



جامعة المجمعة  
Majmaah University

# Program Specifications (PS)

Institution:	College Of Science and Humanities at Alghat
Academic Department :	Computer Science
Programme :	Information Technology
Specification Approved Date :	20/ 08 / 1436 H

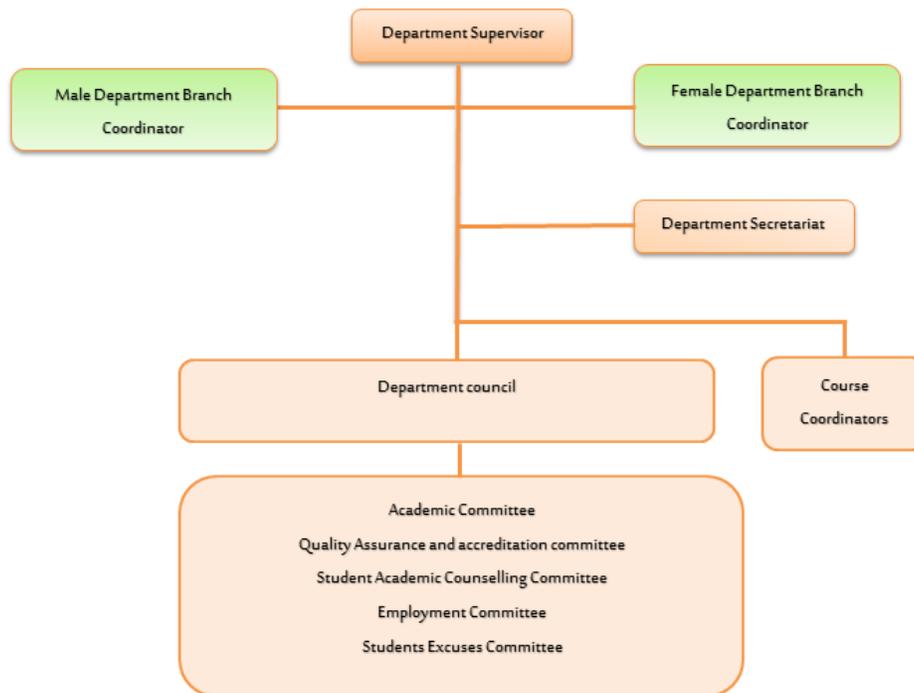
Muharram 1437 H



## Program Specifications

1. **Institution:** Majmaah University      **Date of Report:** 25 \ 06 \ 1437 H
2. **College / Department :** College Of Science and Humanities at Alghat / Computer science department
3. **Dean**      Dr. Omar Al-Omar

4. **Insert program administrative flowchart :**



5. **List all branches/locations offering this program**

- Branch/Location 1.** Alghat Male campus
- Branch/Location 2** Alghat Female campus

## A. Program Identification General Information

<b>1. Program title :</b>	Information Technology-IT	<b>Code :</b>	INT82
<b>2. Total credit hours needed for completion of the program :</b>	136		
<b>3. Award granted on completion of the program :</b>	Bachelor degree (B. SC) in Information Technology		
<b>4. Major tracks/pathways or specializations within the program :</b>	Information Technology		
<b>5. Intermediate Exit Points and Awards (if any) :</b>	N.A		
<b>6. Professional occupations</b> ( <i>licensed occupations, if any</i> ) <i>for which graduates are prepared. (If there is an early exit point from the program ) include professions or occupations at each exit point) from the program (eg. diploma or associate degree) include professions or occupations at each exit point) :</i>	<ul style="list-style-type: none"> <li>• Software developer</li> <li>• Software analyst</li> <li>• Software designer</li> <li>• Software tester</li> <li>• Computer security specialist</li> <li>• Computer Network administrator</li> <li>• System Integrator</li> <li>• Database analyst</li> <li>• Database designer</li> <li>• Database Administrator</li> <li>• Internet and Web Developer</li> <li>• Web Designer</li> <li>• Multimedia Designer</li> </ul>		
<b>7. (a) New Program</b>	<input type="checkbox"/>	Planned starting date :	N.A
<b>(b) Continuing Program</b>	<input checked="" type="checkbox"/>	Year of most recent major program review	N.A
<b>Organization involved in recent major review</b>			
Accreditation review by : N.A			

Other : N.A

## 8. Name of program coordinator or chair.

( If a program coordinator or chair has been appointed for the female section as well as the male section, include names of both)

Program supervisor: Adil Humaidan Alshammari

Program coordinator (male): Mossaad Mohamed Ben Ayed

Program coordinator (female): Jihen Hassan Majdoubi

## 9. Date of approval by the authorized body :

(MoHE for private institutions and Council of Higher Education for public institutions).

Campus Branch/Location	Approval By	Date
<b>Main Campus:</b>		
1: AlGhat Male Campus	University Council	20/08/1436
2: AlGhat Female Campus	University Council	20/08/1436

## B. Program Context :

### 1. Explain why the program was established.

a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.

- Meeting the urgent needs of the labor markets in the information technology field.
- Keeping pace with technological development and progress in the world.
- Providing computer science tools that serve and support the community.

b. Explain the relevance of the program to the mission and goals of the institution.

The program mission and goals are closely related to the college and university mission and goals.

See the following consistency tables:

### Consistency between college and university missions

College mission Keywords University mission keywords		<b>University mission</b> Offer educational programs with high quality as well as funding all types of research projects and social initiatives that contribute in achieving the sustainable development. We also committed to instil the concept of patriotism and educate students about the culture and heritage of the country.					
		Educational programs with high quality	Funding research projects	Social initiatives	Sustainable development	Concept of patriotism	Educate students about the culture and heritage of the country
<b>College mission</b> Provide excellent educational and research programs and support the community partnership to achieve sustainable development and promotion of belonging to the homeland.	Excellent educational programs	X					
	Excellent research programs		X				
	Support the community partnership			X			
	Sustainable development				X		
	Promotion of belonging to the homeland					X	X

### Consistency between program and college missions

**Program mission:** Prepare and qualify graduates with the latest knowledge, advanced skills and ethical values to work and compete in the field of computer science, and be leader in the research and postgraduate studies, in order to ensure the effective contribution in the instillation of the community of knowledge and fulfill the national objectives of the development.

College mission Keywords Program mission Keywords		<b>College Mission</b> Provide excellent educational and research programs and supporting community partnership to achieve sustainable development and promotion of belonging to the homeland.				
		Excellent education	Excellent research	Sustainable development	Promotion of belonging to the homeland	Supporting the community partnership
<b>Program mission</b>	Advanced skills	X				
	Latest knowledge		X			
	Work and compete in the field of computer science	X				
	Leader in the research and postgraduate studies		X	X		
	Ethical values				X	
	Effective contribution in the instillation of the community of knowledge					X
Fulfill the national objectives of the development			X	X		

Consistency between objectives and program mission

		Program Mission						
		<i>KW1</i> Advanced skills	<i>KW2</i> Latest knowledge	<i>KW3</i> Work and compete in the field of computer science	<i>KW4</i> Leader in the research and postgraduate studies	<i>KW5</i> Ethical values	<i>KW6</i> Effective contribution in the instillation of the community of knowledge	<i>KW7</i> Fulfill the national objectives of the development
<b>program Objectives</b>	<i>Objective ( 1 )</i>	X	X	X				X
	<i>Objective ( 2 )</i>					X		X
	<i>Objective ( 3 )</i>				X		X	X
	<i>Objective ( 4 )</i>						X	X

(KW) Program Mission keywords

**Program Objectives:**

1	Prepare and qualify graduates to acquire the latest knowledge and advanced skills in computer science areas in order to fulfill the labor market needs.
2	Prepare and qualify graduates to abide by the appropriate professional codes of practice in order to deal with professional, legal and ethical responsibilities.
3	Encourage graduates to continuously improve their scientific skills through the self-learning, and the pursuit of the postgraduate studies or the involvement in the professional training and development.
4	Prepare and qualify graduates to be engaged in the community service.

**2. Relationship (if any) to other programs offered by the institution / college / department.**

**a. Does this program offer courses that students in other programs are required to take?**

Yes	x
NO	

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

These courses are part of other college programs requirements:

- Computer skills and information technology (Law program)
- Analysis of information systems (Management information systems program)
- Data management (Management information systems program)
- Intro to programming (Management information systems program)
- Computer Webs (Management information systems program)

As explained below, they cover certain learning outcomes needed to be acquired by the students of the other programs. The taught courses allow to achieve the law and the Management information systems programs learning outcome that deals with the ability of the students to use current computer science techniques, skills, and tools.

The course specifications are prepared by cooperation between the college programs.

Course reports and the evaluation of the learning outcomes are submitted to the other departments in every end of semester.

**b. Does the program require students to take courses taught by other departments?**

Yes	x
NO	

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

These courses are taught in other departments or units:

- ENGL 102, ENGL 104 and ENGL 110 (English program)
- BA 101, BA 241 and ACCT 231 (Management of information systems)
- The university requirement courses, MATH 101, MATH 102, PHYSC 104, MATH 151, STAT 324, MATH 244, STAT 111 (Courses taught by the unit of the general preparation).

As explained below, they cover certain learning outcomes needed to be acquired by the students of the IT program. English courses allow to re-inforce the student skills in the English language which is not only the program teaching language but also the language the most proliferated in the IT field and the related labour markets. Thus, it helps in the achievement of all student learning outcomes and more specifically the ability of the students to communicate effectively with a range of audiences. CHS 305, BA 101, BA 241, ACCT 101 and ACCT 231 allow to achieve the learning outcome relative to the ability of the students to be effective in project planning (the ability of the students to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables). MATH 101, MATH 102, PHYSC 104, MATH 151, STAT 324, MATH 244, STAT 111 allow to achieve the learning outcome relative to the ability of the students to define the basic knowledge of computing and mathematics appropriate to the discipline, while the general preparation courses allow to achieve the leaning outcomes relative to the ability of the students to communicate effectively with a range of audiences and their ability to make informed judgments in computing practice based on legal and ethical principles.

We note that the course specifications are prepared by cooperation between the college programs. At the end of the semester, the course reports and the learning outcomes evaluation are submitted to the IT department.

**3. Do students who are likely to be enrolled in the program have any special needs or characteristics?** (eg. Part time evening students, physical and academic disabilities, limited IT or language skills).

Yes	X	NO	
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**4. What modifications or services are you providing for special needs applicants?**

- Initiation to the basic computer science tools in the first levels.
- Teaching English language in the first levels.
- Provide accommodations and facilities for the students who have physical disabilities (elevator, special class room arrangement and equipment, wheelchair, etc.).

## C. Mission, Goals and Objectives

### 1 . Program Mission Statement :

Prepare and qualify graduates with the latest knowledge, advanced skills and ethical values to work and compete in the field of computer science, and be leader in the research and postgraduate studies, in order to ensure the effective contribution in the instillation of the community of knowledge and fulfill the national objectives of the development.

**List goals and objectives of the program within to help achieve the mission. For each goal and objective describe the major strategies to be followed and list the indicators that are used to measure achievement.**

Goals and Objectives	Major Strategies	Measurable Indicators
<p><b>Prepare and qualify graduate to acquire the latest knowledge and advanced skills in computer science areas in order to fulfill the labor market needs.</b></p>	<ul style="list-style-type: none"> <li>-Recruit and retain faculty qualified to support the academic program.</li> <li>- Assign course projects particularly in the capstone courses.</li> <li>- Propose graduate projects with the cooperation of the regional organizations.</li> <li>- Continuously review the program and course achievements referring to the employers' feedbacks.</li> <li>-Provide outstanding students with scholarships to attend some courses at international universities.</li> <li>- Demand a certain level in the program preparatory courses such as English, physic and Math related ones.</li> <li>-Establish partnerships with the regional organizations, and industrial companies.</li> </ul>	<ul style="list-style-type: none"> <li>-Ratio of students to teaching staff.</li> <li>-Proportion of the teaching staff with verified doctoral qualifications.</li> <li>-Students overall rating of quality of their courses.</li> <li>- Students' overall evaluation on the quality of their learning experiences.</li> <li>- Proportion of courses in which student evaluations were conducted during the year.</li> <li>- Percentage of students entering programs who successfully complete first year.</li> <li>- Proportion of graduates from undergraduate programs who within six months of graduation are employed.</li> <li>-Ratio of employer satisfaction of the alumni abilities.</li> </ul>
<p><b>Encourage graduates to continuously improve their scientific skills through the self-learning, and the pursuit of the postgraduate studies or the involvement in the professional training and development.</b></p>	<ul style="list-style-type: none"> <li>-Encourage students to develop their self-learning.</li> <li>-Initiate the students in the capstone courses the premises of the scientific research.</li> <li>- Assign research projects in the capstone courses.</li> <li>- Propose high quality graduate projects that are related to the contemporary scientific research issues.</li> <li>- Use distance learning teaching strategy.</li> <li>-Initiate collaborative contracts with various agencies for research and training.</li> <li>-Motivate faculty members for producing relevant scientific researches.</li> <li>-Provide advising and career services to support optimal job placement.</li> <li>-Conduct and disseminate research and creative activity.</li> <li>-Demonstrate success in acquiring external and internal funds for research and creative activity.</li> <li>-Conduct research and creative activity in partnership with academic, industrial, and community</li> </ul>	<ul style="list-style-type: none"> <li>-Ratio of employer satisfaction of the alumni abilities.</li> <li>- Graduation Rate for Undergraduate Students: Proportion of students entering undergraduate programs who complete those programs in minimum time.</li> <li>-Proportion of graduates from undergraduate programs who within six months of graduation are enrolled in further study.</li> <li>- Student evaluation of academic and career counselling.</li> <li>-The rate of students involved in the distance learning.</li> <li>- Stakeholder evaluation of the digital library.</li> <li>- Stakeholder evaluation of library and media center.</li> <li>- Proportion of full time member of teaching staff with at least one refereed publication during the previous year.</li> <li>-Number of papers or reports presented at academic conferences during the past year per full time equivalent faculty members.</li> <li>- Proportion of full time member of teaching staff with at least one</li> </ul>

	organizations and institutions.	refereed publication during the previous year. - Number of citations in refereed journals in the previous year per full time equivalent faculty members. - Number of refereed publications in the previous year per full time equivalent teaching staff.
<b>Prepare and qualify graduate to abide by the relevant professional codes of practice in order to deal with professional, legal and ethical responsibilities.</b>	Teach ethical aspects in some courses of the program	Ratio of employer satisfaction of the alumni abilities.
<b>Prepare and qualify graduates to be engaged in the community service.</b>	- Propose high quality graduate projects that aim to solve the community problems. -Encourage the participation of students in social, cultural and scientific activities that serve the community. -Organize students' visits to the regional organizations, associations and industrial companies.	- Proportion of full time teaching and other staff actively engaged in community service activities.

## D. Program Structure and Organization

### 1. Program Description:

List the core and elective program courses offered each semester from Prep Year to graduation using the below Curriculum Study Plan Table

(A separate table is required for each branch IF a given branch/location offers a different study plan).

### Curriculum Study Plan Table

\* *Prerequisite* – list course code numbers that are required prior to taking this course.

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
1st Year Semester 1						
	MATH 101	<i>Calculus 1</i>	<i>Required</i>	--	3	<i>General preparation Unit</i>
	IC 101	<i>Introduction to</i>	<i>Required</i>	--	2	<i>General</i>

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
		<i>Islamic Culture</i>				<i>preparation Unit</i>
	<b>ENGL 102</b>	<i>English language for the Students of Computer Engineering 1</i>	<i>Required</i>	--	6	<i>English Dep.</i>
	<b>CAP 107</b>	<i>Introduction to Computing</i>	<i>Required</i>	--	3	<i>Computer Dep.</i>
	<b>CSC 112</b>	<i>Computer Programming -1</i>	<i>Required</i>	--	3	<i>Computer Dep.</i>
<b>1st Year Semester 2</b>						
	<b>ARAB 101</b>	<i>Arabic language skills</i>	<i>Required</i>	--	2	<i>General preparation Unit</i>
	<b>MATH 102</b>	<i>Calculus 2</i>	<i>Required</i>	<b>MATH 101</b>	3	<i>General preparation Unit</i>
	<b>IC 102</b>	<i>Islam &amp; Society</i>	<i>Required</i>	--	2	<i>General preparation Unit</i>
	<b>PHYS 104</b>	<i>General Physics (2)</i>	<i>Required</i>	--	4	<i>General preparation Unit</i>
	<b>ENGL 104</b>	<i>English Language for the Student Computer</i>	<i>Required</i>	<b>ENGL 102</b>	3	<i>English Dep.</i>
	<b>CSC 113</b>	<i>Computer Programming -2</i>	<i>Required</i>	<b>CSC 112</b>	4	<i>Computer Dep.</i>
<b>2nd Year Semester 1</b>						
	<b>ENGL 110</b>	<i>Report Writing</i>	<i>Required</i>	<b>ENGL 104</b>	2	<i>English Dep.</i>
	<b>MATH 151</b>	<i>Discrete Mathematics</i>	<i>Required</i>	--	3	<i>Computer Dep.</i>
	<b>CAP 211</b>	<i>Visual Programming</i>	<i>Required</i>	<b>CSC 113</b>	3	<i>Computer Dep.</i>
	<b>CSC 212</b>	<i>Data Structures</i>	<i>Required</i>	<b>CSC 113</b>	3	<i>Computer Dep.</i>
	<b>CAP 221</b>	<i>Computer Organization &amp; Assembly language</i>	<i>Required</i>	--	3	<i>Computer Dep.</i>
	<b>CAP 250</b>	<i>Introduction to Information System</i>	<i>Required</i>	--	3	<i>Computer Dep.</i>
<b>2nd Year Semester 2</b>						
	<b>IC 103</b>	<i>The Islamic Economy</i>	<i>Required</i>	--	2	<i>General preparation Unit</i>
	<b>CAP 223</b>	<i>Computer Architecture</i>	<i>Required</i>	<b>CAP 221</b>	3	<i>Computer Dep.</i>

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	CAP 240	Network & Internet Technology	Required	PHYS 104	3	Computer Science Dep.
	CAP 252	System Analysis & Design	Required	CAP 250	3	Computer Science Dep.
	CAP 261	Fundamental of Database System	Required	CSC 212	3	Computer Science Dep.
	STAT 324	Probability & Statistics for Engineers	Required	--	3	General preparation Unit
<b>3rd Year Semester 1</b>						
	ACCT 101	Accounting Principle 1	Required	--	3	Business Management Dep.
	ARAB 103	Arabic Writing	Required	--	2	General preparation Unit
	MATH 244	Linear Algebra	Required	MATH 102	3	General preparation Unit
	CAP 311	Web Engineering & Applications	Required	CAP 211	3	Computer Science Dep.
	CAP 322	PC Environment & Peripherals	Required	CAP 223	3	Computer Science Dep.
	CAP 332	Operating Systems	Required	CAP 223 CSC 212	3	Computer Science Dep.
<b>3rd Year Semester 2</b>						
	IC 104	Fundamentals of Islamic Politics	Required	--	2	General preparation Unit
	STAT 111	Elements of Distribution Theory	Required	--	3	General preparation Unit
	ACCT 231	Cost Accounting (1)	Required	--	3	Business Management Dep.
	CAP 312	Software Engineering	Required	CAP 252 CAP 261	3	Computer Science Dep.
	CAP 333	Network Management Systems	Required	CAP 240 CAP 332	3	Computer Science Dep.
	CAP 364	Database Management Systems	Required	CAP 261	4	Computer Science Dep.

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
<b>4th Year Semester 1</b>						
	<b>BA 101</b>	<i>Fundamentals of Management</i>	<i>Required</i>	--	3	<i>Business Management Dep.</i>
	<b>OPER 241</b>	<i>Simulation -1</i>	<i>Required</i>	<b>STAT 111</b>	3	<i>Computer Science Dep.</i>
	<b>ARED 412</b>	<i>Computer Graphics</i>	<i>Required</i>		2	<i>Computer Science Dep.</i>
	<b>CAP 430</b>	<i>Information Security</i>	<i>Required</i>	<b>CAP 240</b>	3	<i>Computer Science Dep.</i>
	<b>CAP 490</b>	<i>Selected Topics in Information Technology-1</i>	<i>Required</i>	--	3	<i>Computer Science Dep.</i>
	<b>CAP 496</b>	<i>Project (1)</i>	<i>Required</i>	<b>CAP 311</b> <b>CAP 312</b> <b>CSC 212</b> <b>90 CH</b>	2	<i>Computer Science Dep.</i>
<b>4th Year Semester 2</b>						
	<b>BA 241</b>	<i>Marketing Management</i>	<i>Required</i>	<b>BA 101</b>	3	<i>Business Management Dep.</i>
	<b>CHS 305</b>	<i>Health Information Management</i>	<i>Required</i>	--	3	<i>Business Management Dep.</i>
	<b>CAP 472</b>	<i>Electronic Business Systems</i>	<i>Required</i>	<b>CAP 311</b> <b>CAP 430</b>	3	<i>Computer Science Dep.</i>
	<b>CAP 492</b>	<i>Selected Topics in Information Technology-2</i>	<i>Required</i>	<b>CAP 490</b>	3	<i>Computer Science Dep.</i>
	<b>CAP 497</b>	<i>Project (2)</i>	<i>Required</i>	<b>CAP 496</b>	4	<i>Computer Science Dep.</i>
<i>Include additional years if needed.</i>						

## 2. Required Field Experience Component

(if any, e.g. internship, cooperative program, work experience).

**Summary of practical, clinical or internship component required in the program.**

*Note: see Field Experience Specification*

**a. Brief description of field experience activity**

N.A

**b. At what stage or stages in the program does the field experience occur?**

*(eg. year, semester)*

N.A

**c. Time allocation and scheduling arrangement.**

*(eg. 3 days per week for 4 weeks, full time for one semester)*

N.A

**d. Number of credit hours (if any)**

N.A

**3. Project or Research Requirements (if any)**

**Summary of any project or thesis requirements in the program.**

*(Other than projects or assignments within individual courses)*

*(A copy of the requirements for the project should be attached.)*

**a. Brief description**

The program has two courses, namely, Graduation Project 1 (CAP 496) and Graduation Project2 (CAP 497) in which the students (as groups of three or four students) complete a project under the supervision of one of the faculty members.

90 credit hours are required before CAP 496.

The graduation project is the first part of a senior design and development software project that will give the chance to students to apply the knowledge they acquired in the curriculum on a real project. Thus, it is a real test of the achievement of the student learning outcomes. The outcome of this project must be a significant software system, employing knowledge gained from courses throughout the curriculum. The project should cover most phases of the software lifecycle. In the first part of the project (Project 1), the focus will be on software process and development methodologies, requirements analysis & specification, high-level design, quality assurance, as well as on management of the project. Students must use software case tools to realize their work. In the second part of the project (Project 2), the focus will be on coding and testing the software.

Each project group is constituted by a maximum of 4 students, which are supervised by a staff member. Project 1 will culminate with a formal public presentation, and written documentation, while Project 2 will end by the delivery of a working system, a formal public presentation, and a written documentation.

**b. List the major intended learning outcomes of the project or research task.**

- An ability to explain current technical concepts and practices in the core information technologies.
- An ability to define the basic knowledge of computing and mathematics.
- An ability to analyze a problem, and to identify and define the computing requirements appropriate to its solution.
- An ability to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline.
- An ability to identify and analyze user needs and to take them into account in the selection, integration, evaluation, and administration of computer-based systems.
- An ability to make informed judgments in computing practice based on legal and ethical principles.
- An ability to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables.

- An ability to engage in continuous learning as well as research and assess new ideas and information to provide the capabilities for lifelong learning.
- An ability to communicate effectively with a range of audiences about technical information.

**c. At what stage or stages in the program is the project or research undertaken?**

(e.g. year, semester)

Project 1: 7<sup>th</sup> semester

Project 2: 8<sup>th</sup> semester

4th year

**d. Number of credit hours (if any)**

Project 1: 2 credit hours

Project 2: 4 credit hours

**e. Description of academic advising and support mechanisms for students.**

The following is the procedure used for the graduation projects

- All faculty members provide potential project topics in their fields of specializations to the course coordinator. The course coordinator then announces the project topics to the students.
- Students are required to choose their projects (with the assistance of the project supervisor)
- If a project topic is chosen by more than one group, the group with highest average GPA will be assigned that project topic.
- If the student's project of first choice has already been assigned, then the second choice is considered, and so on.
- A project group consists of at least three students.

Student groups meet their respective supervisors at least one hour weekly to discuss the project. They are advised by their supervisor to resolve the technical and managerial problems.

**f. Description of assessment procedures**

(including mechanism for verification of standards)

First the responsible teacher gives an evaluation to each student involved in the project. It concerns the student fulfillments during the semester. The weight of this evaluation is 50 %.

The students submit a final report at the end of the semester to be reviewed by an assigned project committee. The students present their project to the committee. The weight of project committee evaluation is 50 %.

The assessment is based on the achievement of the intended project learning outcomes.

## 4. Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy

The program must enable students to attain, by the time of graduation:

NQF Learning Domains and Learning Outcomes		Teaching Strategies	Assessment Methods
<b>A</b>	<b>Knowledge</b>		
<b>a1</b>	An ability to explain current technical concepts and practices in the core information technologies.	lecture, small group work, whole group and small group discussion, In class Exercises, homeworks, D2I	Final Exam, Mid-term Exams, class room participation, In class Exercises, homeworks,
<b>a2</b>	An ability to define the basic knowledge of computing and mathematics.		

NQF Learning Domains and Learning Outcomes		Teaching Strategies	Assessment Methods
			D21 homeworks, D21 quizzes, surveys about the learning outcomes.
<b>B</b>	<b>Cognitive Skills</b>		
<b>b1</b>	An ability to analyze a problem, and to identify and define the computing requirements appropriate to its solution.	Small group work, whole group and small group discussion, Practical lab, case studies, debates, In class Exercises, homeworks, brainstorming, D21, active learning, problem-solving	Final Exam, Mid-term Exams, Mini- project, practical Exam, class room participation, In class Exercises, In class practical Exercises, homeworks, presentation, D21 homeworks, surveys about the learning outcomes.
<b>b2</b>	An ability to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline.		
<b>b3</b>	An ability to identify and analyze user needs and to take them into account in the selection, integration, evaluation, and administration of computer-based systems.		
<b>C</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
<b>c1</b>	An ability to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables.	Lectures, Small group work, whole group and small group discussion, role playing , individual and collective presentation, cooperative learning	Mini- project, graduate project, class room participation, homeworks, presentations, surveys about the learning outcomes.
<b>c2</b>	An ability to make informed judgments in computing practice based on legal and ethical principles.		
<b>c3</b>	An ability to engage in continuous learning as well as research and assess new ideas and information to provide the capabilities for lifelong learning.		
<b>D</b>	<b>Communication, Information Technology, Numerical</b>		
<b>d1</b>	An ability to communicate effectively with a range of audiences about technical information.	Debates, whole group and small group discussion, role playing, individual and collective presentation, D21	Mini-project, graduate project, class room participation, presentations, D21 class room participation, surveys about the learning outcomes.
<b>E</b>	<b>Psychomotor: N.A</b>		

### Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to teach the program learning outcomes. Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale.

**Levels : I = Introduction(Introduce) R = Reinforce (Proficient) E = Emphasize (Advanced)**  
**A: Knowledge, B: Cognitive Skills, C: Interpersonal Skills & Responsibility, D: Communication, Information Technology, Numerical**

	A		B			C			D
	a1	a2	b1	b2	b3	c1	c2	c3	d1
<b>IC 101</b>							I		I
<b>IC 102</b>							R		R
<b>IC 103</b>							R		R
<b>IC104</b>							R		R
<b>ARAB 101</b>							I		I
<b>ARAB 102</b>							R		R
<b>MATH 101</b>		I							
<b>ENGL 102</b>									I
<b>CAP 107</b>	I	I	I		I				
<b>CSC 112</b>	I			I	I				
<b>MATH 102</b>		R							
<b>PHYS 104</b>		R							
<b>ENGL 104</b>									R
<b>CSC 113</b>	I			I	I				
<b>ENGL 110</b>									R
<b>MATH 151</b>		R							
<b>CAP 211</b>	R		R		R		R		
<b>CSC 212</b>	R			R	R			I	
<b>CAP 221</b>	R		R						
<b>CAP 250</b>	R		R		R				
<b>CAP 223</b>	R		R		R				
<b>CAP 240</b>	R			R	R				
<b>CAP 252</b>	R		R	R	R			R	
<b>CAP 261</b>	R	R	R		R				
<b>STAT 324</b>		R							
<b>ACCT 101</b>		I							
<b>MATH 244</b>		R							
<b>CAP 311</b>	E			R	R				
<b>CAP 322</b>	E			R					
<b>CAP 332</b>	E		R		R				
<b>STAT 111</b>		R							
<b>ACCT 231</b>		R							
<b>CAP 312</b>	E		R		R	R	R		
<b>CAP 333</b>	E			R	R				
<b>CAP 364</b>	E			R					
<b>BA 101</b>									
<b>OPER 241</b>	E			E					
<b>ARED 412</b>	E			E	E				
<b>CAP 430</b>	E		E		E				
<b>CAP 490</b>	E		E						
<b>CAP 496</b>	E	E	E	E	E	E	E	E	E
<b>BA 241</b>									
<b>CHS 305</b>				E	E				
<b>CAP 472</b>	E			E					

***COURSES***

	<b>CAP 492</b>	E			E	E				
	<b>CAP 497</b>	E	E	E	E	E	E	E	E	E

## 5. Admission Requirements for the program

*Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.*

The admission process of all students of MU is performed mainly electronically via the E-Register electronic system. Electronic admission starts by the student application via the internet and ends by MU sending the acceptance letter and files of those who are accepted.

### Major General Admission Requirements:

The following requirements have been stipulated for the admission of the new student:

- An applicant for admission must have a Saudi Secondary School Certificate -Science Section (SSSCSS) or its equivalent. The secondary school certificate should not be more than five years old and the Rector of the University may give exemption from this condition.
- Must have an Aptitude Test Certificate (ATC) administered by the National Centre for Assessment in Higher Education.
- The minimum qualifying scores in SSSCSS & ATC tests are: A total equivalent percentage of 75% (based on 30% from the SSSCSS + 30% from the ATC + 40% from cumulative basic Science of SSSCSS).
- Must not have been dismissed from another university for disciplinary reasons.
- When applicants exceed availability, priority is given to the students with higher grades.

### Registration Procedure:

The student is automatically registered at the beginning of each semester for a number of credit hours according to his academic standing.

### Withdrawal:

The student has the right to withdraw from an academic semester within the withdrawal period announced in the academic calendar for that semester. No withdrawal is allowed during the last five weeks before the final examination.

## 6. Attendance and Completion Requirements

*Attach handbook or bulletin description of requirements for:*

- Attendance.*
- Progression from year to year.*
- Program completion or graduation requirements.*

### a. Attendance.

Considering that regular course attendance is necessary for academic success, MU University requires that students should attend at least 75% of the lectures and practical labs. Students failing to meet this requirement in any of the courses will be prohibited from attending the final examination of that course and will have an F (Fail) grade in that course. Furthermore, the student who is absent in the final examination of a course(s) will not be given a substitute examination, except for a valid reason accepted by the college council.

### b. Progression from year to year.

The IT program, similar to all other programs at MU, follows the semester system. Two semesters are offered in each academic year (each semester is called a level). The duration of each semester is fifteen weeks excluding examinations. The program consists of eight semesters distributed over four years.

#### **Examination and Grading System:**

The examination and grading system of the program abides by the following regulations:

- Success in a course is usually based on the combination of a grade awarded for the course work, plus a grade for the final examination.
- Each course will have a total of 100 points, and these are distributed as follows: 50% for the course work (quizzes, assignments, homework, midterm exams, practical) and 50% for the final examination.
- The passing mark in each course is 60% out of the total.

The program grading system follows the requirements at MU which is based on a maximum of **5** as shown in the following.

#### **Grading system at MU**

Letter Grade	Numerical	Point Average
A+	95-100	5.0
A	90-less than 95	4.75
B+	85-less than 90	4.5
B	80-less than 85	4.0
C+	75-less than 80	3.5
C	70-less than 75	3.0
D+	65-less than 70	2.5
D	60-less than 65	2.0
F	Below 60	1.0

The student Grade Point Average (GPA) is determined by dividing the credit hours weighted cumulative point average value of all courses attempted by the number of credit hours in the student semester schedule. The cumulative grade point value is translated into performance standing as shown in the following table:

#### **Cumulative Grade Point Average**

Grade Range	Standing
4.50 upwards	Excellent
3.75- 4.50	Very Good
2.75- 3.75	Good
2.00- 2.75	Pass
Less than 2.00	Fail

#### **Scholastic Probation:**

All students at MU University are required to maintain a grade point average of at least 2.0 out of 5.0. Those who fail to maintain this average are placed on scholastic probation and are given two semesters in which they must attain a GPA of 2.0. If this condition is not met within the two semesters of probation, the student may then be dismissed from his studies at the College of Applied Medical Sciences. One last opportunity of a third semester to raise the average can be given, after review of the academic record by the academic supervisor and approval of college council, to those who can attain the 2.0 GPA if they study 12 credit hours and score B average in all (48 points).

c. Program completion or graduation requirements.

To obtain the Bachelor degree in Information Technology, the student must successfully complete 136 credit hours.

## **E. Regulations for Student Assessment and Verification of Standards**

What processes will be used for verifying standards of achievement :

(eg check marking of sample of tests or assignments? Independent assessment by faculty from another institution) (Processes may vary for different courses or domains of learning.)

-The marks of the exams are checked by a second teacher.

-The exam learning outcomes are assessed by the course teacher and then reviewed by a second teacher.

-The achievement of the learning outcomes is verified through the feedbacks received from the graduate students and the employers (interviews and surveys).

## **F Student Administration and Support**

### **1. Student Academic Counselling**

Describe the arrangements for academic counselling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

The academic advisor is responsible for monitoring and guiding the student progress throughout his academic education. The students meet their academic advisor during the office hours to address student issues.

The process of advising the students starts with an orientation program specifically designed to inform the new students of the various programs at the college. Lectures are presented by faculty members from each program. The college has a system for student advising which includes a college committee for advising, where each program is represented by a faculty member. Moreover, a system for advising is in place for the IT program students through the student academic counselling committee. Each beginning of semester, the IT program holds a meeting with students where the students and faculty exchange views and opinions regarding curriculum, extra-curriculum and career matters. Each student in IT program is assigned to an academic advisor, who assists him in getting familiar with the available services, understanding the university and the program policies, explaining the curriculum, and resolving problems or issues they might face. The academic advisor is also responsible for monitoring and guiding the student progress throughout his academic education. The main student counselling and advice are given during the office hours. Some individual practices might use e-mails or other electronic communications.

Recently the advising process has been supplemented with an online monitoring system of the student records and schedule. This system also allows the faculty advisor and department head to check on the students record and academic activities via the EduGate Web System.

### **2. Student Appeals:**

*Attach the regulations for student appeals on academic matters, including processes for consideration of those appeals.*

Discipline Regulations' document that includes policies and procedures dealing with student appeals are provided in the web site of the university <https://www.mu.edu.sa/sites/default/files/MU04.%20Discipline%20Regulations%20.pdf>. In the beginning of the year, this document is distributed to the students.

In conformity with that, the student advisor examines the students' complaints, guides the student to find the appropriate solutions, and submit the student concerns to the program supervisor.

## **G. Learning Resources, Facilities and Equipment**

**1a.** What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

The course specifications were written so that all references and textbooks are up to date. However, faculty members review their course at the end of each semester. Their updates, if needed, should include any suggestions to change

references and textbooks. Any suggested updates will be mentioned in the course report and discussed and reported in a department meeting. The department requests to procure the textbooks list approved by the department and the college councils. The university deanship of library affairs is then responsible for providing the college library by the list of the requested textbooks. The textbooks and references are made available by the book shop and the college library, while electronic and web based resources are provided via the subscription in the electronic Saudi Digital Library (SDL library) (<https://sdl.edu.sa/SDLPortal/en/publishers.aspx>).

**1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.**

Faculty and teaching staff follow the institutional process for planning and acquisition of any resources needed for library, laboratories, and classrooms. This procedure generally starts by submitting the requests in appropriate forms to the department council, which has to approve or not the required resources.

**2. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?**

The textbook and references are defined in the course specifications. Afterwards, the faculty member or the course coordinator may request the update of the needed textbooks or materials by the course, in response to the program review process. The evaluation of the adequacy of textbooks, reference and other resources is done by faculty and teaching staff at the end of each semester. They write their recommendations in the course report form based on the feedback from students (surveys dealing with adequacy of resources and services), the evaluation of the course learning outcomes and also the new trends emerging in the field of study.

**3. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?**

The students have the opportunity to evaluate the adequacy of the textbooks, reference and other resource via the group discussion in the class sessions and the surveys dealing with adequacy of resources and services.

**4. What processes are followed for textbook acquisition and approval?**

The requirement of textbooks is identified by the course coordinator and the teaching staff for the course. The course coordinator has to submit a justifications report for the chosen textbook. The department requests to procure the textbooks list approved by the department and the college councils. The university deanship of library affairs is then responsible for providing the college library by the list of the requested textbooks.

## **H. Faculty and other Teaching Staff**

### **1. Appointments**

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

Majmaah University has clear formal recruitment processes defined in the regulation of employment form. These processes deal with the employment of Saudi and non-Saudi academic staff. On the University Website the detailed processes of recruitment are announced (Deanship of Faculty Members and Staff Affairs). At the departmental level, the Alumni affairs and employment committee discusses every documents and recommendations of candidate. This then has to be approved by the department council, then by the College Board, and then by the Committee of Teaching Assistants and Lecturers headed by the Vice Rector for Graduate Studies and Research. The final decision is for the Scientific Council.

Positions are publicly advertised at local newspapers and the University website. Some professional recruitment services have also been used. The advertisements include job title and means to apply. Detailed description of the job, selection criteria, indicators of performance, and processes of performance evaluations are not consistently included in

the advertisements. However, they can be looked up in the regulations of the Ministry of Higher Education or the regulations of the Ministry of civil service on the University website. The University is strict about verifying the standing and reputation of the institutions from which degrees were obtained. The process undoubtedly includes considering if the institution is recognized by the Ministry of Higher Education.

Careful attention is given to appoint qualified and skilled faculty staff. Final decisions for professorial-level appointments are made by the Scientific Council. All other appointments are confirmed by the Committee for Teaching Assistants and Lecturers. There are a number of specialized units and programs to recruit internationally renowned scholars and researchers. A process of qualifications and reference checking is in place. For the last three years, orientation and induction has been provided at the University level to new faculty members at the beginning of each academic year by the Deanship of Development. Colleges provide additional orientation to new faculty members.

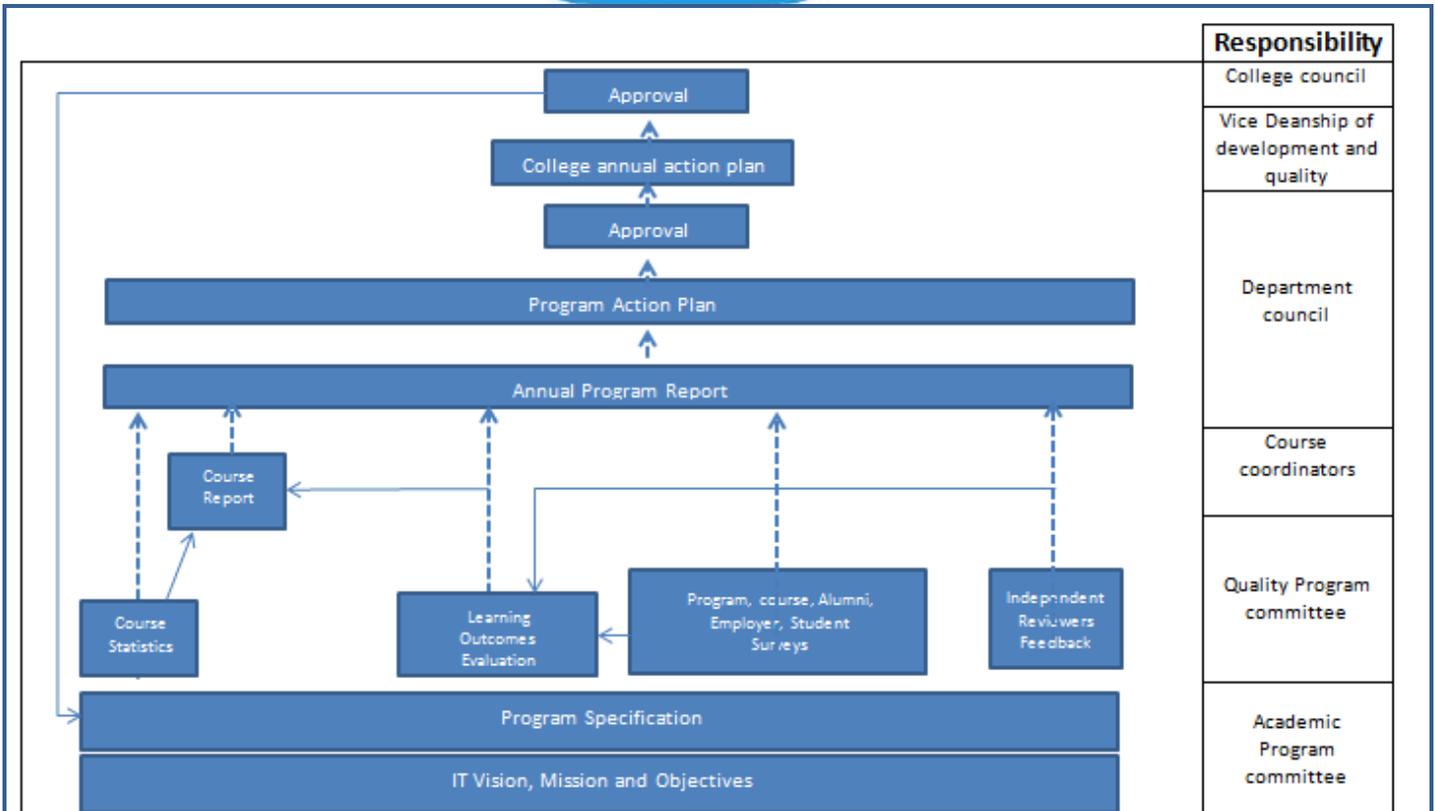
## **2. Participation in Program Planning, Monitoring and Review**

### **a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.**

- The students are provided by the details of the course specification (learning outcomes, assessment tools, textbooks, etc.) at the beginning of the semester.
- At the end of each semester, the learning outcomes are assessed directly via the exams and the different course assignments and indirectly via various surveys which are conducted to take the opinion of the students, the graduates and the employers.
- Based on the learning outcomes evaluation, the course instructor send recommendations in the course report regarding revision of the course learning outcomes, revision of the assessment tools, modification of course content, requirements for special tools/equipment for implementing the course objectives or any other difficulty raised during that semester.
- The course reports are then reviewed by the program council.
- Annually, the KPIs of the program are evaluated to measure the achievement of the program objectives.
- Based on all gathered recommendations the annual report and the action plan are written, approved by the program council and sent to the vice-deanship of development and quality, and the college council for possible approval.
- The program specification can be updated based on the recommendations raised in the review process.

If required, an internal/external independent evaluation is constituted for the program evaluation.

The following flowchart describes the process of monitoring the program quality:



**b. Explain the process of the Advisory Committee (if applicable)**

N.A

### 3. Professional; Development

**What arrangements are made for professional development of faculty and teaching staff for:**

**a. Improvement of skills in teaching and student assessment?**

All College staff is encouraged to regularly attend training and professional development workshops held within the MU. MU provides a wide range of opportunities for professional development to all its faculty members. Program faculty members are actively participating in various workshops and training courses that fit their teaching (teaching and assessment strategies) quality, and research skills.

The Deanship of quality & Skills Development hosts a series of skills development workshops and training courses offered by renowned speakers.

The university has a policy to reward its staff on their educational, research and administrative performance. Such rewards are generally achieved under an announcement in the University website about the staff performances.

**b. Other professional development including knowledge of research and developments in their field of teaching specialty?**

All the faculty members are encouraged to attend national and international conferences, symposia and

workshops. Faculty members are given financial support for transportation, conference/workshop registration fees and living allowance for the event duration.

#### 4. Preparation of New Faculty and Teaching Staff

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

Every year, at the beginning of the first semester, the college arranges orientation and induction program for the new full time faculties. The program agenda divided into two main tracks; the first one focused on the educational issues which includes orientations and workshops about :

- The preparation of course specification
- The preparation of course report
- The preparation of course portfolio
- The assessment methods of CLOs
- The academic advising
- The teaching strategies

The second one focused on the administrative issues which includes orientations and workshops about:

- The university's and college internal regulations
- The correspondence tracking systems
- The distance learning system (D2L)
- The committee and council systems

#### 5. Part Time and Visiting Faculty and Teaching Staff

Provide a summary of Program/Department/College/institution policy on appointment of part time and visiting teaching staff.

*(ie. Approvals required, selection process, proportion to total teaching staff, etc.)*

In case of unavailability of a specialist in the program, the department sends the recommendations of a part-time or a visitor teaching staff to the concerned vice-deanship which communicates with other Department/College to hire an expert teacher.

### I. Program Evaluation and Improvement Processes

#### 1. Effectiveness of Teaching

a. What processes are used to evaluate and improve the strategies for developing learning outcomes in the different domains of learning?

*(eg. assessment of learning achieved, advice on consistency with learning theory for different types of learning, assessment of understanding and skill of teaching staff in using different strategies)*

All the courses of the program have specific learning objectives that are aligned with the program learning outcomes. Course specifications specify the general objectives of the course and the intended learning outcomes. All courses in the Program specify a set of specific learning outcomes, which are assessed by the appropriate assessment tools. Both direct and indirect assessment techniques are utilized to ensure that the desired program

outcomes are achieved. Two assessment methods are carried out for the capstone (Emphasize) courses using a cycle of 4 years:

- Direct assessment is realized through the exams and the different course assignments.
- Indirect assessment:
  - course evaluation survey given to the students
  - program evaluation survey given to the students.
  - alumni survey
  - Employer survey

Besides, an independent (internal/external) assessment of the achievement of the learning outcomes is established.

Based on the assessment results, recommendations for improvement of the course and program learning outcomes are defined.

Besides, faculty members are given workshops on the assessment of the learning outcomes, the teaching strategies and the assessment tools to develop their ability to define, apply and assess the learning outcomes.

b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies?

Based on the students and the graduate interviews and surveys, and the opinion of a colleague that assists some course sessions, the skills of the faculty in using the planned strategies are evaluated.

## 2. Overall Program Evaluation

a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes

**(i) From current students and graduates of the program?**

- Course evaluation surveys given to the students
- Program evaluation surveys given to the students.
- Alumni surveys

**(ii) From independent advisors and/or evaluator(s)?**

- The periodical independent review by the quality of deanship and development skills of MU.
- The consultation of experts in the field of computer science & Information Technology from other computer science departments.

**(iii) From employers and/or other stakeholders.**

Feedback from employers using interviews and surveys

**Attachments:**

1. Copies of regulations and other documents referred to in template preceded by a table of contents.
2. Course specifications for all courses including field experience specification if applicable.

### **Authorized Signatures**

<i>Dean / Program Chair</i>	<i>Name</i>	<i>Title</i>	<i>Signature</i>	<i>Date</i>
<i>Program Dean or Chair of Board of Trustees Main Campus</i>	Adil Humaidan Alshammari	Lecturer		25 \ 06 \ 1437 H
<i>Vice Rector</i>	Ahmad Ali Alrumaih	Associate Professor		



جامعة المجمعة  
Majmaah University

# Program Specifications (PS)

Muharram 1437 H



This form compatible with NCAAA Edition

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