Al Quds Bard Honors for Arts and Sciences – Computer Science Program

Al-Quds University
Computer Science Program

Section One: Four Year Study Plan

First Year		
Courses	**CRN**	**Hours**
Language & Thinking	9100100	03

Fall			Spring		
Courses	**CRN**	**Hours/**	**Courses**	**CRN/Type**	**Hours**
▪ FYSEM I	9100101	3 CR	▪ FYSEM II	9100102	3 CR
▪ English Composition I	9100105	3 CR	▪ English Composition II	9100106	3 CR
▪ Arabic Composition I	9100109	3 CR	▪ Arabic Composition II	9100110	3 CR
▪ Calculus I	9102110	3 PR	▪ Statistics & Experimental Methods	9102131	3 PR
▪ Computer Science I	9112101	4 PR	▪ Computer Science II	9112102	4 PR
		Total: 16			**Total: 16**

Second Year					
Fall			**Spring**		
Courses	**CRN**	**Hours**	**Courses**	**CRN/T**	**Hours**
▪ SYSEM I	9100201	3 CR	▪ SYSEM II	9100202	3 CR
▪ Introduction to Management	9112103	3 PR	▪ Discrete Mathematics	9112221	3 PR
▪ Data Structures and Algorithms I	9112201	4 PR	▪ Data Structures and Algorithms II	9112301	4 PR
			▪ 200 Level Program Elective **	911------	3 PE
▪ 200 level Program Elective**	911-----	3 PE	▪ Free Courses*	----------	3 FC
▪ Free Courses*	----------	3 FC			
		Total: 16			**Total: 16**

Third Year					
Fall			**Spring**		
Courses	**CRN/T**	**Hours**	**Courses**	**CRN/T**	**Hours**
▪ Computer Organization & Architecture	9112232	3 PR	▪ Database Systems I	9112351	3 PR
			▪ Computer Operating Systems	9112371	3 PR
▪ Human-Computer Interaction	9112204	3 PR	▪ 300 Level Program elective**	911----	3 PE
▪ 300 Level Program elective**	911-----	3 PE	▪ 300 Level Program Elective	911----	4 PE
▪ 300 Level Program Elective **	911-----	4 PE	▪ Free Courses*	---------	3 FC
▪ Free Courses*	----------	3 FC			
		Total: 16			**Total: 16**

Senior Year					
Fall			**Spring**		
Courses	**CRN/T**	**Hours**	**Courses**	**CRN/T**	**Hours**

▪ Software Engineering	9112454	3 PR	▪ Senior Seminar II: CS	9112402	4 PR
▪ Senior Project I: CS	9112401	4 PR	▪ Web Design and Programming	9112481	3 PR
▪ Computer Networks	9112473	3 PR	▪ Programming Languages Paradigm	9112464	4 PE
▪ 400 Level Program Elective	911-----	3 PR			
▪ Free Courses*	----------	3 FC	▪ 400 Level Program Elective**	911-----	3 PE
			▪ Free Courses*	----------	3 FC
		Total: 16			**Total: 17**

PROGRAM TOTAL CREDITS				**132/132**

Section Two: Four Year Study Plan Requirements

College Requirements (CR):

a. Obligatory Courses 27 credits.

Students MUST take 27 credits: 9 courses (Language & Thinking, FYSEM I & FYSEM II, English Composition I & English Composition II, Arabic Composition I & Arabic Composition II, SYSEM I & SYSEM II).

#	Course name	Course #	Total	Prerequisite
1	Language and Thinking	9100100	3	-
2	First Year Seminar (FYSEM) I	9100101	3	-
3	First Year Seminar (FYSEM) II	9100102	3	9100101 preferred, not required
4	Arabic Composition I	9100109	3	-
5	Arabic Composition II	9100110	3	9100109 preferred, not required
6	English Composition I	9100105	3	-
7	English Composition II	9100106	3	9100105 preferred, not required
8	Second Year Seminar (SYSEM) I	9100201	3	-
9	Second Year Seminar (SYSEM) II	9100202	3	9100201 preferred, not required

TOTAL CREDITS			**27 Credits (9 Courses)**

For Arabic Composition, students MUST select 6 credits (two courses) from the courses listed in the table below:

#	Arabic Composition Courses	Course #	Total	Prerequisite
1	Beginning Arabic 1	9100107	3	-
2	Beginning Arabic 2	9100108	3	9100107 preferred, not required
3	Arabic Composition I	9100109	3	-
4	Arabic Composition II	9100110	3	9100109 preferred, not required

TOTAL CREDITS			6 Credits (2 Courses)

For English Composition, students MUST select 6 credits (two courses) from the courses listed in the table below:

#	Course name	Course #	Total	Prerequisite
1	English Composition I	9100105	3	-
2	English Composition II	9100106	3	9100105 preferred, not required
3	English through the Liberal Arts	9100111	3	-
4	Advanced Composition	9100112	3	-
5	Junior Writing	9100301	4	-
6	Media Theory	9106121	3	-
7	Introduction to the Study of History	9107101	3	-
8	Introduction to Creative Writing	9108115	3	-

TOTAL CREDITS			6 Credits (2 Courses)

b. Program Requirements (PR):

1. Obligatory Courses: 52 credits.

Students MUST complete all courses listed in the table below (60 credits) for majoring in Computer Science.

#	Course name	Course No	Theory	LAB	Total Credits	Prerequisites
1	Calculus	9102120	3	-	3	-
2	Statistics & Experimental Methods	9102131	3	-	3	-

#	Course name	Course No	Theory	Lab/Practical	Total Credits	Prerequisites
3	Computer Science I	9112101	3	1	4	-
4	Computer Science II	9112102	3	1	4	9112101
5	Introduction to Management	9112103	3	-	3	-
6	Data Structures and Algorithms I	9112201	3	1	4	9112102
7	Human-Computer Interaction	9112204	2	1	3	9112102
8	Discrete Mathematics	9112221	3	-	3	9112102
9	Computer Organization & Architecture	9112232	3	-	3	9112102
10	Data Structures and Algorithms II	9112301	3	1	4	9112201
11	Database Systems I	9112351	2	1	3	9112201
12	Software Engineering	9112454	3	-	3	9112351
13	Programming Languages Paradigms	9112464	3	-	3	9112201
14	Computer Operating Systems	9112371	3	-	3	9112232/301
15	Computer Networks	9112473	3	-	3	9112232
16	Web Design and Programming	9112481	2	1	3	9112301/351
17	Senior Project I: Computer Science	9112401	4	-	4	Dept.
18	Senior Seminar II: Computer Science	9112402	4	-	4	Dept.
	Total Credits				**60**	

2. **Elective Courses (PE): 27 credits.**

200-Level Courses: 6 credit hours of the following:

#	Course name	Course No	Theory	Lab/Practical	Total Credits	Prerequisites
1	C and UNIX Systems Administration	9112271	2	1	3	9112201

2	Computer Graphics & Animation	9112281	3	1	4	9112201
3	Managing Information Technology Resources	9112202	3	-	3	9112102
4	Creative Design	9112211	3	1	4	9112204

300-Level Courses: 14 credit hours of the following:

#	Course name	Course No	Theory	Lab/Practical	Total Credits	Prerequisites
5	Simulation Tools	9112321	3	1	4	9112201
6	Information Ethics	9112340	3	-	3	9112102
7	Management Information Systems	9112348	3	-	3	9112103
8	Database Systems II	9112352	3	-	3	9112351
9	Enterprise Information Architecture	9112355	4	-	4	9112351
10	Intro. to Artificial Intelligence	9112358	3	-	3	9112201
13	Systems Implementation and Testing	9112365	3	-	3	9112354
14	Software Quality Control	9112366	3	1	4	9112354
15	Mobile Computing	9112374	3	1	4	9112373
16	Bioinformatics	9112384	3	1	4	9112201/9101101

400-Level Courses: 7 credit hours of the following:

#	Course name	Course No	Theory	Lab/Practical	Total Credits	Prerequisites
16	Distributed Systems	9112476	3	-	3	9112373
17	Genetic Algorithms	9112460	3	-	3	9112301
18	Translators and Programming Languages	9112462	3	-	3	9112201/221
19	Parallel Programming	9112485	3	1	4	9112301/232
20	Knowledge Base Systems	9112486	3	-	3	9112352
21	Geographic Information	9112487	3	1	4	9112102

| 22 | Internship Course | 9112490 | 4 | - | 4 | Dept. |
| 23 | Special Topics in Computer Science | 9112494 | 3 | - | 3 | Dept |

c. Free Courses (PE): 18 credits.

Students MUST choose two courses from each division in the college and the divisions are Practicing and fine Arts division (Media studies and Literature and society) and Social Sciences (Urban Studies, Human Rights, Political Science, and Economics and Finance).

Section Three: Four Year Study Plan Summary

The student has to pass at least (132) credit hours to get B.SC Degree in Computer Science.

College Requirements (CR):

a. Obligatory Courses: 27 credits.

Program Requirements (PR):

a. Obligatory Courses: 60 credits.

Students MUST complete all courses listed before in the table above (52 credits) for

majoring in Biology Program.

b. Elective Courses (PE): 27 credits.

Up to 27 credits (6 credits 200 level courses, 14 credits 300-level from table 300, 7 credits 400-level courses.

c. Free Courses (PE): 18 credits.

Total Credits required: 132 credits are required to fulfill the B.A. degree in Computer Science.