

Bachelor of Science in Computer Engineering

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
3122420	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	3122420
3122110	Programming for Engineers	2	2	0	3	3121120
3122510	Electronics I	3	2	2	4	3122150
3152050	Fundamentals of Data	2	2	0	3	1041100 & 40

	Communications & Networking					Cr. Hrs
xxxxxx	University Elective II	3	0	0	3	-
Total		16	6	4	19	

FIFTH SEMESTER

Course No.	Course Title	Contact Hours			Cr. Hrs.	Prerequisite
		Th	Lab	Tut		
3123030	Electronics II	2	2	0	3	3122510
3123210	Digital System Design	3	2	0	4	3122420
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			Cr. Hrs.	Prerequisite
		Th	Lab	Tut		
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, 3122420
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			Cr. Hrs.	Prerequisite
		Th	Lab	Tut		
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			Cr. Hrs.	Prerequisite
		Th	Lab	Tut		
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	
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MINOR IN COMPUTER SCIENCE

Study Plan-A

The study plan of the Minor in Computer Science for students of the College of Engineering & IT 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 in addition to the following requirements:

- Only registered students in the Colleges of Engineering & IT, Business Administration, and Scientific majors of the College of Humanities & Sciences at AU can register for the minor in Computer Science – Plan A. Students with a computing major (such as: Information Technology, Computer Science, Information Systems, Computer Engineering) are not eligible to register in this minor.
- Students accepted for a Minor in Computer Science must successfully complete 15 credit hours from the courses described in the minor's study plan.
- 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 & IT is as follows:

(c) 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
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 in addition to the following requirements:

1. Only registered students in the Colleges of Business Administration, Law, Information and Mass Communications and scientific majors of the College of Humanities & Sciences at AU can register for the minor in Computer Science – Plan B. Students with a computing major (such as: Information Technology, Computer Science, Information Systems, Computer Engineering) are not eligible to register in this minor.
2. Students accepted for a Minor in Computer Science must successfully complete 18 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.