ASIIN Seal & Euro-Inf®-Label

Accreditation Report

Bachelor's Degree Programme
Computer Science
Information Technology

Provided by
Majmaah University

Version: 25 September 2026

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
علوم الحاسب	Computer Science	ASIIN, Euro-Inf® Label		04
تقنية المعلومات	Information Technology	ASIIN, Euro-Inf® Label		04
Date of the contract: 10.09.2025 **Submission of the final version of the self-assessment report:** 25.10.2025 **Date of the audit:** 12.-13.05.2026 **online meeting**				
Expert panel: Prof. Dr. Gregor Engels, Bielefeld University Prof. Dr. Dieter Baums, Technical University of Central Hesse Prof. Dr. Walter Hower, Albstadt-Sigmaringen University Taher Al Kalbani, General Secretariat of the Council of Ministers of Oman Reem Al-Saigh, student at University of Mosul				
Representative of the ASIIN headquarter: Johann Jakob Winter				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				
Criteria used: Euro-Inf Framework Standards and Accreditation Criteria as of October 24, 2016				

[1] ASIIN Seal for degree programmes; Euro-Inf®: Label European Label for Informatics
[2] TC: Technical Committee for the following subject areas: TC 04 – Informatics/Computer Science

ASIIN General Criteria for the Accreditation of Degree Programmes as of March 28, 2023 Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science as of March 29, 2018	

B Accreditation Status

Result Overview

The most recent decision for the ASIIN Seal was made by the ASIIN Accreditation Commission on 25.09.2026.

Degree Programmes	ASIIN Seal	Validity	Euro-Inf® Label	Validity
Ba Computer Science	Accredited with requirements	25.09.2026 - 16.10.2027	Accredited with requirements	25.09.2026 - 16.10.2027
Ba Information Technology	Accredited with requirements	25.09.2026 - 16.10.2027	Accredited with requirements	25.09.2026 - 16.10.2027

Fulfilment of the Accreditation Criteria

ASIIN General Criteria / Subject-Specific Criteria	Ba Computer Science	Ba Information Technology
1 Degree programme: Concept, Content & Implementation		
1.1 Objectives and learning outcomes (intended qualification profile)	**Not fulfilled** Requirement A 1	**Not fulfilled** Requirement A 1
1.2 Title of the degree programme	Fulfilled	Fulfilled
1.3 Curriculum	Fulfilled	Fulfilled
1.4 Admission requirements	Fulfilled	Fulfilled
1.5 Workload and credits	**Not fulfilled** Requirement A 2	**Not fulfilled** Requirement A 2
1.6 Didactics and teaching methodology	**Not fulfilled** Requirement A 3	**Not fulfilled** Requirement A 3

ASIIN General Criteria / Subject-Specific Criteria	Ba Computer Science	Ba Information Technology
2 Exams: System, Concept and Organisation		
2 Exams: System, Concept and Organisation	**Not fulfilled** Requirement A 4	**Not fulfilled** Requirement A 4
3 Resources		
3.1 Staff and staff development	**Not fulfilled** Requirement A 3	**Not fulfilled** Requirement A 3
3.2 Student support and student services	Fulfilled	Fulfilled
3.3 Funds and equipment	Fulfilled	Fulfilled
4 Transparency and Documentation		
4.1 Module descriptions	**Not fulfilled** Requirement A 5	**Not fulfilled** Requirement A 5
4.2 Diploma and Diploma Supplement	**Not fulfilled** Requirements A 6, A 7	**Not fulfilled** Requirements A 6, A 7
4.3 Relevant rules	**Not fulfilled** Requirement A 1	**Not fulfilled** Requirement A 1
5 Quality Management: Quality Assessment and Development		
5 Quality Management: Quality Assessment and Development	**Not fulfilled** Requirement A 8	**Not fulfilled** Requirement A 8

Requirements

For both programmes

A 1. (ASIIN 1.1, 4.3) Harmonise the PLOs across all official documents and websites.

A 2. (ASIIN 1.5) Verify the time students' need for self-studies in each module and adjust the awarded ECTS points if necessary.

A 3. (ASIIN 1.6, 3.1) Ensure the equal implementation of teaching in terms of methodology and staff qualification in both sections.

A 4. (ASIIN 2) Raise the scientific level of the final projects to the standard of a Bachelor´s thesis.

A 5. (ASIIN 4.1) Provide module descriptions for all modules, including the graduation projects, internships, and university-level modules.

A 6. (ASIIN 4.2) Ensure that the final documentation outlines the title of the Bachelor´s thesis/ graduation project.

A 7. (ASIIN 4.2) Ensure that the Diploma Supplement lists the PLOs and provides statistical data on the distribution of final grades, as set out in the ECTS Users' Guide.

A 8. (ASIIN 5) Ensure that students are informed about the evaluation results.

Accreditation History

The programmes have not been previously accredited by ASIIN.

C Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Computer Science	B.Sc.	Information and Communication Technologies	6	Full time	-/-	8 Semester	139 credits (equivalent to 209 ECTS)	August 2021
Information Technology	B.Sc.	Information and Communication Technologies	6	Full time	-/-	8 Semester	134 credits (equivalent to 201 ECTS)	August 2021

Contextualisation

Majmaah University

The official website of Majmaah University states that this institution, founded in 1430 according to the Arabic calendar, corresponding to 2009 in the Gregorian calendar, helps meet the needs of the growing number of high school graduates, promotes social stability within the region, and eases the burden on universities located in larger cities. The university continues to expand through the establishment of additional faculties.

The general student handbook presented by this institution further indicates that Majmaah University offers study programs in a wide range of academic fields, including General Sciences, Medicine and Medical Sciences, Engineering, Computer Science, Law, Business and Accounting, as well as Education and Humanities. The university operates several campuses located in Majmaah City, Al-Zulfi, Hawtat-Sudair, Al-Ghat, and Romaah.

College of Science (Al-Zulfi)

The College of Science within Majmaah University, as described in the student handbook for both study programmes, combines theoretical education with practical application in basic sciences. It offers suitable research facilities, modern laboratory infrastructure and student development initiatives, as well as the alignment of the academic programmes

[3] EQF = The European Qualifications Framework for lifelong learning

with labour market demands. The handbook further explains: “The Department of Computer and Information Sciences offers two undergraduate academic programs; each designed with a specialized track to meet current technological and labour market demands: Bachelor Program in Computer Science – Artificial Intelligence Track, Bachelor Program in Information Technology – Cyber Security Track.”

General assessment

Overall, the experts are satisfied with the quality of the programmes which produce highly qualified and demanded graduates for the national labour market, as both disciplines are currently in the focus of the national digitalisation agenda of the Vision 2030. Positive highlights are the up-to-date programme focuses, the infrastructure and lab equipment of the campus, the student support system, as well as the strong culture of review and quality assurance processes. On the other hand, shortcomings are identified regarding the workload verification, the scientific level of the final projects, the harmonisation of teaching in the male and female section due to staff shortages, and multiple aspects of transparency and documentation. Further room for improvement is, among others, an increase of student mobility, a better inclusion of research as teaching content and methodology, as well as the opening of the two remaining specialisation tracks.

Programme profiles

Bachelor’s degree programme in Computer Science

In the official website of Majmaah University is provided a general overview of this programme which was established in 2021, including objectives, admission requirements, programme details, and potential employment opportunities for graduates.

The website further states that: “Students study the college’s core requirements, which include mathematics, science, and programming. These requirements provide students with a solid foundation in computer science and analytical skills, as well as a solid grasp of the fundamentals of computer science and basic technical information. Students gain a comprehensive understanding of computer science and computer engineering, as well as training in various fields, including programming languages, computer graphics, algorithm design and analysis, artificial intelligence, software engineering, human-computer interactions, network security, and database management systems.” In the final phase of studies, students follow the currently implemented specialization in Artificial Intelligence.

Bachelor’s degree programme in Information Technology

The structure, objectives, admission requirements, and other relevant details of the programme, which was established in 2021, are presented in the university’s official website.

As described on the website: “Students study a set of core courses that focus on developing skills such as English, computer fundamentals, probability, statistics, and physics. Students also take programming courses. Through the Information Technology major, students study core courses that provide students with a comprehensive understanding of information technology, such as systems integration, multimedia and human-computer interaction, visual programming, and information security.” In the advanced stages of study, students follow the currently implemented specialization in Cybersecurity.

D Expert Report for the ASIIN Seal[4]

1. The Degree Programme: Concept, Content & Implementation

Criterion 1.1 Objectives and Learning Outcomes of a Degree Programme (Intended Qualifications Profile)

Evidence:

- Self-Assessment Report
- Programme specifications of both programmes
- Measurement of learning outcomes reports for both programmes
- Objective-Module Matrices for both programmes
- Module descriptions of both programmes
- Exemplary Diploma Supplements of both programmes
- Websites of both programmes
    - BaCS: https://qlt.mu.edu.sa/MUQLT/#/ProgramSpecificationByCode/CS
    - BaIT: https://qlt.mu.edu.sa/MUQLT/#/ProgramSpecificationByCode/IT
- Discussions during the audit

Preliminary assessment and analysis of the experts:

As a basis for assessing the learning outcomes of the Bachelor's degree programmes in Computer Science (BaCS) and Information Technology (BaIT), the experts refer to the ASIIN general criteria and the Subject-Specific Criteria (SSC) of Technical Committee 04 – Informatics/Computer Science.

The university explains in the Self-Assessment Report that the objectives and programme learning outcomes (PLOs) of the two programmes are embedded within the university´s catalogue of graduate characteristics and are aligned with the national qualifications framework of Saudi Arabia as well as the country´s digital transformation agenda of the Vision 2030. The PLOs are classified by the domains of knowledge, skills and values. On the module level, they are further distinguished into specific learning outcomes which are

[4] This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

linked to the overarching PLOs via objective-module matrices. Furthermore, these matrices show the alignment of the programmes´ PLOs and modules with the relevant Subject-Specific Criteria. The objectives and programme learning outcomes of both programmes, as presented on the programmes´ websites and measurement of learning outcomes reports, are contained in the appendix.

The objectives of the BaCS programme focus primarily on preparing graduates for professional activities in computer science and related technological fields, while also promoting professional development, teamwork, communication skills and ethical responsibility. The BaIT programme is presented as a combination of theoretical and practical competencies in information technology with orientation towards the labour market, leadership development, research support, and strengthening practical and technological learning environments.

The BaCS programme aims to provide students with in-depth knowledge in computer science and computer engineering. In this programme, they are trained in areas such as programming languages, computer graphics, algorithm design and analysis, artificial intelligence, software engineering, human-computer interaction, network security, and database management systems.

In the final stages of the programme, students follow the Artificial Intelligence track, which includes advanced courses such as computer vision, intelligent agents, machine learning, natural language processing, robotics, artificial neural networks, and selected topics in artificial intelligence. A second specialisation track in Data Science has been developed but not yet been implemented.

Graduates of the Computer Science programme are prepared for professional roles in fields related to artificial intelligence, machine learning, robotics, software development, and other digital technologies.

The BaIT programme aims to provide students with essential knowledge in areas such as system integration, multimedia and human-computer interaction, visual programming, and information security. In the advanced stage of studies, students pursue a specialisation in cybersecurity, which includes courses such as applied cryptography, network security, enterprise cybersecurity, security governance, penetration testing, and vulnerability analysis. In this programme, a second specialisation option is planned as well, but the Cloud Computing track has not yet been implemented.

The students who graduate from this programme pursue careers related to cybersecurity, digital infrastructure, and information security management, including positions such as cybersecurity analyst, SOC analyst, and cybersecurity specialist.

The experts refer to the Subject-Specific Criteria (SSC) of the Technical Committee 04 – Informatics/Computer Science as a basis for judging whether the intended learning outcomes of both Bachelor's degree programmes, as defined by Majmaah University, correspond with the competences as outlined by the SSC. They confirm their alignment and express their general satisfaction with the formulation of the learning outcomes and competence profiles. However, they question the differentiation of both programmes as they generally consider information technology as part of the larger domain of computer science. From the programme coordinators, the experts learned in that regard that although both programmes have similarities and some subjects and modules overlap, the differentiation between them is based on the specialisation tracks which result in distinct professional orientations and labour market profiles. Additionally, the national framework in Saudi Arabia requires a differentiation between these two areas. As confirmed during the audit, this distinction is known and recognised by both students and representatives from industry and the labour market. In general, graduates are said to have good employment opportunities with private companies in the wilder field of technology as well as government agencies as the most prominent employers.

While the experts are generally satisfied with the formulation of the programme profiles, in dealing with different information sources of the university, they noticed inconsistencies between the programme learning outcomes published in the programme specifications and the list published on the programmes´ websites. While these inconsistencies do not harm the content-wise constitution of the programmes´ profiles and their alignment with the SSC, it still needs to be ensured that the published information on the programmes is up to date and harmonised. Therefore, the experts require the university to harmonise the PLO across all official documents and websites. Besides that, the experts also notice that the PLO are not outlined in the Diploma Supplements which serve as the main document for communicating graduates´ qualifications (see chapter 4.2). This needs to be corrected.

In terms of a regular review process, the experts acknowledged the development and periodic review of programme objectives and learning outcomes and the involvement of several stakeholders to identify emerging technological trends, evolving labour market expectations, and competencies that require stronger emphasis within the curriculum. Graduates of different cohorts employed in sectors such as banking and information technology informed the experts that employment opportunities in these fields are generally available within a short period of time after graduation, which demonstrates the alignment of the graduate profiles with current labour market needs. The experts highlight the focus on these important and up-to-date study topics which are crucial for the current development of society and labour market as strengths of both programmes.

In summary, the experts confirm that the targeted competence profiles reflect the qualification level defined by the European Qualifications Framework level 6 and correspond to the respective ASIIN Subject-Specific Criteria (SSC) as well the Euro-Inf criteria. The competence profiles of both programmes are highly relevant for the labour market and allow graduates to find suitable employment within short time from their graduation, and development of the respective profiles is ensured by an adequate review process. However, the experts require the harmonisation of the objectives and PLOs across official documents and the university websites.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report
- Websites of both programmes
- Discussion during the audit

Preliminary assessment and analysis of the experts:

At the end of their studies, graduates of these two programmes are awarded the academic grade of a Bachelor of Science (B.Sc.) in Computer Science or Information Technology, respectively. The designation Computer Science refers to the theoretical and scientific foundations of computing and information processing, while Information Technology emphasizes the applied aspects related to the implementation and management of computer systems. As the experts confirm, the programme titles corresponded to the respective graduate profiles, are in line with the international academic terminology and are consistently used in both Arabic and English in institutional documents and public resources.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Course specification of both programmes
- Module descriptions of both programmes
- Objective-Module Matrices of both programmes
- Statistics on student mobility
- Websites of both programmes

- Discussions during the audit

Preliminary assessment and analysis of the experts:
Structure and content

Both programmes under review are offered by the College of Science at Majmaah University. They are designed as full-time programmes with a regular study duration of eight academic semesters (four academic years). Foundational and prerequisite courses, including mathematics, programming, computer fundamentals, and general disciplinary knowledge, form the basis of the first part of the studies, while the later stages focus on advanced and specialisation-focused modules. The BaCS programme includes a total of 139 credit hours (equivalent to 209.77 ECTS credits), including 55 mandatory programme credits and 18 elective credits, while the BaIT programme consists of 134 credit hours (202.23 ECTS credits), including 50 mandatory programme credits and 18 elective credits. The curricular overviews of both programmes are contained in the appendix.

The curricula combine university-level modules, mandatory college-level modules, compulsory core programme-specific modules and elective specialisation modules. The university-level modules (12 credit hours) can be elected by the students out of a catalogue of different offers which includes subjects relating to Islamic culture, language, and religion, as well as ethics, entrepreneurship and societal issues. As the university representatives explained, these modules shall contribute to the development of a broader academic and professional profile of the students. The college´s compulsory modules mainly contain scientific fundamentals (physics, mathematics, statistics), fundamentals of programming, computer systems, and databases, as well as an ethics module and multiple modules of general and technical English. These compulsory modules are mainly contained in the first two study years of both programmes which share a common basic structure. As the programme coordinators explain, the first two semesters are fully harmonised between both programmes and are taught together.

In the advanced stages of the curricula, the BaCS programme places more emphasis on theoretical and computational areas such as algorithms, artificial intelligence and data science, and offers a specialisation in Artificial Intelligence. The BaIT programme focuses more strongly on applied and technological areas, including networking, cloud computing, systems integration and cybersecurity, with a specialization in cybersecurity. As the programme coordinators explain, both programmes are supposed to have a second planned specialisation track for students to choose from, namely data science in BaCS and cloud computing in BaIT. However, as both programmes were established only in 2021, they are not yet fully operational as the recruitment of suitable teaching staff for these

specialisations is still pending (see also chapter 3.1). Nevertheless, the experts approve of the programmes´ structures and commend the opportunities for specialisation.

While the experts express their general satisfaction with the structure and content of the programmes, they wonder about the inclusion of the multiple mandatory English language modules given that the official teaching language in both programmes is English. They learned from programme coordinators that, although English is a requirement for university admission, students may still present difficulties due to little English language education at school level, which is why the inclusion of the general English language modules is considered a necessity. Besides these, the Technical English modules prepare students with subject-specific language competencies. The importance of a high level of English proficiency is also linked to labour market requirements for these two programmes.

Moreover, the experts wonder about the role of basic science modules like physics within these study programmes. It is explained that such disciplines are intended to provide students with a broader scientific basis and opportunities for orientation towards specific professional fields, including applications related to medical technologies and other advanced technological sectors.

The experts also assess the importance of practical training in both programmes and its integration into the curriculum. Practical training is formally integrated into the curricula through a mandatory eight-week summer training component conducted in collaboration with IT-related institutions and companies. The university organises and supervises these internships through a structured process divided into preparation, implementation and evaluation. Students are supervised by both an academic and field supervisor of the internship host. Competence-based assessment methods are used to assess professional performance, practical competencies and the application of theoretical knowledge in professional environments. Feedback from internship supervisors and employers contribute to the assessment of students' practical competencies and the continuous development of the programmes. During the audit, the students reported that after completing 90 credit hours they can apply for summer training and that there is a formal procedure for this process. Guidance and support from the university orient them in finding companies where they can develop their professional practice. However, the university is also open to proposals from students themselves for new companies. Students consider summer training important for the concrete application of the acquired knowledge and for their preparation for the job market.

The industry representatives also confirmed that the university cooperates with various companies and organizations to provide training and practical projects for students. They mentioned successful cases of internships by students, which later resulted in their

employment. Although they appreciated the theoretical basis of the students, they recommended more practical and longer internships to give them the opportunity to transform theoretical knowledge into practical competency. The experts can relate to this wish for a longer internship but consider the eight-week training as adequate for a Bachelor´s programme. Still, the experts consider this cooperation and exchange with companies and organisations particularly important for the practical development of students and applaud the efforts of the programme coordinators in this regard.

In summary, the experts consider the curricula to be well-structured and aligned with the learning outcomes. Thus, they reflect the Bachelor´s level of EQF 6 and are suited to fulfil Subject-Specific Criteria of the Technical Committee 04 – Informatics, and the Euro-Inf criteria. The experts further confirm that the curricula are coherent and provide students with the necessary theoretical knowledge and practical training in the respective areas.

Student Mobility

At the university level, Majmaah University supports national and international student exchange through institutional mobility agreements, recognition procedures and support services. Various university programmes include formal opportunities for student mobility and academic exchange.

During the audit, the experts learned from university representatives that in cases where a student exchange has been implemented, no major problems have been identified regarding student progress or graduation delays in relation to the current curriculum structure. They reported that around 250 students at the university level have participated in mobility activities. Most recently, a summer exchange programme was realised for 100 students (50 male and 50 female) with the University of Leeds (England). However, it becomes apparent that no student of either the BaCS programme or the BaIT programme participated in this exchange. In general, it is noted that, in these two programmes, student mobility is almost non-existent and limited to sporadic individual student initiatives which are also not recognised by the university. Some students completed short-term exchanges with other national universities and, likewise, also incoming students are registered only nationally.

The programme coordinators emphasized the importance of this cooperation and exchange and mentioned the cooperation agreements in process that are expected to contribute to the future development of academic exchange opportunities and credit transfer agreements within the programmes. However, initially, exchanges with other institutions within Saudi Arabia and the wider Arab region should be strengthened before a further international expansion of mobility offers.

The experts recognise the challenges of establishing a student mobility system but consider international experiences as important for the academic development of students and international exposure. Therefore, they recommend the university to increase the support and opportunities for both incoming and outgoing student mobility. In that regard, they also suggest using existing academic connections of the teaching staff with other universities to further develop the student exchange opportunities. Especially given that both programmes are taught in English, the experts see high potential for welcoming international incoming students.

Periodic Review of the Curriculum

The curricula of Computer Science and Information Technology programmes are subject to regular review and evaluation. The Quality Development Committee conducts annual evaluations of the CS/IT programmes. During these reviews, annual programme reports, weaknesses in learning outcomes (PLOs), improvement plans, and the effectiveness of teaching activities are analysed.

During the discussions with university representatives and programme coordinators, the experts learned that curriculum review is closely linked to developments in rapidly evolving technological fields. A dedicated curriculum committee regularly reviews the content of the programmes and collects feedback from students, academic staff, and labour market representatives that can later be reflected in curriculum changes. Instructors also form an important part of this process. They are expected to contribute with proposals for curriculum improvement and programme renewal at the end of each semester.

The teaching staff explained that up to 20% of the curriculum can be changed through internal expedited procedures, while more substantial revisions require approval through the established institutional hierarchy at the department, college, and university levels.

The students are also involved in the quality assurance and curriculum development processes. They explained that regular surveys and module evaluations are completed, while concerns and suggestions can be addressed directly to instructors, programme coordinators, and student representatives. The experts welcomed the involvement of students in this process and the ability of instructors to follow technological developments in these two areas and implement them in curriculum improvement. They considered that the existing quality assurance mechanisms support the continuous development of curricula and confirm that review procedures that involve all relevant stakeholders of the programmes are in place. The flexibility of changing part of the curriculum without procedural obstacles was another positive aspect of this process for the experts.

Criterion 1.4 Admission Requirements

Evidence:

- Self-Assessment Report
- Admission and registration handbook
- Admission rate statistics
- Admission website of the university: https://www.mu.edu.sa/en/page/Admission-and-registration
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The admission procedure for Bachelor´s programmes at Majmaah University is regulated by binding and publicly available institutional regulations. Student admission is organized through a centralized electronic system at the national level, called the Unified Electronic Admission Portal. This portal is managed centrally by the Deanship of Admission and Registration and not directly by the department. Likewise, applicants do not directly apply for a specific programme but to the university. Based on the results of a universal admission test as well as other criteria such as the high school grade, students can then choose their preferred programme in merit-based order. However, the colleges can pose additional admission requirements such as interviews. The baseline requirement for admission to the two Bachelor´s programmes under review is a high school diploma (scientific track) with a minimum of 85% and proof of sufficient English language proficiency at the level of IELTS 3.5 or STEP 52, since this is the language of instruction. As the experts learned from the students, they can choose their respective programme after completing the first year and that academic advisors and programme coordinators support and assist them in identifying academic paths relevant to them.

In terms of the general admission regulations, the experts discuss the criterion that students must be “medically fit” to be admitted to these programmes. The university representatives explained that this requirement is mainly related to health and safety considerations in specific learning environments, especially laboratory activities, and refers, for example, to contagious conditions or medical situations requiring special precautions. This regulation is not of discriminatory nature, as the experts acknowledge. The university representatives further stated that students with disabilities are admitted to the programmes and provided examples of accessibility measures and accommodations available within the institutional infrastructure and laboratory facilities.

The number of admissions is determined by the Department Council based on the recommendations of the College Board and institutional capacities, including staff availability,

laboratories, classrooms and quality assurance requirements. In general, there are 50 available seats for each male and female annual cohort. However, the admission rate statistics show that the number of students varies strongly and is usually below the full capacity due to generally low application numbers.

Furthermore, the programme coordinators indicated that the programmes are offered without tuition fees and that students have access to various forms of institutional support, including academic advising, psychological counselling, and financial assistance when needed. The university also offers scholarships for international students or people belonging to “displaced tribes”.

In summary, the experts find the admission framework clearly regulated and appropriately aligned with the academic requirements of the programmes. They also positively assessed the existing advisory structures, preparatory measures and support services.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Module descriptions of both programmes
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Majmaah University implements the EUC (University Credit Hours) system for measuring student workload in both Bachelor´s programmes. The BaCS programme consists of 139 credit hours, equivalent to 209 ECTS, while the BaIT programme consists of 134 credit hours, equivalent to 201 ECTS.

As confirmed by experts, credits are awarded for all mandatory components of the programmes, including laboratories, projects and the Summer/Cooperative Training. However, the EUC system is based on the number of structured teaching hours in both lectures and laboratory classes per semester week. To also incorporate the independent student workload, such as self-study, assignments and exams, and ensure international comparability, as stipulated by the ASIIN general criteria, the university additionally accounts for the ECTS equivalence of the programme. According to the Self-Assessment Report, this equivalent is derived from the total number of contact hours times 15 semester weeks plus an assumed number of 4 weekly study hours per module, independently from the credit load of the module. Diverging from that, the exemplary Diploma Supplements which list also the

completed modules in form of a Transcript of Records, shows that a fixed conversion rate of 1 EUC to 1.5 ECTS is applied.

Given this inconsistency, the experts wonder about the workload distribution which, according to the students, is generally manageable and balanced across the semesters. However, they added that some technical modules may require significantly greater effort. According to them, this mainly depends on individual preparation, arrangements of the self-study time, and the learning pace. The workload adequacy is part of the regular semester survey which, however, only asks for the overall workload in general. While the experts are glad about the students´ general satisfaction with the workload and take note that the EUC credit numbers are between 16 and 19 per semester, they criticise the general allocation of the self-study hours which is only an estimate and does not ground on any structured module-level evaluation. In fact, the independent study workload may vary considerably for different modules, as the notion of the very "difficult" two Calculus modules, mentioned by the students, shows. The experts therefore require the university to verify the time the students need for self-studies in each module and adjust the awarded ECTS points accordingly, if necessary.

In summary, the experts confirm that Majmaah University employs the ECTS system as complementary workload-based credit system that incorporates both the structured and independent study load. All compulsory components of the programme are credited. However, given that the workload allocation was calculated only on a general basis, the experts require a systematic verification at the module level. The correspondence between the estimated workload and the ECTS credits awarded needs to be verified and adjustments must be made where necessary.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Module descriptions of both programmes
- Stylised student survey results
- Discussions during the audit

Preliminary assessment and analysis of the experts:

According to the Self-Assessment Report and the module descriptions, lectures, laboratory work, case studies, problem-based learning, simulations, projects and practical assignments are some of the interactive teaching methods practiced in both Bachelor´s

programmes. The variety of teaching methods and different didactic approaches aim to foster a student-oriented environment. They serve as stimuli for the development of critical thinking and independent learning.

Both programmes practice face-to-face and digital teaching through the Blackboard platform. This platform is used for the distribution of materials and communication between students and academic staff. Students are gradually introduced to independent work through project-based modules, supervised assignments, laboratory activities and research-oriented courses. The first semesters are designed to equip students with basic theoretical knowledge, while in the more advanced stages they engage in laboratories, projects, research-oriented projects and graduation theses.

Practical projects, laboratory work, research activities and individual or group assignments help students gradually develop technical and academic competencies. At the same time, they improve communication, collaboration, critical analysis and problem-solving skills in real professional and research contexts.

As confirmed by the students, the teaching practices are reviewed through the regular course evaluations, student surveys, annual programme reports and feedback collected from students and academic staff. Students appreciated the instructors' continuous encouragement for participation, open discussion and exchange of ideas. According to them, the theoretical concepts offered in lectures do not have as their goal their memorization but their practical application through laboratory sessions, coding exercises, projects and assignments that reflect real-world scenarios.

The professors confirmed that they use interactive and modern methods during lectures. They mentioned the use of Blackboard LMS, brainstorming, in-class learning and techniques like the flipped classroom approaches, where students prepare in advance and then discuss and apply knowledge during the lesson. Regardless of the methods used, they also acknowledged that students often need additional stimulation to actively participate in discussions. The experts learned from the academic staff that tools such as ChatGPT and Copilot are regularly used even during laboratory exercises and that their use is in line with the user manuals provided by the university.

The experts noted and appreciated the university's efforts to integrate more interactive and student-centred teaching practices, especially in rapidly evolving fields such as artificial intelligence and cybersecurity. However, also with respect to the provided examples of final projects, they nevertheless see potential for the further expansion of seminar-oriented teaching formats and a stronger integration of scientific research both as teaching content and methodology.

Besides that, the experts discussed the implementation of the teaching in the male and female groups which follow the same curricula but are taught at two separate campuses. While, as explained during the audit and discussions with teaching staff and students, the former strict separation of male and female students and teaching staff has been abandoned, it is still not common to hold mixed-gender classes. However, as the staff numbers show, the majority of teaching staff (18 out of 30), especially in higher academic ranks is male (see also chapter 3.1). Because of this shortage of female teaching staff, some modules/ classes in the female section are offered only online by male instructors, while these classes are taught in person in the male section. Although, as explained by the teaching staff, both sections (male-female) follow the same curricula, assessment procedures, learning outcomes and academic standards, the experts consider it very important that the teaching methods are also the same. According to them, online teaching does not always offer the same level of interaction, engagement, and immediacy as direct classroom teaching. Therefore, they see it as a necessity to create comparable teaching conditions, methodological consistency, and equivalent academic support in both sections of the programmes in all modules. Besides that, the experts would deem it generally useful to teach both sections together, not only for efficiency purposes, but also because students of all genders will have to interact and collaborate in their later work lives.

In summary, the experts confirm that the programmes employ a variety of teaching methods and didactic means to promote achieving the learning outcomes. The focus is on onsite, face-to-face teaching, but digital and asynchronous teaching instruments are used to a reasonable extent. Through the Summer Training, students also gain insights into the practical application outside of the university. The teaching methodology is evaluated every semester as part of the regular module surveys. However, the experts recommend fostering seminar-style teaching and further promote scientific research as teaching content and methodology to improve the students' skills in that regard. Moreover, the experts require to ensure the equal implementation of teaching in terms of methodology and staff qualification in both sections.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 1:

Criterion 1.1:

In its statement, the university alleges that the PLOs have been harmonised in all official documents and public information sources. However, the experts find that the PLOs listed on the programmes' websites (https://qlt.mu.edu.sa/MUQLT/#/ProgramSpecification-ByCode/CS, https://qlt.mu.edu.sa/MUQLT/#/ProgramSpecificationByCode/IT) do still not correspond to the list presented to them; which is why they sustain the requirement.

Criterion 1.3:

No comment was made concerning the experts' recommendation for more student mobility. The experts therefore formalise this recommendation.

Criterion 1.5:

According to the statement, a module-level workload verification has been completed for all modules to ensure that the, so far, only estimated number of independent study hours is adequately reflected in the number of credits. However, the provided references only show examples of Diploma Supplements but do not constitute evidence for a structure workload evaluation by the students. Therefore, the experts consider that this requirement has not yet been addressed satisfactorily and require Majmaah University to conduct and transparent document this evaluation.

Criterion 1.6:

The university explains that the harmonisation of teaching activities in the male and female classes as well as the general strengthening of seminar-style teaching will be further fostered. While the experts appreciate the university's responsiveness, they decide to keep the recommendation regarding the teaching methodology to further encourage the process and to check up on it during a potential re-accreditation. Moreover, the explanations regarding the teaching staff in the separate classes are not yet sufficient (see chapter 3.1).

Final assessment:

In summary, the experts conclude that, while the programmes' concepts and their implementation is very suitable in many regards, the initial critical observations still need to be further addressed by the university.

Overall, they consider this criterion to be **partly fulfilled**.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Self-Assessment Report
- Regulations of study and tests for the undergraduate level
- Examination guide
- Student handbook

- Statistics on grade distribution
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The standard procedures for assessment of the students´ learning progress are outlined in the university´s regulations of study and tests for the undergraduate levels and the examination guide. As stipulated by the university regulations, students are informed about the assessment methods, grading criteria and module objectives at the beginning of each module through syllabi and the Learning Management System (LMS). The examination methods are also outlined in the module descriptions. Assessment is based on continuous and final assessment, where the final grades are usually divided into 20% mid-term exam, 40% semester work and 40% final exam. The semester work exam component is determined by the respective module coordinator and usually consists of multiple small assessments in different semester weeks, such as oral presentations, laboratory demonstrations, practical exams, projects, peer-review activities and online quizzes. These assessment forms and their weights within the cumulative grade are transparently outlined in the module descriptions. Mid-terms and final exams are usually conducted in written form. As the experts confirm for both programmes, the assessment methods applied in both programmes serve to assess different categories of knowledge, technical competences and analytical skills. However, they recommend a stronger integration of oral examinations. According to them, the inclusion of this form of assessment not only promotes students' critical thinking but also prepares them for future professional and leadership roles.

As the programme coordinators explained, the minimum attendance of 75% is required for being allowed to take the final exam. As the minimum cumulative passing grade is 60%, it is theoretically possible to pass a module without taking the final exam, but practically, this is not the case. The student handbook contains the provisions for make-up exams for cases in which students fail a final exam. These are conducted two weeks before the start of the next term. The handbook further states that "students who fail the make-up exams or who fail modules that do not have make-up exams remain in the same level to retake the failed modules. The College Council, on behalf of the University, can allow students to take modules from the following level of study." The experts note that this restriction could hinder the students´ study progress. However, the students explained during the audit the College Council usually allows students to take the modules of the next semester so that re-taking does usually not pose a significant problem. In case of absence for valid reasons, there is an option to take part in a second exam in the same semester. In that regard, the self-assessment notes that there are transparent policies for substitute exams, absences, illness

and support for students with disabilities or special needs. The students appreciated the transparency regarding assessment methods, grading criteria and course requirements by instructors. They indicated that all of these are clearly communicated from the beginning of each semester through syllabi and by instructors themselves in the first week of classes. Written exams, presentations, projects, as confirmed by students, were some of the most frequent assessment formats.

The following scale is applied for the grading of exams:

Latter Grade	Grade Meaning	Grade Points	Latter Grade	Grade Meaning	Grade Points
A +	5.00	95-100	D	Pass	2.00
A	4.75	90-94	E	Failure	1.00
B +	4.50	85-89	H	Debarred	1.00
B	4.00	80-84	W	Withdrawal	0.00
C +	3.50	75-79	I	Incomplete	0.00
C	3.00	70-74	TR	Transferred	0.00
D +	2.50	65-69			

In the final year of the study, students have to complete graduation projects in groups under academic supervision and, in certain cases, in collaboration with external institutions or companies. The programme coordinators explained that, despite the collaborative nature of the work, each student is assessed individually throughout the project process which is positively noted by the experts. These projects can be carried out within the university or in collaboration with external institutions or organisations. During the audit, the experts review multiple examples of final projects and conclude that these are highly application-oriented project works that usually involve analysis and coding. However, the experts note that the scientific background and embedding of these projects is missing which is consistent with the staff´s explanation that many of these projects currently place more importance on the practical application and implementation of existing technologies than on the development of a stronger scientific and research-oriented dimension. The experts therefore require the university to raise the scientific level of the final projects to the standard of a Bachelor´s thesis. This goes together with the mentioned recommendation of exposing students to scientific research and scientific literature (see chapter 1.6). The Bachelor´s theses should demonstrate the students' ability to work scientifically and independently on projects at EQF level 6.

In summary, experts confirm that the exam system is generally transparent and appropriately regulated in both programmes. Appropriate competency-oriented examination

formats are applied, and transparent regulations for make-up exams are in place. However, based on their observations, the experts consider it necessary to raise the graduation projects to the scientific standard of a Bachelor's thesis. Also, they recommend making use of oral examinations.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 2:

Regarding the scientific standard of the Bachelor's theses, the university has presented revised course specifications for the thesis module. The experts confirm that these adequately document the module, but do not contain any provisions for the qualitative preparation of the thesis itself. Therefore, the course specifications do not serve the purpose of regulating and, by that, increasing the quality of the theses, which is sustained as a requirement by the experts. In terms of the academic quality of the theses revised during the audit which were mostly very small practical software projects without sufficient scientific embedding such as extensive literature reviews and conclusions, the experts propose setting up concrete thesis guidelines that outline the specific requirements in terms of formalities (e.g., structure, formatting, citation), methodology, content and provisions for how to document and submit the created software to the thesis reviewer, ideally at least two reviewers, for the assessment. An orientation on common publication standards and guidelines would be deemed useful. Likewise, a stricter supervision and assessment of the work done by the students, e.g. by including an oral presentation/ defence and the review of a second external reviewer would be considered important and suitable steps to raise the level of the theses. This also links to the recommendation of further promoting scientific research as teaching content and methodology.

Final assessment:

In summary, the experts see the need for strict guidelines or a similar measure that ensures the increase of the currently insufficient scientific quality of the thesis projects.

Overall, they consider this criterion to be **partly fulfilled**.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report
- Staff handbook

- Examples of staff development certificates
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The composition of the academic staff for the two Bachelor´s programmes under review, both for the male and female student sections, includes staff with different academic backgrounds. The total number of staff is 30, and the distribution of their academic titles, as outlined in the Self-Assessment Report, is as follows: 1 professor, 6 associate professors, 10 assistant professors, 8 lecturers and 5 demonstrators.

Their responsibility in teaching and in the exchange with students is directly related to the academic degree and experience of each of them. All those who have a doctorate degree hold roles such as professor, associate professor and assistant professor, while those who have a master's degree hold roles as lecturers or demonstrators. Overall, the staff members consider the staff numbers adequate and are satisfied with the workload. They also confirm that the distribution of teaching hours is proportional and responds to their needs for individual scientific development.

Their academic promotion is made at the university level and is conditioned by factors such as academic experience, research activities, scientific publications, etc. Scientific publications in international journals, as listed among others in the staff handbook, also show distinction among the academic staff.

Annual surveys serve as a basis for monitoring and measuring satisfaction with teaching and their results serve as a basis for continuous and consistent improvement. The implementation of these surveys is confirmed by both the students and the academic staff. The students also emphasized the willingness of the academic staff to respond at any time to their requests regarding modules, exams, presentations, etc., which is positively regarded by the experts.

The experts learned from the teaching staff that although the conceptual design, curricula and module specifications for the two additional specialisations within the department have been completed in both programmes, due to the lack of academic staff with the corresponding expertise, they are still inactive. They attribute this delay to the hierarchy and funding at the institutional level and propose as a solution cooperation with other departments and universities that can provide part-time or honorary teaching staff but also highlight the need for new permanent staff. The experts agree and recommend prioritising the enlargement of the permanent staff body for the implementation of the second specialisations in future funding decisions. Moreover, as explained in chapter 1.6, the audit highlighted the aspect of teaching in the sections of male and female students in both

programmes. Female students claimed that due to the lack of female teaching staff, some modules taught by male academic staff are delivered online. This was also confirmed by the teaching staff, who emphasized that although there is no rule that prevents this exchange, it is often a convenient choice to develop them online. Although it was found that both sections have an identical framework in modules, exams, standards, etc., the experts consider it necessary that both sections share the same forms of pedagogical realization of the learning process. An equal implementation of the teaching for the female section by male teaching staff with the same qualifications as the other section allows female students the same level of interaction and engagement and is therefore required by the experts and needs to be considered in the staffing. For the staff management across the faculty, the experts would deem an indication of the generic lecturing part delivered likewise in both programmes useful to better map the staff allocation and make it more efficient.

Besides these points of critique regarding the teaching implementation, the current staff setup of these two programmes and two specializations is acceptable to the experts. However, they recommend increasing the number of staff with higher scientific and academic degrees and ranks.

Staff development

The academic staff indicated during the audit that the department and the university continuously support their professional and academic progress. The numerous opportunities for professional and didactic development, to attend workshops, seminars and to get certified were considered necessary and inevitable for their academic journey. The staff explained that the topics of these workshops relate, e.g., to research proposals, auto publishing, e-learning, as well as AI for teaching and examinations. These training activities are organized through the IRTEQA Platform and help the academic staff to strengthen their didactic and in certain cases also managerial and administrative skills.

Exemplary certificates provided as part of the documentation evidence the completion of these courses.

The Deanship of Postgraduate Studies and Scientific Research at Majmaah University (MU) supports the university research initiatives of the academic staff and guides them to publish in high-quality journals, and to participate in government-funded scientific projects. As explained during the audit, Majmaah University has various mechanisms for financing publications and research projects. After each department's application, depending on the needs, the responsible entity supports the publication of scientific research in national and international journals. Specific cases of the teaching staff who have benefited from these grants were mentioned during the discussion. Participation in various regional conferences, but also at the continental level, received significant financial support. However, some of

them emphasized that it would be useful, especially in these rapidly changing fields, to enable participation in conferences not only with scientific papers, but also simply as listeners.

Students positively assessed the academic preparation of the staff and highlighted the fact that they have the appropriate preparation for the subjects they teach and that they are constantly motivated and encouraged for discussions and brainstorming.

In summary, the experts confirm that Majmaah University and the support mechanisms for scientific research provide favourable conditions for professional development of each faculty members. They see the opportunities offered to the academic staff in international exchanges as optimal for keeping up with the latest developments in the field of technology.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- Student handbook
- Student survey templates
- Stylised results of the student surveys
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The available student service and support offers are listed and explained in the student handbook. At the university level, these offers are administered by the Deanship of Students´ Affairs

Students consider the existing counselling and support structures offered by the university to be supportive and well-structured. The university portal is for them the first and continuous contact for general information and for information or communication with the staff. Meanwhile, academic advisors and the teaching staff provide direct assistance to their concerns and doubts regarding the choice of courses, the choice of the programme at the end of the first year and in resolving difficulties related to the learning process. The availability of psychological and financial support services was also considered important by the students.

Another important aspect for them are also the wish for extended access to laboratories and personal courses and certifications provided by the university.

Collaborations with various companies for summer training and internships are constantly updated by the university and students have the right to propose new companies for collaboration and to follow the internship in the company of their choice.

The university also hosts scientific clubs and extracurricular activities, among others in the domains of sports, music, and arts.

In the Self-Assessment Report as well as in the supporting documents, it is explained that at the university and department level, students are offered academic, administrative and technical assistance.

Before starting the relevant study programmes, students are supervised through the Academic Counselling Unit. For newly admitted students on these programmes, visits and support activities are also organized by students from other years.

Upon the start of studies, each student is assigned an academic advisor who advises them on the selection of courses and on other problems that may arise during their studies. The counselling and communication processes are organized through the EduGate electronic system, while students also have direct access to the teaching staff.

University mechanisms provide financial support for all students in need and psychological assistance or personal meetings with the academic staff for students who show difficulties in certain modules. Students with special needs are assisted by the special needs centre. Extracurricular activities, various scientific clubs are of different types and provide support for both local students and incoming students, for whom special financial support is also available.

The academic staff, through various examples, proved that assistance to students is of particular importance and that university mechanisms are built to facilitate their academic journey.

In summary, the experts confirm that there are sufficient human resources and organisational structures for both academic and non-academic counselling and guidance for the individual development of each student by the staff, which support the students in successfully completing the programme. These services are regularly evaluated through the student surveys.

Criterion 3.3 Funds and equipment

Evidence:

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the experts:
Both study programmes depend on centralised financial planning at the university level and on sustainable financial resources. Stable funding and reliable financial planning, adequate infrastructure, and formalized regulations governing internal and external cooperation are considered the main mechanisms for ensuring the sustainability of the necessary infrastructure. As explained by the university representatives, the baseline funding for the programmes is provided by the university at the institutional level. For additional expenses such as investments into infrastructure or research projects, there is a designated channel and process for programmes to request funds via the university administrative online platform. The submitted plans and budgets need to be discussed and approved at different level to grant the requested resources. The funds are allocated according to the priorities and requirements of the departments, while the final decisions are made by the finance department at the university level. The needs for laboratories, equipment, new staff and academic activities are continuously analysed and financed according to institutional capacities. Overall, all participants in the interview rounds expressed their general satisfaction with these processes and the available funding.

Bachelor´s programmes are free of charge for the students and do not carry tuition fees. Students can even receive ongoing financial support through the Student Fund Board. While grants and funding for academic staff for participation in conferences and for publications in international journals meet their individual needs for academic advancement.

The College of Science provides teaching facilities to support management and communication between students, teaching staff, and peers etc., as well as the necessary tools to enable different pedagogical teaching alternatives.

In terms of infrastructure, the College of Science resides in two satellite campuses (one male, one female) in the town of Az-Zulfi, about 80 km out of the city of Majmaah. The college provides classrooms, laboratories, a central library and offices for administrative and academic staff. There is a total of twelve laboratories, seven for the male student section and five for the female student section, including a Networks Lab, a Data Base Lab, a Programming Lab, an Operating Systems Lab, a Logic Design & Assembly Language Lab, a Multimedia Lab, and a Distributed Systems & Parallel Processing Lab. Some of them serve specific modules, while others serve as general laboratories for both programmes. All necessary programmes and software are licensed by the university, installed on the computers planned for students, and can also be installed on the students' personal computers

According to the Self-Assessment Report, the university´s central library provides comprehensive resources and facilities, including suitable furniture, reading areas, computer

access spaces, bookshelves, and software required for academic use. The library materials and catalogue are accessible through the *Koha* online system. Besides the university´s physical library resources, it provides access to the Saudi Digital Library, the largest digital collection in the Arab world, with over 114,000 full-text e-books across multiple disciplines and more than 300 international publishers, including Elsevier, Springer, Pearson, Wiley, Taylor & Francis, McGraw-Hill, Yale University Press, Oxford University Press, Harvard University Press.

An online tour of the university premises served to concretely see the laboratories, classrooms, library and other facilities of the College of Sciences. The experts found that the college offers a modern and well-equipped learning environment with extensive technical infrastructure and software resources. As seen, laboratory instructions and safety information are provided in both Arabic and English and the facilities include accessibility measures for students with disabilities.

The students also confirmed that the laboratories, technical equipment and software resources available are sufficient for their studies and work on projects. They also mentioned the possibility of receiving financial support during the study cycle.

A further expansion of the laboratories is planned as part of the further development of the building. The laboratories have specific technical support staff, who assist in maintenance and functionality.

In terms of digital infrastructure, the university employs the *Blackboard* learning management system for the distribution of class materials and facilitation of alternative learning opportunities such as e-learning. The administrative services such as the student registration or academic progress tracking are administered via the electronic services portal *EduGate*.

While the experts are highly satisfied with the available resources and facilities of the programmes in both sections, they wonder why the campus already closes at 5pm every day. Although no queries are voiced during the audit or in of the feedback surveys, they would deem it beneficial to extend the opening hour of the campus to allow students more flexibility and a wider time frame for individual practice in the labs, studies in the library, or social activities. In their eyes, this would also benefit closer collaboration and the establishment of a joint academic culture.

In summary, the experts confirm that the financial resources and physical as well as digital infrastructure and equipment of the university and the college constitute a sustainable basis for the successful delivery of the study programmes. They consider the modern laboratories in both programmes and in both sections, classrooms and other facilities to be an

important asset for student development both academically and socially. As evidenced by the student survey templates and results, the facilities are also subject to the evaluation of the students.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 3:

Criterion 3.1:

Concerning the experts' criticism of the lack of female academic staff which affects the equality of the programme delivery for the male and female classes, the experts appreciate that the university will focus the monitoring through the programmes' quality assurance processes in that regard. However, as the experts see it imperative to harmonise the teaching of the separate gender groups, an update of the overall teaching concept and/ or more female staff recruitment would be needed. This, of course, will need time to be implemented and mere affirmations are not considered sufficient. Therefore, the experts sustain the requirement and stress that this conceptual and recruiting work needs to be done within the one-year timeframe for the fulfilment of requirements.

Besides this, the experts also sustain their initial recommendations to support the programmes in acquiring the funding needed for recruiting the necessary academic staff for opening the new specialisation directions. In that regard, the share of staff with higher academic degrees should be increased.

Criterion 3.3:

The university states that the experts' recommendation for longer opening times of the facilities to provide more opportunities for individual practice is under consideration. At the same time, it shows the investments into digital infrastructure to provide a, in the view of the experts, very good environment for individual practica from home. The experts still consider prolonged opening times as a beneficial measure for fostering individual practice but, as the students did not complain about the current state which is apparently suitable, they consider having made the point clear. Whether and how to implement the proposal is up to the university.

Final assessment:

In summary, the experts stress the importance of equal teaching in both campuses which requires adequate staffing. This needs to be clearly demonstrated, e.g., through a staffing concept, staff allocation matrices and staff handbooks. Further recommendations regarding general staff growth and staff qualification are issued.

Overall, the experts consider this criterion to be **partly fulfilled**.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report
- Module descriptions of both study programmes
- Websites of both study programmes
- Discussions during the audit

Preliminary assessment and analysis of the experts:
In the documentation of the Self-Assessment Report, the university has presented comprehensive module descriptions, called “course specifications”. Their extent goes beyond the common scope of module descriptions as the module contents and study requirements are listed in detail for each class; however, they adequately serve the purpose of module descriptions. The specifications contain almost the complete required information, including module title, module coordinator, teaching and exam methods, learning outcomes, and module contents, as well as a reading list. The workload and EUC credit hours are listed as well. For further transparency, the experts recommend to also outline the equivalent ECTS credits in the module descriptions. Besides that, the experts notice that not all modules have module descriptions; most prominently the graduation projects, the internship, and the university-level modules. Therefore, it is required to present the complete set of module descriptions.

During the audit, the students indicated that detailed information regarding the organization of modules, assessment methods, grade distribution, examination formats and course requirements is communicated to them at the beginning of each semester. Instructors present these requirements during the first weeks of teaching, and the relevant documentation remains continuously accessible through the learning management system. While the module descriptions are thus internally available to both students and staff members, the experts point out that the module descriptions are not publicly accessible. To strengthen transparency, the experts recommend publishing the module handbook on the programmes´ websites so that all stakeholders and interested third parties can access them.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report

- Exemplary Diploma Supplements of both study programmes
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Upon completion of the programmes, students are provided with graduation documents. These documents include the Diploma Certificate and a Diploma Supplement which contains also a Transcript of Records. The documentation provides information about the student's academic performance, completed modules, grades achieved and the calculation of the final grade. However, the experts criticise that the documentation does not clearly indicate the title of the graduation project which is an important indicator of the individual specialisation and study focus of each student.

Also, the Diploma Supplement does not include statistical data on the distribution of final grades in accordance with the ECTS User Guide which needs to be added. Moreover, as noted in chapter 1.1, the experts require to also list the PLOs in the Diploma Supplement to give adequate information about the qualification profile.

Criterion 4.3 Relevant Rules

Evidence:
- Self-Assessment Report
- Student handbook
- Websites of both study programmes and the College of Science
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As the experts confirm, the rights and responsibilities of both the university and students are clearly defined through institutional regulations, guidelines and administrative procedures. Relevant information regarding admission procedures, academic regulations, examination requirements, student responsibilities, complaint procedures and graduation is provided through the EduGate platform and the student handbook.

Students expressed satisfaction with the availability of relevant information at the beginning of each semester through the module descriptions and the university's electronic systems. They also indicated that information regarding regulations is accessible online or clarified by the academic staff whenever necessary. For the experts, information mechanisms and the guidelines for students and staff include all necessary information.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 4:

Criterion 4.1:

In its statement, the university provides evidence that most of the course specifications (module descriptions) are already published on the College website which makes them openly available to all interested parties. The experts recognise the university's efforts to also publish the remaining descriptions but see no need for formalising the recommendation. However, they suggest linking these descriptions on the websites of the programmes to make them more easily and transparently accessible.

The recommendation to include also the converted ECTS credit numbers is sustained as no comment was given in that regard.

Criterion 4.2:

Together with the statement, the university provided revised templates of the Diploma Supplement, now containing the PLOs. However, the experts point out that information in the national higher education system as well as information on the grade distribution still missing. Currently, a table on the grading scheme is included, which the experts consider helpful already, but which still does not enable assessing the respective student's individual performance in relation to the cohort. Also, the thesis title is not yet foreseen in the documentation. These shortcomings still need to be addressed before approving and implementing the Diploma Supplement.

Final assessment:

In summary, while the documentation of the university is transparent overall, the experts still find multiple small-scale issues that need to be addressed to fully comply with the applicable accreditation criteria.

Overall, the experts consider this criterion to be **almost fulfilled**.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- Operational plan for the Computer and Information Department

- Quality assurance manuals of both programmes
- Exemplary annual programme reports
- Student survey templates
- Stylised results of the student surveys
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts positively assessed the efforts of the university and the College of Sciences in requesting international accreditation of the Computer Science and Information Technology programmes, which are currently considered highly relevant fields for society and the labour market and require continuous updating.

Through the explanations of the university representatives and programme coordinators, the experts learned that Majmaah University has a well-organized system for quality management and improvement in various dimensions of these two programmes. The bodies that participate in quality assessment are internal and external and numerous.

The Quality Committees, which are divided according to different organisational levels, are the basic bodies that oversee quality assurance and improvement, while the Internal Audit Committees ensure that processes are implemented properly and, through assessments and reports, provide recommendations for internal quality management. Part of quality assurance are also academic staff and department heads who are involved in reviewing programmes, improving teaching pedagogy and developing the curricula.

Student surveys, module evaluation forms, feedback sessions, self-evaluation reports of the academic programme serve as a basis for assessing the relevance of programmes and teaching methods and their continuous improvement, supplemented by feedback from alumni, external experts and employers. Student surveys and feedback on courses and professors are considered a vital element for internal quality assurance and directly affect future changes in both the curriculum and teaching methods. During the audit, the students confirmed that they regularly complete surveys or provide feedback on professors, teaching methods, and curricula, However, based on discussions and additional documents, there was no clear procedure for communicating the results of the evaluation and the impact of their feedback on decision-making back to the students. Therefore, the experts require the university to ensure greater transparency by ensuring that students are informed about the evaluation results.

An important part of external quality assurance is also the involvement of alumni, employers and external and independent experts. While the first two provide feedback on their professional preparation and experience after graduation, the external stakeholders assess

the graduates' competencies and the programmes' compliance with labour market requirements. On the other hand, external experts contribute with independent assessments, audits and recommendations for the improvement of academic standards, curriculum and quality assurance processes.

Teaching staff explained the work of the curriculum committee that meets regularly and where representatives from both campuses and groups participate. Professors propose each semester parts for improvement or renewal of courses. Alumni stated that they maintain regular contact with the university, where they are asked to provide feedback regarding the time needed to obtain employment and the relevance of the knowledge acquired during their studies for their current positions. They are also informed about various university events. University representatives spoke about various activities in which they have the role of mediator between students and various companies for the development of summer training, various internships, graduation projects and future employment opportunities.

All internal and external information serves as a foundation for any changes undertaken by the relevant university instances. This information is structurally analysed and incorporated into the operational plan of the department as well as the quality assurance manuals of the individual programmes which, among others, outline development goals and measures for further improvement. Annual programme reports document and analyse the performance of the programmes based on different KPIs and serve the internal evaluation.

Regarding the process of collection, review and decision-making, university representatives specified that the relevant bodies classify complaints and suggestions and propose concrete solutions.

In summary, the experts confirm that the study programme is subject to periodical internal quality assurance and that the results of these processes are incorporated in the further programme development. They highly appreciate the strong culture of review and quality assurance processes and the involvement of many stakeholders. The quality assurance processes and responsibilities are defined and transparently regulated in respective guidelines and standard operating procedures. Students are actively involved in the processes; however, the feedback loop back to the students is required to be closed.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 5:

The university did not comment on this criterion. Consequently, the experts formalise their initial requirement to ensure that students are informed about the evaluation results.

Final assessment:

In summary, while suitable quality assurance processes are in place, the feedback loop back to the students is required to be closed.

Overall, the experts consider this criterion to be **partly fulfilled**.

E Additional Documents

Before preparing their final assessment, the panel asks that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

D 1. Complete module handbook/ module specifications
D 2. Updated statistics on academic success

F Comment of the Higher Education Institution (29.07.2026)

The following quotes the detailed statement of the institution:

no	Chapters	Asiin Comments	Programs' action
1	**Criterion 1.1 Objectives and Learning Outcomes of a Degree Programme**	The experts require the harmonisation of the objectives and PLOs across official documents and the university websites.	Completed. The updated Programme Learning Outcomes have been published on the College website and in the official programme documents. During the review process, an additional S4 skill item was identified under the skills category of the Computer Science programme. This additional item will be removed soon to ensure full alignment and consistency with the approved Programme Learning Outcomes..[Ref]
2	**Criterion 1.5 Workload and Credits**	given that the workload allocation was calculated only on a general basis, the experts require a systematic verification at the module level. The correspondence between the estimated workload and the ECTS credits awarded needs to be verified and adjustments must be made where necessary.	The module-level workload verification has been completed for all modules. Based on the review findings, any necessary adjustments to module workload estimates and the corresponding ECTS credit allocations will be incorporated into the forthcoming revision of the programs and module specifications.[Ref]
3	**Criterion 1.6 Didactic and Teaching Methodology**	The experts recommend fostering seminar-style teaching and further promote scientific research as teaching content and methodology to improve the students' skills in that regard. Moreover, the experts require to ensure the equal implementation of teaching in terms of methodology and staff qualification in both sections.	Seminar-style and research-oriented teaching will be further expanded within the curriculum. Measures to harmonise teaching methodologies, assessment practices, and staff qualifications across both sections will continue to be implemented and monitored through the programs' quality assurance processes.

no	Chapters	Asiin Comments	Programs' action
4	**Criterion 2 Exams: System, Concept and Organisation**	The experts consider it necessary to raise the graduation projects to the scientific standard of a Bachelor's thesis. Also, they recommend making use of oral examinations.	The programme already includes several graduation projects that meet the scientific standards expected of a Bachelor's thesis [Ref]. The Graduation Project Committee also conducts two to three progress meetings with project students, during which they present and discuss their work and receive constructive academic feedback [Ref].
5	**Criterion 3.1 Staff and Development**	The experts learned from the teaching staff that although the conceptual design, curricula and module specifications for the two additional specialisations within the department have been completed in both programmes, due to the lack of academic staff with the corresponding expertise, they are still inactive. They attribute this delay to the hierarchy and funding at the institutional level and propose as a solution cooperation with other departments and universities that can provide part-time or honorary teaching staff but also highlight the need for new permanent staff. The experts agree and recommend prioritising the enlargement of the permanent staff body for the implementation of the second specialisations in future funding decisions. Moreover, as explained in chapter 1.6, the audit highlighted the aspect of teaching in the sections of male and female students in both programmes. Female students claimed that due to the lack of female teaching staff, some modules taught by male academic staff are delivered online. This was also	Ongoing. Recruitment of additional permanent academic staff will continue to be prioritised in future staffing plans. The University will continue to support cooperation with other departments and partner universities to strengthen programme delivery until permanent appointments are made. Measures to ensure equivalent teaching implementation across both sections and enhanced documentation of staff allocation will be continuously monitored through the programs' quality assurance processes.

no	Chapters	Asiin Comments	Programs' action
		confirmed by the teaching staff, who emphasized that although there is no rule that prevents this exchange, it is often a convenient choice to develop them online. Although it was found that both sections have an identical framework in modules, exams, standards, etc., the experts consider it necessary that both sections share the same forms of pedagogical realization of the learning process. An equal implementation of the teaching for the female section by male teaching staff with the same qualifications as the other section allows female students the same level of interaction and engagement and is therefore required by the experts and needs to be considered in the staffing. For the staff management across the faculty, the experts would deem an indication of the generic lecturing part delivered likewise in both programmes useful to better map the staff allocation and make it more efficient.	
6	**Criterion 3.3 Funds and equipment**	While the experts are highly satisfied with the available resources and facilities of the programmes in both sections, they wonder why the campus already closes at 5pm every day. Although no queries are voiced during the audit or in of the feedback surveys, they would deem it beneficial to extend the opening hour of the campus to allow students more flexibility and a wider time frame for individual practice in the labs, studies in the library, or social activities. In	Under consideration. The College will coordinate with the concerned university departments to evaluate the feasibility of extending campus opening hours and to identify suitable arrangements that support students' academic and social activities. Meanwhile, students continue to benefit from available digital library services and electronic resources to support flexible learning and research activities. [Ref]

no	Chapters	Asiin Comments	Programs' action
		their eyes, this would also benefit closer collaboration and the establishment of a joint academic culture.	
7	**Criterion 4.1 Module Descriptions**	During the audit, the students indicated that detailed information regarding the organization of modules, assessment methods, grade distribution, examination formats and course requirements is communicated to them at the beginning of each semester. Instructors present these requirements during the first weeks of teaching, and the relevant documentation remains continuously accessible through the learning management system. While the module descriptions are thus internally available to both students and staff members, the experts point out that the module descriptions are not publicly accessible. To strengthen transparency, the experts recommend publishing the module handbook on the programmes´ websites so that all stakeholders and interested third parties can access them.	Ongoing. Most course specifications for both programmes have already been published on the College website, and the remaining descriptions will be made publicly available in the near future to ensure complete transparency and accessibility. [courses description – CS Program][courses description – IT Program][module specification]
8	**Criterion 4.2 Diploma and Diploma Supplement**	The Diploma Supplement does not include statistical data on the distribution of final grades in accordance with the ECTS User Guide which needs to be added. Moreover, as noted in chapter 1.1, the experts require to also list the PLOs in the Diploma Supplement to give adequate information about the qualification profile	Under approval. The revised Diploma Supplement has been prepared, including the final grade distribution data, Programme Learning Outcomes, and graduation project title, and will be implemented for graduating students after obtaining the required University approval. [Ref]

G Summary: Expert recommendations (04.09.2026)

Taking into account the additional information and the comments given by Majmaah University the experts summarise their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Computer Science	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032
Ba Information Technology	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032

Requirements

For both programmes

A 1. (ASIIN 1.1, 4.3) Harmonise the PLOs across all official documents and websites.

A 2. (ASIIN 1.5) Verify the time students' need for self-studies in each module and adjust the awarded ECTS points if necessary.

A 3. (ASIIN 1.6, 3.1) Ensure the equal implementation of teaching in terms of methodology and staff qualification in both sections.

A 4. (ASIIN 2) Raise the scientific level of the final projects to the standard of a Bachelor´s thesis.

A 5. (ASIIN 4.1) Provide module descriptions for all modules, including the graduation projects, internships, and university-level modules.

A 6. (ASIIN 4.2) Ensure that the final documentation outlines the title of the Bachelor´s thesis/ graduation project.

A 7. (ASIIN 4.2) Ensure that the Diploma Supplement lists the PLOs and provides statistical data on the distribution of final grades, as set out in the ECTS Users' Guide.

A 8. (ASIIN 5) Ensure that students are informed about the evaluation results.

Recommendations

For both programmes

E 1. (ASIIN 1.3) It is recommended to increase the offer and support for both incoming and outgoing international student mobility.

E 2. (ASIIN 1.6) It is recommended to foster seminar-style teaching and further promote scientific research as teaching content and methodology.

E 3. (ASIIN 2) It is recommended to introduce oral exams.

E 4. (ASIIN 3.1) It is recommended to prioritise the enlargement of the permanent staff body for the implementation of the second specialisations.

E 5. (ASIIN 3.1) It is recommended to increase the share of teaching staff with higher academic degrees and ranks.

E 6. (ASIIN 4.1) It is recommended to outline the ECTS credit numbers in the module descriptions and the curricular overviews.

H Comment of the Technical Committee 04 – Informatics/ Computer Science (10.09.2026)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the procedure and follows the experts' assessment without any changes.

Assessment and analysis for the award of the Euro-Inf® Label:

The Technical Committee deems that the intended learning outcomes of the degree programmes do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science.

The Technical Committee 04 – Informatics/Computer Science recommends the award of the seals as follows:

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Ba Computer Science	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032
Ba Information Technology	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032

I Decision of the Accreditation Commission (25.09.2026)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure and confirms the proposal of the Technical Committee without changes.

Assessment and analysis for the award of the Euro-Inf® Label:

The Accreditation Commission deems that the intended learning outcomes of the degree programme do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science.

The Accreditation Commission decides to award the following seals:

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Ba Computer Science	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032
Ba Information Technology	With requirements for one year	30.09.2032	Euro-Inf®	30.09.2032

Requirements

For both programmes

A 1. (ASIIN 1.1, 4.3) Harmonise the PLOs across all official documents and websites.

A 2. (ASIIN 1.5) Verify the time students' need for self-studies in each module and adjust the awarded ECTS points if necessary.

A 3. (ASIIN 1.6, 3.1) Ensure the equal implementation of teaching in terms of methodology and staff qualification in both sections.

A 4. (ASIIN 2) Raise the scientific level of the final projects to the standard of a Bachelor´s thesis.

A 5. (ASIIN 4.1) Provide module descriptions for all modules, including the graduation projects, internships, and university-level modules.

A 6. (ASIIN 4.2) Ensure that the final documentation outlines the title of the Bachelor´s thesis/ graduation project.

A 7. (ASIIN 4.2) Ensure that the Diploma Supplement lists the PLOs and provides statistical data on the distribution of final grades, as set out in the ECTS Users' Guide.

A 8. (ASIIN 5) Ensure that students are informed about the evaluation results.

Recommendations

For both programmes

E 1. (ASIIN 1.3) It is recommended to increase the offer and support for both incoming and outgoing international student mobility.

E 2. (ASIIN 1.6) It is recommended to foster seminar-style teaching and further promote scientific research as teaching content and methodology.

E 3. (ASIIN 2) It is recommended to introduce oral exams.

E 4. (ASIIN 3.1) It is recommended to prioritise the enlargement of the permanent staff body for the implementation of the second specialisations.

E 5. (ASIIN 3.1) It is recommended to increase the share of teaching staff with higher academic degrees and ranks.

E 6. (ASIIN 4.1) It is recommended to outline the ECTS credit numbers in the module descriptions and the curricular overviews.

Appendix: Programme Learning Outcomes and Curricula

According to the programme specification, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor´s degree programme Computer Science:

Objectives

PEO 1: Be gainfully employed in computer science or related career paths including industrial, academic, governmental, and non-governmental organizations.

PEO 2: Continue their professional development by engaging in professional activities and/or training to enhance their careers and/or pursue post-graduate studies.

PEO 3: Acquire graduates' methods and procedures to communicate and work effectively within multi- disciplinary team.

PEO 4: Follow appropriate practices within a professional, legal, and ethical responsibility.

Programme Learning Outcomes

Knowledge	
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 computer science (algorithms, programming languages, computer systems, software development methodology).
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 computer science principles and the relevant concepts at basic and advanced levels.

S4	Apply systems and software development and management principles, methodologies, techniques, and tools to innovatively and creatively analyze, design, implement and evaluate systems and applications at various complexity levels.
S5	Investigate Artificial Intelligence (AI) theories, principles, and relevant mathematical models to automate processes, develop smart decision support systems, or simulate real-world situations at various complexity levels.
S6	Compare, contrast, and evaluate competing data science methods appropriate to the context of the problem.
Values	
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.

The following **curriculum** is presented:

Level	Course Code	Course Title	Required or	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or
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

Level	Course Code	Course Title	Required or	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or
	EN 122	English 2 (لغة إنجليزية 2)	Required	EN 111	3 (2,2,0)	College
	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
	PHY 214	Physics 2 (فيزياء 2)	Required	PHY 123	3 (3,0,1)	Program
	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
	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

Level	Course Code	Course Title	Required or	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	MH 223	Differential Equations (المعادلات التفاضلية)	Required	MH 132	3 (3,0,1)	Program
	CS 233	Computer Graphics (الرسومات باستخدام بالحاسب)	Required	CS 211	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
	CS 322	Computer Organization (تنظيم الحاسب)	Required	MH 121	3 (3,0,1)	Program
	GE 313	Engineering Chemistry (كيمياء هندسية)	Required		3 (3,0,1)	Program
	CS 323	Programming Languages (لغات البرمجة)	Required	CS 231	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 (تراسل 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 (االخلاقيات والممارسات المهنية)	Required	70 Credits	2 (2,0,0)	Program

Level	Course Code	Course Title	Required or	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
	CS 334	Algorithm Design and Analysis تصميم وتحليل (الخوارزميات)	Required	CS 231	3 (3,0,1)	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program
Level 7	CS 414	Summer Training (تدريب صيفي)	Required	90 Credits	1 (1,0,0)	Program
	CS 412	Compilers (المترجمات)	Required	CS 323	3 (3,1,0)	Program
	CS 413	Software Modeling and Analysis (نمذجة وتحليل البرمجيات)	Required	CS 314	3 (3,0,1)	Program
	CS 415	Graduation Project 1 (مشروع التخرج 1)	Required	90 Credits	2 (2,0,0)	Program
	IT 420	Information Security (أمن المعلومات)	Required	IT 324	3 (3,0,1)	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program
Level 8	CS 448	Graduation Project 2 (مشروع التخرج 2)	Required	CS 415	3 (3,0,0)	Program
	CS 439	Parallel and Distributed Computing (الحوسبة المتوازية والموزعة)	Required	CS 322	3 (3,0,1)	Program
	MH 423	Numerical Methods (طرق عددية)	Required	MH 223	3 (3,0,1)	Program

Level	Course Code	Course Title	Required or	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or
	CS 424	Artificial Intelligence (الذكاء الاصطناعي)	Required	MH 121	3 (3,1,0)	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program
	CS ---	Track Course (مقرر مسار)	Elective		3	Program

Track modules

Level	Course Code	Course Title	Required or	Pre-Requisite Cour-	Credit Hours	Type of requirements (Institution, College, or Program)
Artificial Intelligence Track Choose 18 Credits	CS 460	Computer Vision (الرؤية باستخدام الحاسب)	Elective	CS 231	3 (2,2,0)	Program
	CS 461	Intelligent Agents (عملاء الذكاء)	Elective	CS 424	3 (3,1,0)	Program
	CS 462	Machine Learning (تعلم الآلة)	Elective	STAT 133	3(3,1,0)	Program
	CS 463	Natural Language Processing (معالجة اللغة الطبيعية)	Elective	CS 323	3 (3,1,0)	Program
	CS 464	Robotics (الروبوتات)	Elective	CS 424	3 (3,0,1)	Program
	CS 465	Selected Topics in AI (مواضيع مختارة في الذكاء الاصطناعي)	Elective	CS 424	3 (3,1,0)	Program
	CS 466	Artificial Neural Networks (الشبكات العصبية الاصطناعية)	Elective	CS 424	3 (3,0,0)	Program

Level	Course Code	Course Title	Required or	Pre-Requisite Cour-	Credit Hours	Type of requirements (Institution, College, or Program)
Data Science Track Choose 18 Credits	CS 470	Introduction to Data Science (مقدمة في علم البيانات)	Elective	STAT 133	3 (3,1,0)	Program
	CS 471	Big Data Analytics (تحليل البيانات الضخمة)	Elective	STAT 133	3 (2,2,0)	Program
	CS 472	Probability Statistics for Data Science (التحليل الإحصائي لعلم البيانات)	Elective	STAT 133	3 (2,2,0)	Program
	CS 473	Data Visualization (التصوير المرئي للبيانات)	Elective	STAT 133	3 (3,1,0)	Program
	CS 474	Selected Topics in Data Science (مواضيع مختارة في علم البيانات)	Elective	STAT 133	3 (3,1,0)	Program
	CS 475	Data Mining (التنقيب عن البيانات)	Elective	STAT 133	3 (3,0,0)	Program
	CS 476	Ethics in Data Science (الأخلاقيات في علم البيانات)	Elective	STAT 133	3 (3,0,0)	Program

According to the programme specification, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor´s degree programme Information Technology:

Objectives

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.

Programme 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.

The following **curriculum** is presented:

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Course	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 (لغة إنجليزية 2)	Required	EN 111	3 (2,2,0)	College
	CS-131	Programming 1 (برمجة الحاسب 1)	Required		4 (3,2,0)	College

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Course	Credit Hours	Type of requirements (Institution, College, or Program)
	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

Level	Course Code	Course Title	Required or Elec-	Pre-Requisite Cour-	Credit Hours	Type of requirements (Institution, College, or 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 الانسان 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 (تراسل 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 Elec-	Pre-Requisite Cour-	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 النظم)	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

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Course	Credit Hours	Type of requirements (Institution, College, or Program)
	IT-448	Graduation Project 2 (مشروع التخرج 2)	Required	IT 415	3 (3,0,0)	Program
	IT-432	Systems Administration and Maintenance (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

Track modules

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Course	Credit Hours	Type of requirements (Institution, College, or Program)
Software Engineering Track Choose 18 credits	CS 430	Design and Architecture of Large Software Systems (تصميم وبناء نظم البرمجيات الكبيرة)	Elective	CS 314	3 (3,0,1)	Program
	CS 431	Low-Level Design of Software (تصميم البرمجيات منخفضة المستوى)	Elective	CS 314	3 (3,0,1)	Program
	CS 434	Software Evolution (Maintenance) (صيانة"تطور البرمجيات")	Elective	CS 314	3 (3,0,1)	Program
	CS 435	Software Architectures (أبنية البرمجيات)	Elective	CS 314	3 (3,0,1)	Program
	CS 436	Selected Topics in Software Engineering (موضوعات مختارة في هندسة البرمجيات)	Elective	CS 314	3 (3,0,1)	Program

Level	Course Code	Course Title	Requi-red or Elec-	Pre-Re-quisite Cour-	Credit Hours	Type of re-quirements (Institution, College, or Program)
	CS 446	Software Require-ments Analysis (تحليل متطلبات البرامج)	**Elective**	CS 314	3 (3,0,1)	**Program**
	CS 447	User Interface and User Experience Design (واجهة المستخدم وتصميم تجربة المستخدم)		CS 314	3 (3,0,1)	**Program**
Computer Security Track Choose 18 credits	CS 451	Coding and In-for-mation Theory (نظرية الترميز والمعلومات)	**Elective**	IT 324	3 (3,0,1)	**Program**
	CS 452	Security Manage-ment (إدارة الأمن)	**Elective**	IT 324	3 (3,0,1)	**Program**
	CS 453	Computer Security (أمن الحاسب)	**Elective**	IT 324	3 (3,0,1)	**Program**
	CS 454	Formal Meth-ods for Cryptog-raphy (الطرق المناسبة للتشفير)	**Elective**	IT 324	3 (3,0,1)	**Program**
	CS 455	Internet Security, tools & techniques (أمن الإنترنت، الأدوات والتقنيات)	**Elective**	IT 324	3 (3,0,1)	**Program**
	CS 456	Network Manage-ment and Security (إدارة وأمن الشبكات)	**Elective**	IT 324	3 (3,0,1)	**Program**