and major areas of contribution of biotechnology. The course shall also cover recombinant DNA technology including cloning of DNA, PCR and Gene libraries. In addition, different methods adopted for the preparation of biotechnology drug products and their evaluation, handling and storage shall be covered. Current marketed biotechnology drug products, as well as the future prospects of biotechnology shall be discussed.

Pre-requisite: 700232

DEPARTMENT of PHARMACEUTICAL CHEMISTRY and PHARMACOGNOSY

700 124 Pharmaceutical Botany (2-2-3)

This course deals with the study of the medicinal plants and their botanical structure including plant cell structure, type of cells, cell contents and the general study of the plant organs (leaves, barks, flowers, seeds, fruits) macroscopically and microscopically.

Pre-requisite: None

700 127 General Pharmacognosy (3-2-4)

Pharmacognosy deals with the study of physical, chemical and biological properties of important medicinal plants. The study includes their origin, morphology, histology, chemical constituents and their use. The drugs are classified into groups according to their main therapeutic values.

Pre-requisite: 700 124

700 128 Pharmaceutical Organic Chemistry I (2-2-3)

This course presents the fundamentals of certain topics in organic chemistry. It covers important areas in organic chemistry, which include aliphatic and aromatic hydrocarbons, alkyl and aryl halides, alcohols, ethers and epoxides. It emphasizes the pharmaceutical importance of these functional groups.

Pre-requisites: None

700 129 Pharmaceutical Organic Chemistry II (2-2-3)

This course is a continuation of Pharm. Organic Chemistry I. The course includes basic chemical reactions and mechanisms, stereo-chemistry, phenols, aldehydes, ketones, and carboxylic acids and acid derivatives, properties and reactions of dysfunctional compounds, amines, aromatic and heterocyclic compounds, and introduction to organic natural products. Laboratory work concerns specific chemical reactions, organic synthesis and identification of organic compounds.

Pre-requisite: 700 128

700 222 Pharmaceutical Analytical Chemistry I (2-2-3)

The course covers chemical purity and its control; pharmacopoeial standards and specifications, theoretical basis and practical applications of quantitative analysis of pharmaceutical compounds applying volumetric methods based on acid-base, diazotization, complexation and non-aqueous titrations.

Pre-requisite: 700 128

700 223 Pharmaceutical Analytical Chemistry II (2-2-3)

A continuation of Pharmaceutical Analytical Chemistry I, this course covers volumetric analysis based on oxidation-reduction and precipitation as well as gravimetric analysis.
Pre-requisite: 700 222

700 321 Phytochemistry (3-2-4)

This course covers the study of the chemistry of crude drugs such as volatile oils, glycosides, alkaloids bitter principles, resins and saponins, etc. The study includes the biosynthesis, the chemical and physical properties, identification tests, and methods of isolation and methods of assays.

Pre-requisites:700 127, 700 425

700 323 Medicinal and Pharmaceutical Chemistry I(2-2-3)

This course covers the basic principles of medicinal chemistry. It deals with the relationship between chemical structure and biologic activity. Topics covered include the effect of physicochemical properties on biologic response, the effect of molecular modification on receptor binding, and drug metabolism. The second part of the course is devoted to the study of chemotherapeutic agents including antibiotics, synthetic antibacterial agents and antifungal and antiviral agents.

Pre-requisites: 700 129, 700 333

700 324 Medicinal and Pharmaceutical Chemistry II(2-2-3)

This course covers the chemistry, structural features and structure – activity relationships of the major classes of pharmacotherapeutic agents. The course adopts a pharmacological classification, but within each class the emphasis is on the chemical basis of drug action. Topics covered include adrenergic and cholinergic drugs, CNS depressants, analgesics, antihistamines, local anesthetics and cardiovascular drugs.

Pre-requisite: 700 323

700 422 Instrumental Analysis I (2-2-3)

The course provides an introduction to the instrumental methods of analysis including spectroscopic methods of analysis such as UV – VIS and flourimetry; in addition to the following electro chemical methods: conductometry, potentiometry, amperometry and polarography.

Pre-requisite: 700 223

700 425 Instrumental Analysis II (2-2-3)

This course aims to introduce students to application of the concept of applying instrumentation for the separation of mixtures as well as the qualitative and quantitative analysis of medicinal and pharmaceutical formulations. The course covers different chromatographic methods and techniques (PC, TLC, IEC, CC, GPC, GC, HPLC) in addition to infra-red spectroscopy, nuclear magnetic resonance and mass spectroscopy.

Pre-requisite: 700 422

700 522 Phytotherapy (College Elective Course) (3-3)

The course covers medicinal plants and other naturally-occurring medicinal compounds intended for the treatment of different ailments of the human body. The study includes the active constituents of these natural products, pharmacokinetic and pharmacodynamic effects of these constituents, appropriate dosage forms and their preparations. Monographs of selected medicinal herbs are also included in the study.

Pre-requisite: 700 321 after 115 Credit Hours

700 527 Nuclear Pharmacy (College Elective Course) (3-3)

The course provides a comprehensive discussion of the fundamentals of the field of nuclear pharmacy. It covers the formulation and application of radiopharmaceuticals. Topics include the preparation, and quality control of clinically useful radiopharmaceuticals. Procedures and techniques involved in handling, disposition, and use of radioisotopes in nuclear pharmacy practice will be discussed. Diagnostic and therapeutic uses of radiopharmaceuticals and their adverse reaction are included.

Pre-requisite: 115 Credit Hours

DEPARTMENT of PHARMACOLOGY and TOXICOLOGY

700 135 Principles of Human Anatomy and Physiology I (3-2-4)

This course provides students with a broad knowledge of the structure and functions of the human body. The course includes the structure and function of the normal cell; tissues in general, their different types, microscopic characteristics, locations, distribution and functions in the human body. A study of the different organ systems and their respective roles and function in the organization of the body. Gross anatomy is covered in its broadest aspects and includes the anatomy of different systems; muscular, respiratory, digestive, cardiovascular, nervous, reproductive, skeletal, endocrinal and urinary. The physiology is integrated with anatomy for each system of the human body. Topics which are covered in details include the organization, regulation and functions of the muscular, gastrointestinal, respiratory, cardiovascular, blood, lymphatic, renal, endocrinal, nervous & special senses and reproductive systems. Clinical applications related to these systems are mentioned.

Pre-requisite: None

700 136 Principles of Human Anatomy and Physiology II(2-2-3)

Continuation of Principles of Anatomy and Physiology I (700 135) with special emphasis on the various pathophysiological aspects and conditions. Systems covered are the nervious, cardiovascular, lymphatic, respiratory, renal, special senses and reproductive system.

Pre-requisite: 700 135

700 231 Biochemistry I (2-2-3)

The course covers the study of the structure and function of the biological constituents of living cells and their chemical reactions. Emphasis is made on the structure and function of carbohydrates, proteins, nucleic acids, lipids and vitamins. Enzyme kinetics and enzyme-catalyzed reactions are also covered.

Pre-requisite: 700 129

700 232 Biochemistry II (2-2-3)

The study of the metabolism and biochemical energetics is covered in the course with emphasis on intermediary metabolism of proteins, carbohydrates and lipids. The course also includes the biosynthesis of biologically important macromolecules such as proteins, lipids, and nucleic acids. Nutrition, starvation and obesity are also covered.

Pre-requisite: 700 231

700 235 Pharmacology and Therapeutics I (2-2-3)

The course covers General Pharmacology: Principles of drug action, routes of administration of drugs, passage of drugs across cell membranes and factors affecting the dosage and action of drugs. The autonomic nervous system: Introduction, sympathomimetics, sympathetic depressants, parasympathomimetics, parasympathetic depressants and drugs acting on autonomic ganglia. Skeletal muscle relaxants. Drugs acting on respiratory system. Autacoids and local hormones are also covered.

Pre-requisite: 700 136

700 238 Pharmacology and Therapeutics II (2-2-3)

This course covers the action of drugs on the cardiovascular system (CVS), rental system, hematopoietic system and in the gastrointestinal tract (G.I.T).

Pre-requisite: 700 235

700 331 Pharmacology and Therapeutics III (2-2-3)

The course covers the action of drugs on the central nervous system and the endocrine system.

Pre-requisite: 700 238

700 333 Pharmaceutical Microbiology and Immunology (3-2-4)

This course covers the following: General microbiology including sterilization, anatomy and growth of bacteria, bacterial genetics and antimicrobials. Systemic microbiology including bacterial diseases, viral diseases and fungal diseases accompanied by the etiology, clinical picture, lab diagnosis, treatment, prevention and control of these diseases

Pre-requisite: 700 231

700 432 Toxicology and Chemotherapy (2-2-3)

This course covers the adverse and toxic effects of drugs and many other chemicals that may be responsible for household, environmental and industrial intoxication. It also covers heavy metals toxicity and its management, common poisons and their antidotes, air pollutants, solvents and vapours and toxicity of pesticides. Chemotherapy covers the classification mechanism of action, clinical indications and adverse effects of anti-infective agents. These include antimicrobials, antiviral, antifungal, anthelmintic, antineoplastic agents.

Pre-requisite: 700 311, 801 318

700 434 Bioassays and Drug Screening (2-2-3)

This course covers general methods used in the preclinical drug development. These include general methods used in the screening for a new drug and the determination of the potency using biological objects. The course covers the general methods of bioassay and drug screening of drugs acting on the autonomic nervous system, cardiovascular system, neuromuscular junction, gastrointestinal tract, respiratory system, central nervous system and hormones. It also deals with the design and analysis of pharmacological experiments.

Pre-requisites: 700311, 0130130

801 318 Pathology (2-2)

The course covers the fundamentals of the basic disease processes of the body: gross, microscopic and biochemical features of pathologic conditions of the organ systems are studied in detail in order to establish a sound foundation for pharmaceutical and clinical practice.

Pre-requisite: 700 333

700 534 Clinical Microbiology (College Elective Course)(2-2-3)

The course provides students with basic knowledge of the important signs, symptoms and etiology of diseases as well as mechanisms of preventing infection and the means of identifying and diagnosing causative agents.

Pre-requisite: 700 333

700 535 Gene Therapy (College Elective Course) (3-3)

The course is designed to provide students with a clear understanding of how human genes causing disease can be identified, and the impact of this on diagnosis, prevention and treatment. Methods used to isolate genes involved in disease and types of gene therapy treatment will also be discussed. The course deals with the basic science of gene therapy, gene delivery vectors, expression of transferred genes, and current gene therapy protocols in humans. Regulatory issues concerning biomaterials will also be addressed. Recognition of the advantages, disadvantages and limitations of gene therapy will be included.

Pre-requisites: 700 232, 700 333 after 115 Credit Hours

DEPARTMENT of CLINICAL PHARMACY

700 442 Clinical Pharmacy I (2-2-3)

The course builds on the prior knowledge gained in pharmacology, biopharmaceutics and kinetics. The overall aim of the module is to develop the skills that students require to understand new aspects of pharmacy practice and the concept of pharmaceutical care. Upon completion of the course, students should be able to demonstrate sound knowledge and understanding of the pathophysiology of major organ diseases, namely, the cardiovascular, respiratory, and endocrine systems. Furthermore, the course is designed to enable students to: analyze and review a patient's case history in the light of pathophysiology of disease; critically evaluate literature and data relating to the clinical use of medicines; identify independently different medical abbreviation and terminology and acquire effective skills in reading, writing, speaking and listening to enable them to communicate effectively with doctors and other healthcare professionals.

Pre-requisites: 700 312 and 700 331

700 443 Clinical Pharmacy II and First Aid (2-2-3)

The course builds on the prior knowledge gained in Clinical Pharmacy I. The overall aim of the module is to help students to access the knowledge base and skills required for assessment of pharmaceutical needs of patients in either primary or secondary healthcare settings and to understand how major diseases are managed, including the options available for drug therapy. The importance of establishing therapeutic goals for the patient will be emphasized throughout the course. The first aid section of this course is designed to educate students as to the correct procedures to be followed in the emergency care of a sick or injured person. The course is designed with great emphasis on the skills and knowledge critical to saving life and minimizing the severity of injury or sudden illness. Safety awareness and accident prevention are emphasized throughout the course.

Pre-requisite: 700 442

700 418 OTC Drug and Products (2-2-3)

The course is designed to provide the student with a solid knowledge of OTC drugs in all aspects with the objective of graduating a patient-oriented pharmacist. This will include monitoring, screening and evaluating drug treatment regimens either in community or hospital settings. In particular, symptoms associated with common diseases will be considered with respect to: possible causes; symptoms and signs; treatment available; counseling points; and when to refer to doctors. This course is also designed to enable students to decide on the diagnosis of a complaint through the use of questioning techniques; recognize and evaluate the symptoms of minor ailments; select a suitable treatment, if any, and give appropriate advice; assess “danger symptoms” and judge when it is appropriate to refer the patient; and choose an effective level of communication with patients and other healthcare professionals.

Pre-requisites: 700 312 and 700 331

700 416 Pharmaceutical Legislations (1-1)

This course is designed to acquaint students with the legal and ethical basis of pharmacy practice. The course emphasizes the pharmacist's responsibility to care for patients and to respect patients as autonomous individuals. A detailed presentation of the laws that govern and affect the practice of pharmacy in UAE is included. Major topics include general legal principles, non-controlled and controlled prescription requirements and over-the-counter drug requirements.

Pre-requisite: 700 432

700 417 Marketing and Sales (1-1)

This course is designed to provide pharmacy students with the basic principles and theories of marketing as well as the principles of management and administration of a pharmacy in community and institutional settings. The course will cover all aspects of selling including applying standard criteria to evaluate the quality of selling, retail selling and product planning.

Pre-requisite: 700 442

700 314 Community Pharmacy Training I (3-3)

700 316 Community Pharmacy Training II (3-3)

Through the utilization of selected community pharmacies and competency based objectives, the student will gain an appreciation for the profession of pharmacy as practiced in the community and develop the professional attitudes, judgment and skills needed to function in this setting. These courses are designed to enable students to: acquire advanced knowledge and proficiency in community pharmacy management, process prescriptions in an efficient manner compatible with advanced skills, acquire additional exposure to pharmacy operations and to different practitioners’ disease approach, develop the skills necessary to provide pharmaceutical care services and acquire increased proficiency in counseling patients on health and drug-related matters.

Pre-requisites: for 700 314:700 111, 30 hours Pre-requisites: for 700 316: 700 314, 700 442

700 315 Hospital Pharmacy Training (3-3)

This training is designed to provide students with the principles of pharmacy practice in a hospital setting. The training program aims to enable the students to acquire practice experience in various areas of hospital pharmacy including: understanding the basic layout of the pharmacy department in a hospital setting; understanding the system of referral, identifying and reporting any possible drug interactions and mastering the administrative part of hospital pharmacy services.

Pre-requisite: 700 333

700 317 Clinical Pharmacy Training (3-3)

This course is designed to provide the students with professional practice experience in clinical pharmacy. This includes acquiring the following competencies: independently reviewing and analyzing a patient’s case

history and identifying possible problems associated with the use of medicines, actively participating in drug choice and in the design of dosage regimens to ensure optimal drug therapy.

Pre-requisites: 700 418, 700 442

700 421 Project (2-2-3)

This course is designed to acquaint the student with the techniques involved in the development of a project in the basic, pharmaceutical or clinical sciences. The project will be assigned and the student will be expected to perform literature reviews and other work deemed necessary by the college instructor to produce an acceptable final written report

Pre-requisite: 115 Credit Hours

LIST OF FACULTY

Ajman Campus

No	Name	Rank	Specialization	Degree	Year	University
1	Prof. Dr. Nageeb Abdul Galil Mohamed Hassan	Head, Dept. of Pharmacology and Toxicology, Professor	Clinical Pharmacology	PhD	1994	University of Manchester, UK
2	Dr. Samir Issa Bloukh	Associate Professor	Virology	PhD	1991	University of Manchester, UK
3	Dr. Farah Hamad Farah Ahmed	Associate Professor	Pharmaceutics	PhD	1982	University of Nottingham, UK
4	Dr. Moyad Jamal Said Shahwan	Associate Professor	Clinical Biochemistry	PhD	2000	Aligarh Muslim University, India
5	Dr Moyad Jamal Al Omer	Assistant Professor	Clinical Pharmacoinformatics	PhD	2010	University Sains Malaysia, Malaysia
6	Dr Moawiya Al Tabakha	Associate Professor	Pharmaceuitical Technology	PhD	2000	University of Wales, Cardiff, UK
7	Dr El-Shimaa Arafa	Assistant Professor	Pharmacology	PhD	2009	Ohio State University, Ohio, USA. And Cairo University, Egypt
8	Dr Mohammad Waseemul Islam	Assistant Professor	Clinical Physiology/Drug Designing	PhD	1975	Aligarh Muslim University, India
9	Dr Akram Ashames	Assistant Professor	Material Sciences Chemistry	PhD	2015	Colorado School of Mines, USA
10	Dr Zehra Edis	Assistant Professor	Chemistry	PhD	1999	University of Cologne, Germany
11	Dr. Nihal Abdulla Ibrahim	Assistant Professor	Clinical Physiology	PhD	2010	Alexandria University, Alexandria, Egypt
12	Dr Sanah Hasan	Assistant Professor	Clinical Pharmacy	PhD	2013	Monash University, Melbourne, Australia

13	Dr. Richie Rashmin Bhandare	Assistant Professor	Medicina Cheistry	PhD	2013	Monash University, Melbourne, Australia
14	Mr Yaseen Khalid Al Hariri	Lecturer	Clinical Pharmacy	MSc	2007	University of Science Malaysia, Malaysia
15	Mrs Zelal Jaber Kharaba	Lecturer	Envirofood- Nutritional Medicine and Protection	MSc	2008	Hohenheim University, Germany
16	Mrs Sundos Qassim Alebrahim	Lecturer	Clinical Pharmacy	MSc	2013	AU
17	Mrs. Sawsan Deeb Mohammed Shanableh	Lecturer	Clinical Pharmacy	MSc	2013	AU
18	Mrs. Aala Farajullah	Lecturer	Clinical Pharmacy	MSc	2014	AU
19	Mr Ahmed Gaili	Teaching Assistant	Clinical Pharmacy	MSc	2015	AU
20	Mr Ahmed H. Khattab	Teaching Assistant	Clinical Pharmacy	MSc	2015	AU
21	Mr. Hamed Abu Sara	Lab Technician	Microbiology, Chemistry & Zoology	B.Sc.	1998	Bangalore University, India
22	Mr. Basil Hassan Alemam	Lab Technician	Chemistry	B.Sc.	1980	Damascus University, Syria
23	Mr. Mamduh Mohamad Eldmerdash	Lab Technician	Quality Production	B.Sc.	1987	Zagazig University, Egypt
24	Mr. Mohammed Siddiq Mohajir	Lab Technician	B.Z.C	B.Sc.	1984	Osmania University, India
25	Mr. Ahmed Raheem	Lab Technician	Chemistry	B.Sc.	1989	Almosul University, Iraq

Fujairah Campus

No	Name	Rank	Specialization	Degree	Year	University
1	Dr. Sumia Sir-Elkhatim Mohamed Ibrahim	Deputy Dean, Professor	Pharmaceutical Sciences	PhD	1991	University of Florida, USA
2	Dr. Ibrahim Mohammed Abu Al Futuh	Associate Professor	Pharmacognosy	PhD	1975	University of Bath, UK
3	Dr. Babiker Mohamed Ahmed El-Haj	Assistant Professor	Pharmaceutical Chemistry	PhD	1982	University of London, UK
4	Dr. Shihab El Tahir Diab	Assistant Professor	Pharmacology / Toxicology	PhD	2014	Florida A & M University
5	Dr. Mousa Adel Qarwai	Assistant Professor	Pharmaceutics	PhD	1997	University of Bath, UK
6	Dr. Yaser Al worafi	Associate Professor	Clinical pharmacy	PhD	2011	USM – University of Science in Malaysia
7	Nader A.H. Abu Mukhaimer	Teaching Assistant	Pharmacy	B.Sc	1998	University of Applied Science and Technology, Jordan
8	Miran Abdel Ghani Al-Halabi	Teaching Assistant	Pharmacy	B.Pharm	2001	AU
9	Mohamed Abdel Gadir	Teaching Assistant	Chemical Engineering Technology	B.Sc	1993	Aljazeera University, Sudan
10	Tarek Diaa ElDin Shahin	Teaching Assistant	Pharmacy	B.Sc	2012	AU

Academic Calendar for Fall Semester

Academic Year 2017 - 2018

Day	Date	Description
Sunday	August 20, 2017	Faculty members report to work
		11:00: Deans welcome the new students
		12:00-13:00: Tour of the campus
		13:00-14:00: Tutorial session on course registration
Sunday-Thursday	August 20 - 24, 2017	Course registration for continuing & new students
		Examinations for incomplete removal
		Period for accepting credit transfer requests
		Period for accepting changing major requests
Sunday	August 27, 2017	Beginning of classes
Sunday-Thursday	August 27 - 31, 2017	Add & drop period
Thursday	August 31, 2017	Last date for dropping courses or registration suspension with 100% refund
Thursday -Sunday	August. 31– Sep. 3, 2017	Arafat Day ,Eid Al-Adha Holiday
Sunday - Thursday	September 3 - 14, 2017	Period suspension of registration with 50% refund
Thursday	September 21, 2017	Last date for dropping courses
Friday	September 22, 2017	Al Hijra holiday
Sunday-Thursday	October 15 - 26, 2017	Mid-term examinations period
Sunday	October 29 , 2017	Beginning of admission period for spring semester 2017-2018
Thursday	November 16, 2017	Last date for withdrawal
Sunday-Thursday	November 19 - 30, 2017	Period for course evaluation
		Early registration for spring semester 2017-2018
Thursday	November 30, 2017	UAE Martyr's Day Al Mawlid Al Nabawi holiday
Saturday - Sunday	December 2 - 3, 2017	UAE National Day holiday
Saturday - Tuesday	December 9 - 19, 2017	Final examinations period
Thursday	December 21, 2017	Last date for requesting incomplete
		10:00 : Colleges Council meeting
		15:00 Council for Academic Affairs meeting
		Announcement of final examinations results
Sunday-Thursday	Dec. 24, 2017 - Jan. 4, 2018	Fall-Semester vacation

Islamic holidays are determined after sighting the moon. Thus, actual dates may not coincide with the dates in this calender.

Academic Calendar for Spring Semester

Academic Year 2017 – 2018

Day	Date	Description
Sunday-Thursday	January 7 - 11, 2018	11:00: Deans welcome the new students
		12:00-13:00: Tour of the campus
		13:00-14:00: Tutorial session on course registration
		Course registration for continuing & new students
		Examinations for incomplete removal
		Period for accepting credit transfer requests
		Period for accepting changing major requests
Sunday	January 14, 2018	Beginning of classes
Sunday-Thursday	January 14 - 18, 2018	Add & drop period
Thursday	January 18, 2018	Last date for dropping courses or registration suspension with 100% refund
Sunday-Thursday	Jan. 21 - Feb. 1, 2018	period for suspension of registration with 50% refund
Monday – Tuesday	February 5 - 6, 2018	Graduation Ceremony for the fall semester 2017-2018
Thursday	February 8, 2018	Last date for dropping courses
Sunday-Thursday	March 4 - 15, 2018	Mid-term examinations period
Sunday-Thursday	March 25 - April 5, 2018	Spring semester vacation
Sunday	April 8, 2018	Beginning of admission period for Fall Semester 2018-2019
Friday	April 13, 2018	Al Isra'a Wal Mi'raj holiday
Sunday-Thursday	April 15 -26, 2018	Period for course evaluation
		Early registration for Summer Semester 2017-2018
Thursday	April 19, 2018	Last date for withdrawal
Sunday – Thursday	April 29 - May 10, 2018	Early registration for Fall Semester 2018-2019
Saturday –Thursday	May 12 -24, 2018	Final examinations period
Tuesday	May 29, 2018	Last date for requesting incomplete
		10:00 : Colleges Council meeting
Thursday	May 31 , 2018	15:00 Council for Academic Affairs meeting
		Announcement of final examinations results
Sunday	June 3, 2018	Beginning of Summer vacation

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Academic Calendar for Summer-1 Semester

Academic Year 2017 – 2018

Day	Date	Description
Wdnesday – Thursday	June 6 - 7, 2018	Course registeration
Sunday	June 10, 2018	Beginning of classes
Sunday-Monday	June 10 - 11, 2018	Add & drop period
Thursday – Sunday	June 14 - 17 , 2018	30 Ramadan, Eid Al-Fitr holiday
Sunday	June 24, 2018	Beginning of mid-term examinations
Thursday	June 28, 2018	Last date for withdrawal
Wednesday – Thursday	July 18 - 19, 2018	Final examinations period
Monday	July 23 , 2018	13:00 Council for Academic Affairs meeting
		Announcement of final examinations results

N.B: 2 hours per class session.

Academic Calendar for Summer-2 Semester (Field training)

Academic Year 2017 – 2018

Day	Date	Description
Sunday	July 22 , 2018	Beginning of training
Monday - Thursday	Augest 20-23 2018	Arafat Day, Eid Al-Adha holiday
Thursday	August 30, 2018	End of 6 weeks training
Sunday	September 9 , 2018	Announcement of 6 weeks training results
Thursday	September 13, 2018	End of 8 weeks training
Sunday	September 23, 2018	Announcement of 8 weeks training results

Islamic holidays are determined after sighting the moon. Thus, actual dates may not coincide with the dates in this calender.

Important Note:

FIELD TRAINING FOR STUDENTS EXPECTED TO GRADUATE IN SUMMER 2 OF ACADEMIC YEAR 2017-2018.

Office of Admissions & Registration

University Registrar