Program Specification

(Bachelor)

Program:	**Information Technology**
Program Code (as per Saudi university ranking):	**IT**
Qualification Level:	**Bachelor**
Department:	**Computer Science & Information**
College:	**Science**
Institution:	**Majmaah University**
Program Specification:	New ☒ updated* ☐
Last Review Date:	**20-Oct.-2025**

*Attach the previous version of the Program Specification.

Table of Contents

A. Program Identification and General Information

1. Program's Main Location:

College of Science, Majmaah University, AZzulfi-11932

2. Branches Offering the Program (if any):

Department of Computer Science & Information, College of Science, Majmaah University.

3. Partnerships with other parties (if any) and the nature of each:

None

4. Professions/jobs for which students are qualified

- **Cyber Security Project Manager**
- **Cybersecurity Analyst**
- **Cybersecurity Consultant**
- **Security Architect**
- **Threat Analyst**
- **Security Specialist**
- **Incident Responder**
- **Security Administrator**
- **Vulnerability Assessor**
- **Chief Information Security Officer**
- **Security Auditor**
- **Penetration Tester**
- **Cloud Developer**
- **Cloud Security Engineer**
- **Front-End & Back-End Developer**
- **System Administrator**
- **Development Operations Engineer**
- **Solutions Architect**

5. Relevant occupational/ Professional sectors:

- Cybersecurity sector
- Banking sector
- Education
- Aerospace and defence
- Agricultural
- Financial services
- Healthcare
- Manufacturing
- Public and third sectors
- Retail

- Telecommunications

6. Major Tracks/Pathways (if any):

Major track/pathway	Credit hours (For each track)	Professions/jobs (For each track)
1. Cybersecurity	18	- Cyber Security Project Manager - Cybersecurity Analyst - Cybersecurity Consultant - Security Architect - Threat Analyst - Security Specialist - Incident Responder - Security Administrator - Vulnerability Assessor - Chief Information Security Officer - Security Auditor - Penetration Tester
2. Cloud Computing	18	- Cloud Developer - Cloud Security Engineer - Front-End & Back-End Developer - System Administrator - Development Operations Engineer Solutions Architect
3. Cybersecurity	18	- Cyber Security Project Manager - Cybersecurity Analyst - Cybersecurity Consultant - Security Architect

		- Threat Analyst - Security Specialist - Incident Responder - Security Administrator - Vulnerability Assessor - Chief Information Security Officer - Security Auditor - Penetration Tester

7. Exit Points/Awarded Degree (if any):	
exit points/awarded degree	**Credit hours**
1. Diploma in Computer and Information Technology	64
8. Total credit hours: 134 credit hours.	

B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

Preparing qualified graduates with high skills and sufficient knowledge to join the IT labor market locally and globally with qualitative, and knowledge of research methods that contribute to community and sustainable development.

2. Program Objectives:

The program Objectives are to produce graduates who can:

PEO1: Practice as computing professionals in areas of IT with an appropriate combination oftheoretical knowledge and hands-on skills.

PEO2: Enhance their skills and master new computing technologies through self-directed professional development or post-graduate education.

PEO3: Demonstrate efficient IT capabilities, and search for information and engage in life-long self-learning.

PEO4: Follow a career path toward leading positions in the IT field.

3. Program Learning Outcomes*

Knowledge and Understanding	
K1	Understand and identify mathematics and science principles of computing problem appropriate to its solution.
K2	Describe the fundamental principles in all core areas of information technology (programming languages, software development methodology, networks, cryptography, emerging technologies and cloud computing).
K3	Gain significant application of software design systems to construct and demonstrate intermediate mastery of their applications.
Skills	
S1	Use abstraction, modeling, and mathematical concepts, methods, and techniques to analyze computing-based problems.
S2	Analyze a complex computing problem, apply principles of computing, and other relevant disciplines to identify solutions.
S3	Use Information Technology (IT) principles, architecture models, user experience theories, and their applications at basic and advanced levels.
S4	Explain cybersecurity foundations, principles, concepts, theories, procedures, operations, policies, and technologies at basic and advanced levels.
S5	Design and implement cloud applications.
Values, Autonomy, and Responsibility	
V1	Communicate effectively with a range of audiences as a member or a leader of a team.
V2	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

* Add a table for each track or exit Point (if any)

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	6	12	9.0
	Elective	-	0	0.0
College Requirements	Required	18	53	39.6
	Elective	-	0	0.0
Program Requirements	Required	18	45	33.6
	Elective	6	18	13.4
Capstone Course/Project		1	5	3.7
Field Training/ Internship		1	1	0.7
Residency year				
Others				
Total			134	100%

* Add a separate table for each track (if any).

2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	EN- 111	English 1 (لغة إنجليزية 1)	**Required**		5 (3,4,0)	**College**
	IT-112	Computer Fundamentals (أساسيات الحاسب)	**Required**		3 (3,1,0)	**College**
	MH-113	Calculus1 (حساب التفاضل والتكامل 1)	**Required**		3 (3,0,1)	**College**
	PHY-123	Physics 1 (فيزياء 1)	**Required**		3 (2,2,0)	**College**
	SALM	Elective Islamic Culture (1) (مقرر إختياري حضارة إسلامية 1)	**Elective**		2 (2,0,0)	**Institution**
	----	Elective General Course (1) (مقرر إختياري عام 1)	**Elective**		2 (2,0,0)	**Institution**
Level 2	MH-121	Discrete Mathematics (الرياضيات المتقطعة)	**Required**		3 (3,0,1)	**College**
	EN-122	English 2	**Required**	EN 111	3 (2,2,0)	**College**

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
		(لغة إنجليزية 2)				
	CS-131	Programming 1 (برمجة الحاسب 1)	**Required**		4 (3,2,0)	**College**
	MH-132	Calculus 2 (حساب التفاضل والتكامل 2)	**Required**	MH 113	3 (3,0,1)	**College**
	STAT-133	Probability and Statistics (الإحتمالات والإحصاء)	**Required**	MH 113	3 (3,0,1)	**College**
	----	Elective General Course (2) (مقرر إختياري عام 2)	**Elective**		2 (2,0,0)	**Institution**
Level 3	CS-211	Programming 2 (برمجة الحاسب 2)	**Required**	CS 131	4 (3,2,0)	**College**
	EN-212	Technical English 1 (لغة إنجليزية تقنية 1)	**Required**	EN 122	2 (2,0,0)	**College**
	IS-213	Fundamental of Database (أساسيات قواعد البيانات)	**Required**	CS 131	3 (3,0,1)	**College**
	MH-222	Linear Algebra (الجبر الخطي)	**Required**		3 (3,0,1)	**College**
	SALM	Elective Islamic Culture (2) (مقرر إختياري ثقافة إسلامية 2)	**Elective**		2 (2,0,0)	**Institution**
Level 4	EN-221	Technical English 2 (لغة إنجليزية تقنية 2)	**Required**	EN 212	2 (2,0,0)	**College**
	IT-223	Visual Programming (البرمجة المرئية)	**Required**	CS 131	3 (3,0,1)	**Program**
	CS-231	Data Structures (هياكل البيانات)	**Required**	CS 211	3 (3,1,1)	**College**
	IT-232	Selected Topics in Emerging Technologies (موضوعات مختارة بالتقنيات الناشئة)	**Required**		2 (0,4,0)	**Program**
	IS-233	Database Management Systems (نظم إدارة قواعد البيانات)	**Required**	IS 213	3 (3,0,1)	**Program**
	---	Elective General Course (3) (مقرر إختياري عام 3)	**Elective**		2 (2,0,0)	**Institution**
Level 5	CS-311	Operating Systems (أنظمة التشغيل)	**Required**	CS 231	3 (3,0,1)	**College**
	CS-314	Software Engineering (هندسة البرمجيات)	**Required**	CS 211	3 (3,0,1)	**Program**
	IT-313	Multimedia & Web Design (الوسائط المتعددة وتصميم الويب)	**Required**	IS 213	3 (2,2,0)	**Program**
	CS-322	Computer Organization (تنظيم الحاسب)	**Required**	MH 121	3 (3,0,1)	**Program**
	IT-334	Human Computer Interactions (التفاعلية بين الإنسان والحاسب)	**Required**	IT 223	3 (3,0,1)	**Program**
	---	Elective General Course (4) (مقرر إختياري عام 4)	**Elective**		2 (2,0,0)	**Institution**
Level 6	IT-324	Data Transmission &Computer Networks (نراسل البيانات وشبكات الحاسب)	**Required**	CS 231	3 (3,0,1)	**Program**
	CS-331	Seminar (ندوة)	**Required**	70 Credits	1 (1,0,0)	**Program**
	IT-335	Ethics & Professional Practice (الأخلاقيات والممارسات المهنية)	**Required**	70 Credits	2 (2,0,0)	**Program**

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	IS-333	Software Project Management (إدارة مشاريع البرمجيات)	**Required**	70 Credits	3 (3,0,1)	**Program**
	IT-323	Database Lab (معمل قواعد البيانات)	**Required**	IS 213	2 (0,4,0)	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**
Level 7	IT-414	Summer Training (تدريب صيفي)	**Required**	90 Credits	1 (1,0,0)	**Program**
	IT-412	System Integration (تكامل الأنظمة)	**Required**	CS 314	3 (3,0,1)	**Program**
	IS-413	System Analysis & Design (تحليل وتصميم النظم)	**Required**	CS 314	3 (3,0,1)	**Program**
	IT-415	Graduation Project 1 (مشروع التخرج 1)	**Required**	90 Credits	2 (2,0,0)	**Program**
	IT-416	Computer Networks Lab (معمل شبكات الحاسب)	**Required**	IT 324	2 (0,4,0)	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**
Level 8	IT-420	Information Security (أمن المعلومات)	**Required**	IT 324	3 (3,0,1)	**Program**
	IT-495	Cloud Computing Fundamentals (أساسيات الحوسبة السحابية)	**Required**	IT 324	3 (3,0,1)	**Program**
	IT-448	Graduation Project 2 (مشروع التخرج 2)	**Required**	IT 415	3 (3,0,0)	**Program**
	IT-432	Systems Administration andMaintenance (ادارة وصيانة النظم)	**Required**	IT 412	3 (3,0,1)	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**
	IT-	Track Course (مقرر مسار)	**Elective**		3	**Program**

* Include additional levels (for three semesters option or if needed).
** Add a table for the courses of each track (if any)

3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

Course Specification

4. Program learning Outcomes Mapping Matrix:

Align the program learning outcomes with program courses' according to the following desired performance levels *(I = Introduced & P = Practiced & M = Mastered).*

Course code & No.	Program Learning Outcomes									
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility	
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2
English 1 EN- 111	I	I				I				
Computer Fundamentals IT- 112		I			I				I	
Calculus1 MH-113	I			I				I		
Physics 1 PHY-123	I		I	I						
Elective Islamic Culture (1) SALM	I								I	I
Elective General Course (1)										

Course code & No.	Program Learning Outcomes									
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility	
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2
Discrete Mathematics MH-121	I	I		I						
English 2 EN-122	I					I				
Programming 1 CS-131		I			I				I	
Calculus 2 MH-132	M			M	M					
Probability and Statistics STAT-133	M			M	M					
Elective General Course (2) -----										
Programming 2 CS-211		M			M				M	
Technical English 1 EN-212						I				
Fundamental of Database IS-213		I			I		I		I	
Linear Algebra MH-222	P			M	M	M				
Elective Islamic Culture (2) SALM										
Technical English 2 EN-212						P				
Visual Programming IT-223		P				P			P	
Data Structures CS-231		P		M		P				I
Selected Topics in Emerging Technologies IT-232		M						I		M

Course code & No.	Program Learning Outcomes									
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility	
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2
DBMS IS-233		M			M		M		M	
Operating Systems CS-311		M			M		M			M
Software Engineering CS-314		M	I	M	M	I			M	
Multimedia & Web Design IT-313		M	M		M				M	
Computer Organization CS-322	M	P		M	P	M			P	
Human Computer Interactions IT-334		P				P			P	
Data Transmission &Computer Networks IT-324		M		M	M	M				M
Seminar CS-311		M				M			M	M
Ethics & Professional Practice IT-335		M				M				M
Software Project Management IS-333	M				M					M

Course code & No.	Program Learning Outcomes									
	Knowledge and understanding			Skills					Values, Autonomy, and Responsibility	
	K1	K2	K3	S1	S2	S3	S4	S5	V1	V2
Database Lab IT-323			M			M		M		M
Summer Training IT-414			M			M	M	M	M	M
System Integration IT-412		M	M			M	M		M	
System Analysis & Design IS-413	M	P		M	M	P			M	M
Graduation Project 1 IT-415			M	M			M	P	P	M
Computer Networks Lab IT-416			P			M	P			P
Information Security IT-420	M	M		M		M	P		P	
Cloud Computing Fundamentals IT-495		P				P		P		P
Graduation Project 2 IT-448			P		P		P	P	P	P
Systems Administration and Maintenance IT-432					P		P			P
Network Security		M		M			P			P
Applied cryptography	P	P		P		P	P		P	
Software security design	P	P		p		P	P			P

Corporate Cybersecurity	P	P		P		P	P			P
Penetration Testing and Vulnerability Analysis	P	P		P		P	P		P	

* Add a separate table for each track (if any).

5. Teaching and learning strategies applied to achieve program learning outcomes.

Describe teaching and learning strategies and curricular and extra-curricular activities adopted to achieve the Program's learning outcomes in all areas.

In order to meet the increasing demand for graduates in computer and information sciences, we have developed robust and modern curricula; established sophisticated facilities; and hired high qualified and motivated faculty. As part of Majmaah University's strategic plan, CSI department

puts great emphasis on teaching process with balanced emphasis on research. The college's research activities are directed to be nationally recognized for their quality. Quality and excellences in learning have been some of the values that have guided the Program Review Plan. These factors would contribute to an even stronger learning and teaching environment that is more student-centered and more outcomes-based using the National Quality Framework(NQF) and NCAAA as the main blueprints.

Description of process for investigation and preparation of report on this standard.

The preparation of this section of the report involves a number of steps, including:

- A member of the Program NCAAA team was assigned to this standard.
- Regular meetings were carried out with the program chairman and faculty & staff members to collect information about learning and teaching;
- Analysis of data including, surveys, interviews, statistical data sets, reports, and other resources related to the quality of teaching and learning.
- Identification of key performance indicators for learning and teaching;
- Compiling the self-evaluation scales for learning and teaching.
- Writing the final report concerning the learning and teaching standard

6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure the achievement of program learning outcomes in all areas.

The Program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program's cycle and once in other degrees).

NCAAA Category	NCAAA Code	SO Descriptor	Teaching Strategies	Assessment Methods
Knowledge	K1	An ability to understand a problem and identify the computing requirements appropriate to its solution	Classroom Teaching	Class Test, Mid Exam, Final Exam
	K2	Describe the fundamental principles in all core areas of information technology (programming languages, software development methodology, networks , cryptography, emerging technologies and cloud computing).	Classroom Teaching	Class Test, Mid Exam, Final Exam

	K3	Gain significant application of software design systems to construct and demonstrate intermediate mastery of their applications.	Classroom Teaching	Class Test, Mid Exam, Final Exam
Skills	**S1**	Use abstraction, modeling, and mathematical concepts, methods, and techniques to analyze computing-based problems.	Classroom Teaching	Class Test, Mid Exam, Final Exam
	S2	Analyze a complex computing problem, apply principles of computing, and other relevant disciplines to identify solutions.	Mini Project, Lab Exercises	Lab Based Assignments, Mini Project
	S3	Use Information Technology (IT) principles, architecture models, user experience theories, and their applications at basic and advanced levels.	Oral /Written Communication, Seminar	Group Assignments,Mini Project
	S4	Explain cybersecurity foundations, principles, concepts, theories, procedures, operations, policies, and technologies at basic and advanced levels.	Mini Project, Graduation Project, Lab Exercises	Case Study Implementation/ Laboratory /Mini project
	S5	Design and implement cloud applications.	Mini Project, Graduation Project, Lab Exercises	Class Test, Mid Exam, Final Exam Oral or Written Communication, Seminar
Values	**V1**	Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline	Mini Project, Graduation Project, Lab Exercises	Oral or Written Communication ,Seminar
	V2	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles	Classroom Teaching, Graduation Project	Class Test, Mid Exam, Final Exam

(PLO) Assessment process

The assessment of student outcomes is performed every semester through direct and indirect assessments. All student outcomes are considered to be attained when the average score reaches 70 % and above .Direct assessment:

- The assessment is performed on the defined assessment tools for all the courses. The assessment tools are provided in the course portfolio.

Indirect assessment:

- This is mainly used as a supplementary assessment measure and is done through the following surveys:
  - Course surveys
  - Summer internship survey
  - Graduation project survey
  - Exit survey

Figurebelow, illustrates various direct and indirect assessment methods

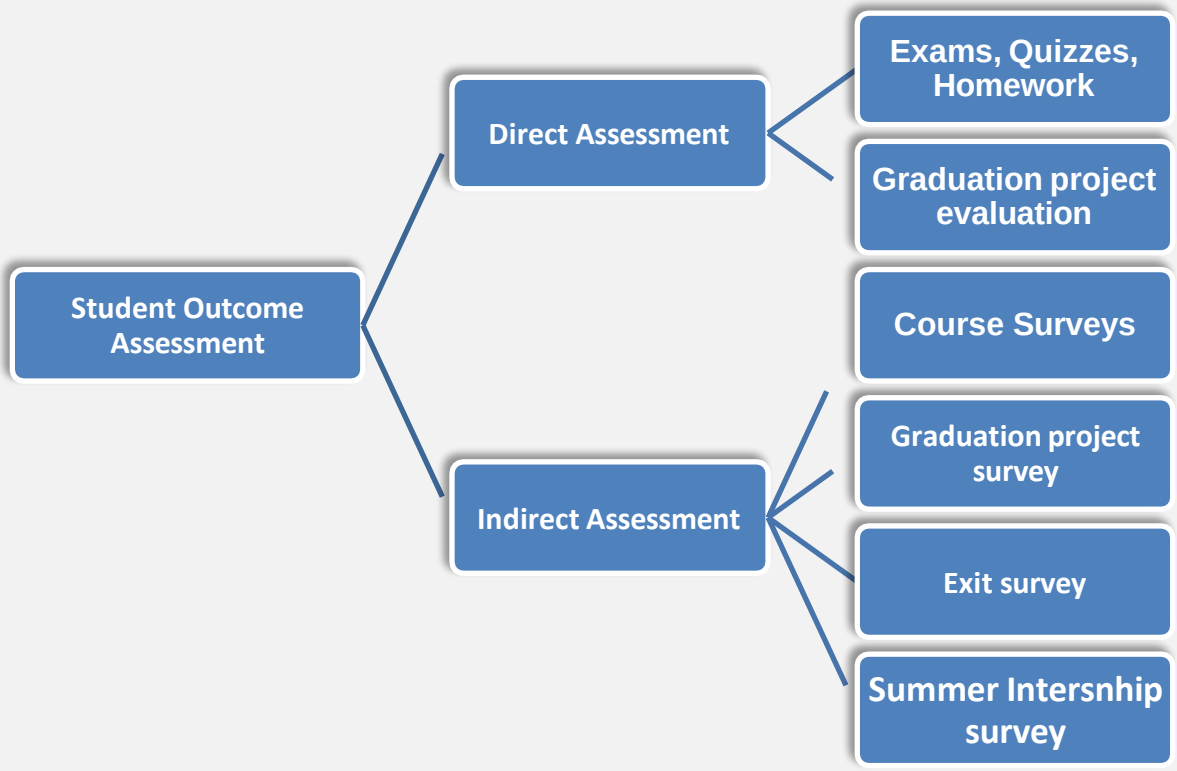

Figure: Student outcomes assessment

assessment of student outcomes.

Table: below, describes the instruments that are used in direct and indirect assessment of student outcomes.

Table: Students outcomes assessment tools – Direct and Indirect

	Assessment Tool	Frequency	Media	How Collected	Source	Collected and evaluated by
Direct Assessment	Mid exam, Class test, Quiz, Assignment, Final Exam	Every Semester	Course Assessment Report	Electronic	Faculty Members	Quality Unit
Indirect Assessment	Course Surveys	Every Semester	Survey	Paper / Electronic	Faculty Members	Faculty Members
	Exit Surveys	Every Semester	Survey	Paper	Faculty Members	Quality Unit
	Graduation Project Surveys	Every Semester	Survey	Paper	Faculty Members	Graduation Project Coordinator
	Summer Internship Surveys	Every year	Survey	Paper	Summer Training and Employability Unit	Summer Training and Employability Unit

Direct Assessment:

In the IT program, each course targets a subset of the student outcomes with a certain percentage. These outcomes are directly assessed in every course using pieces of student work (questions in exam, homework, project, etc.,) Specific questions from the desired assessment tools are designed to assess a targeted outcome in the course. The designated level of performance (70% and above) indicates the achievement of PLOs in the course.

In every course, the faculty member is expected to assess the achievements of the relevant student outcomes in the course. The final assessment is preferably done close to the end of the semester.

The faculty member prepares a direct assessment report and evaluates the student outcome achievement in each course. If the assessment revealed any weaknesses in a specific student outcome, the faculty should identify the cause and propose corrective action plan that can be implemented in the course or in one of the prerequisite courses in order to improve that specific outcome achievement in the future.

The proposed corrective actions are implemented in the following semester and their impact on the specific outcome achievement shall be assessed.

The measurement and evaluation unit aggregate the outcomes achievement in all courses in IT

program and computes the average score. If an outcome achievement appears to be unsatisfactory, the faculty member/department propose corrective action plan at the course level, the curriculum level, or both.

Different courses contribute to a specific outcome achievement at the program level depending on their number of credit hours and the percentage by which they target that specific outcome.

The student outcomes' assessment process is conducted every semester.

Each course instructor provides direct assessment reports and outcome evidences:

- Brief description of the student works used to measure the achievement of student outcomes (assignments, projects, exams, etc.),
- A description of which specific work is meant to assess which outcome.
- Student outcomes achievement.
- Analysis of the student outcomes achievements and identifying strengths and weaknesses.
- Proposals to fix any identified weaknesses to be applied during the following semester.
- Samples of students' work.

- The measurement and evaluation unit reviews the provided material and checks:
  - What extent did the students demonstrate they attained every outcome,
  - Whether the work evidence is appropriate for the assessment and
  - The adequacy of the improvement proposals with regards to the identified improvement area.
- The measurement and evaluation unit then writes a report to the quality unit with their findings. The findings are processed by the quality unit and forwarded to department.
- The measurement and evaluation unit keeps track of the improvement proposals and checks the achieved improvement at the end of the following semester.

Indirect Assessment

The indirect assessment consists of the following processes:

- Course survey
- Summer internship survey
- Graduation project survey
- Exit survey

The surveys are described in the following sections.

Course survey

Faculty are required to conduct course survey to assess the course learning outcomes(CLOs) achievement from the students' point of view.

Faculty members need to analyze the survey data in order to assess the achievement of the CLOs of their courses and consequently the student outcomes. The students' perception should also be discussed in the light of the direct assessment results obtained from students' work. Faculty write an indirect assessment report, where they identify issues and their causes (if any) and suggest corrective actions or improvements to be applied in the following semester. The assessment report is submitted to the measurement and evaluation unit to check adequacy of the proposed actions and follow up their implementation. All courses' surveys and their results are available with the faculty members.

Summer internship survey

After the students finished their summer internship, they are asked to fill in a survey to assess their summer internship experience and outcomes. The measurement and Evaluation unit analyses the survey data, where in which corrective actions may be suggested.

Graduation project survey

After the students present their graduation projects, they are asked to fill in a survey to assess their project experience and outcomes. The graduation project coordinator analyzes the survey data and submits a report to the measurement and evaluation unit, where in which corrective actions may be suggested.

Exit survey

An exit survey is filled in by the graduates at the end of their graduation semester. The exit survey contains questions that directly target every one of the student outcomes. At the end of every semester, the survey data are analyzed by the measurement and evaluation unit and a report identifying weaknesses is produced and submitted to the department.

Based on the students' outcome direct and indirect assessment reports, the assessment will compute the program outcomes achievement at the program level. In addition to keeping track of the identified weaknesses at the course levels, the measurement and evaluation unit will identify weaknesses that may need a global corrective action at the program level. It may propose corrective actions to the accreditation and quality unit and department council. Those actions may relate to the curriculum by changing some courses or adding new ones in order for the IT program to better achieve the student outcomes.

Frequency of Assessment

The assessment frequency is detailed in

Table: below

Table: Assessment frequency

Formative	Every semester
Summative	
Course survey	
Graduation project survey	
Exit survey	
Summer internship survey	Every year

Assessment Process

The assessment and evaluation of PLOs of an individual course during the semester based on data collection is explained in detail.

1. Data Collection

    a) The direct assessment is evidence of student outcome. It is tangible, visible, measurable and tends to be more compelling evidence of exactly what students have and does not learned. The evidence of students' performance to determine what they've learned is available in the course portfolio.
    b) Indirect assessment evidences tend to be composed of proxy signs that students are probably learning. An example of indirect evidence is a survey through which asking students their self-report that what they have learned. This is evidence that students probably are learning what they report to have learned, but it is not as compelling as a faculty member looking at students' work. It is not uncommon in students' self-reports to either inflate or undervalue what they have learned.
    c) Course assessment report is a consolidated evidence by the instructor of each and individual section. It contains the data collected from direct and indirect assessments, which were practiced during semester. The information is gathered using several instruments at regular intervals. For example, an exit survey is a data collection instrument that is used to gather information about the graduating students' opinion to measure the PLOs achievement. These instruments are described in detail at later sections.
2. Data Preparation: The data preparation involves validation and transformation to make it ready for use in evaluation of PLOs. For example, the paper-based survey data is converted

to electronic format. The illegible, incomplete, erroneous or duplicate submissions are discarded whenever necessary.

Evaluation Processes

1. Data Interpretation: Metrics are used to summarize data and its interpretation based on the points of interest. For example, the survey responses are used to calculate weighted averages scored of PLOs.

2. Attainment Evaluation: The attainment of evaluation for all the PLOs are measured in this step. For example, the verification of the PLO achievement from various data sources with reference to the threshold values (EE-Exceeding Expectation, ME-Meeting Expectation, PE-Progressing towards Expectation & DNME-Does Not Meet Expectation) are carried out.

3. Issue Analysis: Wherever the evaluation of targeted PLOs are not achieved, an issue based deeper analysis is conducted. For example, reviewing faculty course assessment reports, discussing with faculty and students to determine underlying issues for poor achievement.

4. Improvement plan: An action plan is developed to remedy the identified issues and recommended implementation over the issue.

D. Student Admission and Support:

1. Student Admission Requirements

In general, students applying to the college are centrally admitted by the deanship of admission and registration to the preparatory year. The University council decides the number of admitted students for each upcoming year according to the recommendation of the college council, whichin turn take recommendations from the department council.

For a student to be admitted to the College of Computer and Information Sciences, the following conditions must be satisfied:

- The student must have obtained a recent Secondary School Certificate (not earlier than five years), or its equivalent.
- The student must be of Saudi nationality. Non-Saudis are treated in accordance with Majmaah University regulations of international students scholarship.
- The student must have good behavior and conduct.
- The student must be physically fit and in a good health for the purpose of study.
- Admission is based on a combination of the student score in the General Certificate of Secondary Education (GCSE), known as THANAWIA, and scores in two standard national exams organized and administered by the “National Center for Assessment in Higher Education” (QIYAS). These two Exams are:
    - General Aptitude Test, known as QUDRAT.
    - Scientific Track Admission Test, known as TAHSEEL.

If all the above conditions are satisfied, admission is granted to the preparatory year. Students

who have an initial acceptance to the college before the preparatory year must maintain a GPA not less than 3.0 / 5 in order to be eligible to continue in the college.

2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the Program that differ from those provided at the institutional level).

- Orientation day is arranged for the newly admitted students in Level 3, to explain the important aspects of the university, college and the department and provide him/her with needed information to understand the program and department objectives.
- Workshops offered by the Different Units.
- Academic Advising - Freshmen students are considered under the academic advisingof the Academic Advising unit until they join a program. Once joined to one of the available programs, the student is assigned to a faculty member of the same programas an advisor.

3. Student Counseling Services

(Academic, professional, psychological, and social)
(Include only the exceptional needs offered to the students of the Program that differ from those provided at the institutional level).

A full faculty member is assigned to each student for the duration of the student's enrollment with the program. Each faculty member is asked to define advising hours and announces them to the students. Freshmen students, however, are considered under the academic advising of the Academic Advising unit until they join a program.Once joined to one of the available programs, the student is assigned to a faculty member of the same program as an advisor.

Role of the Academic Advising Unit
The goal of academic advising unit is to connect faculty members with students through following-up, guidance and observation of students academically. This process can be achieved through:

1. Welcoming the new students in their first day of the academic year, and notifying them of the University and College systems and the environments.
2. Distributing the students according to their specialties all over the college staff.
3. General supervising of Academic advisors and following up what are raised to him from student cases.
4. Resolving the cases that are raised to him from academic advisors or raising them to the academic vice dean or the dean according to the situation.
5. Organizing events and meetings with students at various levels related to academic advising.

Enrollment Advising
The academic advising unit is primarily responsible for advising students prior to the start of each academic year. The unit allocates groups of students to faculty members, which, in turn, is recorded into the university's electronic registration system, EduGate. The student can see his/her advisor's name in the electronic registration system, and the advisor has access to the records of his/her advisees through the EduGate portal.

Academic advisors

Academic advisors are meant to provide educational counseling for students. The academic advisor's primary responsibility is to evaluate the student's study plan to ensure it will satisfy university requirements while it meets each student's specific needs. To be effective, the advisor must recognize that each student has different abilities, interests, aspirations, needs, experiences, and problems so that his/her approach in dealing with students can be different from one to another. Academic advising cannot, therefore, be a mechanical, routine matter. To fulfill this requirement,the general advising duties can be stated as follows:

1. Students are encouraged to meet with their academic advisors regularly during the semester for consultation and guidance. The relation between academic advisors and students can be summarized as follows:
    a. Revising and studying the student academic register, including the courses studiedand his academic plan and its data. This is to ensure that each student comply withthe study plan he/she enrolled in and to avoid delays in graduation
    b. Helping student in choosing the courses among his academic program.
    c. Following up the student continuously, and resolving the problems that mayappear during his study.
    d. Raising statistical reports about the department students to the department chief.
    e. Preparing a complete file for each student advised by him, including his academic schedule, transcript, study plan and attendance during current semester.
2. Academic advisors are requested to conduct group meeting with all students at the beginning of each semester.
3. Advisors should regularly follow up student 4 times during the term to check his/her attendance and academic progress rate during fifth, eighth, eleventh and fourteenth weeks.
4. Students can meet his advisors in other times during the semester to discuss any academic-related issues that may arise and be of concern to the study progress of any student.

After assigning an academic advisor for each student in the program, the student is required to meet his/her academic advisor for the purpose of registration based on his/her study plan, addressing any academic or career issues, and meeting graduation requirements. Each student has his/her own study plan based on the progress in his/her academic study and his/ her choice of the program's tracks. The student is required to maintain an updated study plan each semester to help him/her in choosing appropriate courses for registration in the following semester and to easily follow up the academic progress. The study plan is available for both students and academic advisors .
The student can add/drop courses during the first week of each semester after obtaining the permission from the academic advisor. The student is allowed to registerup to 18 credit hours per semester but not less than 12. Exceptions to this rule can be made after getting the approval of academic advisor and Department Chair.

Career Advising

Career advising is provided to the students through academic advisors, industry/governmental affiliates, experts in the fields, etc. and organized by the

Academic Advising Unit.

4. Special Support

(Low achievers, disabled, gifted, and talented students).

The performance of the student in his/her courses is evaluated by the instructor using course assessment tools such as final exams, midterms, quizzes, homework, projects, reports etc. that fulfill the course/student outcomes. The instructors are invited to submit list of students who suffer difficulties in their classes to academic advisors. This will help the advisors to present assistance to those students in order to improve their performance in the class. In addition, students are encouraged to stop by their instructor's office during the office hours to discuss with them any concerns regarding the course. Special Care of low achievers, disabled, gifted and talented students by Academic Advisor.

E. Faculty and Administrative Staff:

1. Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professor	IT	Cybersecurity		1	0	1
Associate Professor	IT	Cybersecurity & Cloud Computing		6	0	6
Assistant Professor	-	-		6	3	9
Lecturer	-	-		4	4	8
Teaching Assistant						
Technicians and Laboratory Assistant						
Administrative and Supportive Staff						
Others (specify)						

F. Learning Resources, Facilities, and Equipment:

1. Learning Resources

Learning resources required by the Program (textbooks, references, e-learning resources, web-based resources, etc.)

- Under the supervision of the Deanship of Students' Affairs, the university provides aid to the students under the Students Fund Board through several programs; examples are students loans, students employment, and academic text books.
- All library needs (textbooks, e-books, journals, publications, periodicals, databases, etc.) are available through the central library.
- In addition, 10 laptops and 6 iPADs are available in innovation center to access **Saudi Digital Library**(SDL) containing access to several e-text booksand journal papers.
- In addition, the college has provided (286) textbooks serving (29) titles fromour offered courses.
- **Student Information System (EduGate)**-The Deanship of Admission and Registration provides an electronic services portal (EduGate) for students and faculty, through which, students can perform online registration, review their academic progress, view and print transcripts/grades, and monitor their absence rates. While instructors can monitor students under their academic advising, view their academic progress and results, insert marks and absencesfor students in their class, edit self-profiles, view their academic schedules.

Learning Management System – BLACK BOARD-The Deanship of E-Learning and Distance Learning is providing a learning management system BLACK BOARD to manage courses electronically and provide other possible learning opportunities to the students. It provides not only an easy way for course material management, but also a way of communication between faculty, colleagues, and students through virtually any deviceconnected to the Internet, anytime, anywhere.

2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

The College of Science building is spread over three floors in addition to the main lobby, which contains offices for the Dean, Vice-Dean for Educational Affairs, administrative staff (including Dean's and Vice-Dean's secretaries), and other educational and managerial facilities. The Computer Science Department's faculty offices are in the second floor which is shared with the other departments as well; All other infrastructure (including classrooms, labs) are distributed among the rest of the building, which are also accessible to all departments.

Attached to the meeting room in department has enough to hold up to 20 people and equipped with a modern teleconference/presentation facility to conduct national and international meetings and/or interviews.

Offices (administrative, faculty, clerical, and teaching assistants)

The department main facilities reside in the second floor, which comprises the department head's office, department secretary, ten offices (6 faculty, 2 shared offices for lecturers), one shared meeting room equipped with presentation facilities and enough to hold up to nine people, all offices are around 9′×9′ in size, equipped with large working desk area, book shelves, folders cabinet, chairs to conduct students' meetings, desktop (or laptop) computer with regular software installed (Windows, MS Office, etc.), office stationeries (messages keeper, stapler, puncher, pen holder), IP phone, wired and wireless Internet access, and air-conditioned. Most offices are also equipped with desk-size printers, in addition to a large shared networked printer in the same floor. All offices have access to fresh air and daylight. In addition, there are two large shared offices in the female side (33′×16′ and 23′×23′) for TAs (7 and 4 TAs, respectively). Other shared resources are spread over the lobby and fourth floor include: six large displays for important announcements, rest area, general meeting room that can hold up to 90 people, prayer room, recreation area, and cafeteria. All the shared resources are air-conditioned and have access to fresh air and daylight.

Classrooms

There are total twenty-two classrooms (12 for the male side and 10 for the female side) to conduct lectures distributed over the ground, first and second floors shared between all the departments. Classrooms are of various sizes and capacities; they can accommodate students ranging from 30 to 50 students each. All classrooms are equipped with presentation podiums, wired (dedicated to the podiums) and wireless Internet access, single students' chairs (right- and left-handed), and fully air-conditioned. All classrooms have access to fresh air and most of them have daylight access.

Laboratories

Seven laboratories equipped with dual operating systems (Windows and Mac) are being used to conduct tutorials, experiments and/or lectures. Some of these labs are for special courses only while the others are for general programming courses. In addition to two labs available in the female side for certain courses that require lab work.

Currently, the IT program has full access to Image Processing, Robotics, Network, Computer Engineering, Database, and Operating Systems Labs totaling a capacity of (116) seats in addition to instructors' seats.

Library Facilities

The Central Library hosts between its borders all the necessary materials, equipment, and software appropriate to serve the attendees of the library, including (but not limited to) adequate furniture, bookshelves, reading desks, private reading and Internet areas. Online access to the library index is possible through the Koha system.

Services provided by the library:

- Access to SDL (Saudi Digital Library) which constitutes the largest gathering of e-books in the Arab World with more than 114K full text e-books in multiple scientific disciplines, and more than 300 publishers worldwide (Elsevier, Springer, Pearson, Wiley, Taylor & Francis, McGraw-Hill and

contain books of publishers such as world-class academics: Yale University, Oxford University, Harvard University)

- Free inquires capability (keywords, full text, title, author, subject, date of publication)
- Electronic citation service
- Information awareness
- Single access to the digital library
- Interlibrary loans
- Scan and print services for the students for educational purposes
- Access to thirty-one (31) global electronic databases

Automated search service in the electronic catalog for the University Libraries

3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the Program)

- Use and Update Labels and Signs One way of adhering to health and safety procedures, apart from the obvious aspect of providing safe and protective tools and equipment, is to use labels and signs.
- Provide Protective Equipment and Safe Tools.
- Implement Safety Protocols.
- Train The Staff Frequently.

Encourage Open Communication

G. Program Quality Assurance:

1. Program Quality Assurance System

Provide a link to the quality assurance manual.

https://majmaah-my.sharepoint.com/shared?listurl=%2Fpersonal%2Fm%5Fwagieh%5Fmu%5Fedu%5Fsa%2FDocuments&source=waffle

(5.3 Quality Manual_v3.pdf)

2. Procedures to Monitor Quality of Courses Taught by other Departments

- Monitoring by Academic Follow-up Unit of CSI Dept..
- Reviewing faculty member course evaluation for all courses each semester.
- Reviewing student course evaluations for all courses each semester.
- Student feedback.

- Course file evaluation of the faculty members

3. Procedures Used to Ensure the Consistency between Main Campus and Branches (including male and female sections).

- **Vice Dean Academic Affairs**- The College Vice dean for academic affairs essentially focuses on the academic and educational affairs in the college (including male and female sections). Vice dean for academic affairs is responsible for supervising the academic and educational performance in the college.

  Roles in Academic affairs

  - Supervising the academic and educational performance in the college.
  - Supervising student cultural, social and sport activities.
  - Supervising the mission of students' rights in the advising council.
  - Supervising field training.
  - Supervising academic advising.
  - Studying and following up of student affairs.

  • **The Department Chair (HOD)** is appointed by the university rector with the recommendation of dean of the college for two renewable years.

  Head of Department (HOD) is responsible and accountable for setting and advancingthe academic strategy of the Department in line with Faculty and University strategic plans and direction. HOD Chairs the Departmental Council and contribute to the overallleadership and management of the Faculty, also develop and sustain appropriate structures for management, consultation, decision-making and communication with staff and students.

- **Course Conveners** – Appointed by Vice Dean Academic Affairs, Course Convenerwill be senior faculty among all teaching the same course in different section. Course evaluation is a continuous process in which course is evaluated by facultymembers and course conveners after mid exam as well as after final Exam.

4. Assessment Plan for Program Learning Outcomes (PLOs),

A. Student Outcomes

The Information Technology program enables students to attain, by the time of graduation Mapping table;

The mapping between courses and student outcomes, shows that all outcomes are supported by at least two courses each.

(PLO Assessment Attached-

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The curriculum covers the following main subject areas of information technology, below shows courses that cover significant portion of these areas.

Area	Courses (Dept., Number, and Title)
Programming	CS, CS131, Programming (1) CS, CS211, Programming (2) CS, CS231, Data Structures
Human computer interaction	IT, IT334, Human Computer Interactions
Information management	IT, IT444, Global Information Management
Networking	IT, IT321, Data Transmission and Computer Network IT, IT423, Computer Networks Lab
Web systems and technologies	IT, IT452, Web Development Using Content Management Systems IT, IT455, Advanced Web Applications Development
Selection, creation, evaluation, and administration of computer-based systems	IT, IT 421, Information Administration and Storage Technology IT, IT424, Global Information Management IT, IT 425, Enterprise Architecture and Systems Design
Integrate IT-based solutions into the user environment	IT, IT412, Systems Integration IT, IT 445, Enterprise Architecture and Systems Design IS 233, Database Management Systems
Understanding of best practices and standards	IT, IT112, Computer Fundamentals IT, IT313, Multimedia and Web Design
Creation of an effective project plan	IT, IT421, Graduation Project (1) IT, IT431, Graduation Project (2)

Table - Curriculum covers the following main subject areas of information technology

5. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Facility	Students	Survey	Mid of semester and End of Semester
Leadership	Students	Survey	End of Semester

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Effectiveness of Teaching	Students	Exams and Survey	Beginning of semesters, Mid of semester and End of Semester
Assessment (Direct)	Students	Exams	Beginning of semesters, Mid of semester and End of Semester
Assessment (In Direct)	Students	Survey	Mid of semester and End of Semester

Evaluation Areas/Aspects: e.g., leadership, effectiveness of teaching & assessment, learning resources, services, partnerships, etc.
Evaluation Sources: students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, etc.
Evaluation Methods: e.g., Surveys, interviews, visits, etc.
Evaluation Time: e.g., beginning of semesters, end of the academic year, etc.

6. Program KPIs*

The period to achieve the target (__4__) year(s).

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
1	KPI-P-01	Percentage of achieved indicators of the program operational plan objectives	70%	Percentage of performance indicators of the operational plan objectives of the program that achieved the targeted annual level to the total number of indicators targeted for these objectives in the same year.	W16/S
2	KPI-P-02	Students' Evaluation of quality of learning experience in the program	4/5	Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey	W15/S
3	KPI-P-03	Students' evaluation of the quality of the courses	4/5	Average students overall rating for the quality of courses on a five-point scale in an annual survey.	W16/F-S
4	KPI-P-04	Completion rate	95%	Proportion of undergraduate students who completed the program in minimum time in each cohort.	W16/F-S
5	KPI-P-05	First-year students retention rate	100%	Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year.	W16/F-S
6	KPI-P-06	Students' performance in the professional and/or	100%	Percentage of students or graduates who were successful in the professional and / or national	W16/S

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
		national examinations		examinations, or their score average and median (if any).	
7	KPI-P-07	Graduates' employability and enrolment in postgraduate programs	50%	Percentage of graduates from the program who within a year of graduation were: a. employed b. enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year	W16/S
8	KPI-P-08	Average number of students in the class	25	Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session)	W8/S
9	KPI-P-09	Employers' evaluation of the program graduates proficiency	4/5	Average of overall rating of employers for the proficiency of the program graduates on a five point scale in an annual survey.	W15/S
10	KPI-P-10	Students' satisfaction with the offered services	3/5	Average of students' satisfaction rate with the various services offered by the program (restaurants, transportation, sports facilities, academic advising, ...) on a five-point scale in an annual survey.	W16/S
11	KPI-P-11	Ratio of students to teaching staff	1:15	Ratio of the total number of students to the total number of full-time and full-time equivalent teaching staff in the program	W16/S
12	KPI-P-12	Percentage of teaching staff distribution based on: a. Gender b. Branches c. Academic Ranking Professor Associate Professor Assistant Professor Lecturer TA	 50% 50% 10% 20% 40% 20% 10%	Percentage of teaching staff distribution based on: a. Gender b. Branches c. Academic Ranking	W16/S
13	KPI-P-13	Proportion of teaching staff leaving the program	0%	Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff.	W16/S
14	KPI-P-14	Percentage of publications of faculty members	90%	Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program.	W16/S
15	KPI-P-15	Rate of published research per faculty member	2	The average number of refereed and/or published research per each faculty member during the year (total number of refereed	W16/S

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
				and/or published research to the total number of fulltime or equivalent faculty members during the year).	
16	KPI-P-16	Citations rate in refereed journals per faculty member	4	The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published).	W16/S
17	KPI-P-17	Satisfaction of beneficiaries with the learning resources	5	Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases… etc.) on a five point scale in an annual survey.	W16/S

*including KPIs required by NCAAA

H. Specification Approval Data:

Council / Committee	Department Meeting
Reference No.	5
Date	30-03-1447] - [22-09-2025] - الاثنين