ASIIN Seal & EUR-ACE® Label

Accreditation Report

Bachelor's Degree Programmes
Civil Engineering
Mechanical Engineering

Master's Degree Programmes
Civil Engineering
Mechanical Engineering

Provided by
Qassim University

Version: 26 September 2025

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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]
بكالوريوس العلوم في الهندسة المدنية	Bachelor of Science in Civil Engineering	ASIIN, EUR-ACE® Label	ABET 01.10.2022 – 30.09.2028, NCAAA 01.05.2023 – 30.04.2028	TC 03
ماجستيرالعلوم في الهندسة المدنية	Master of Science in Civil Engineering	ASIIN, EUR-ACE® Label	/	TC 03
بكالوريوس العلوم في الهندسة الميكانيكية	Bachelor of Science in Mechanical Engineering	ASIIN, EUR-ACE® Label	ABET 01.10.2022 – 30.09.2028, NCAAA 01.05.2023 – 30.04.2028	TC 01
ماجستيرالعلوم في الهندسة الميكانيكية	Master of Science in Mechanical Engineering	ASIIN, EUR-ACE® Label	/	TC 01
Date of the contract: 16.09.2024				

[1] ASIIN Seal for degree programmes; EUR-ACE® Label: European Label for Engineering Programmes

[2] TC: Technical Committee for the following subject areas: TC 01 – Mechanical Engineering/Process Engineering; TC 03 – Civil Engineering, Geodesy and Architecture.

Submission of the final version of the self-assessment report: 26.02.2025 **Date of the onsite visit:** 21./22.05.2025 **at:** College of Engineering, Qassim University	
Expert panel: Prof. Dr.-Ing. habil. Manfred Krafczyk, Technical University of Braunschweig Prof. Dr.-Ing. Olaf Wünsch, University of Kassel Prof. Dr.-Ing. Ulrich Neuhof, Turkish-German University Fawaz Al-Saleh, SAMI Advanced Electronics Mohammad H. Alfridi, Umm Al-Qura University	
Representative of the ASIIN headquarters: Tamina Renner	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of March 28, 2023 EUR-ACE® Framework Standards and Guidelines as of November 4, 2021 Subject-Specific Criteria of Technical Committee 01 – Mechanical Engineering/Process Engineering as of March 21, 2021) Subject-Specific Criteria of Technical Committee 03 – Civil Engineering, Geodesy and Architecture as of June 26, 2020	

B 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
Civil Engineering	B.Sc.	/	6	Full time	/	10 Semesters	160 CP	Each semester, 2005
Civil Engineering	M.Sc.	Structural Engineering, Geotechnical and Foundation Engineering, Construction and Management Engineering, Transportation and Traffic Engineering, Water Resources Engineering, Environmental Engineering	7	Full time	/	4 Semester	30 CP	Annually, 2013
Mechanical Engineering	B.Sc.	/	6	Full time	/	10 Semesters	160 CP	Each semester, 2005
Mechanical Engineering	M.Sc.	Materials and Production, Mechanical Design and Control, Thermofluids	7	Full time	/	4 Semester	30 CP	Annually, 2013

Contextualisation

Qassim University is a public university located in the Qassim region of the Kingdom of Saudi Arabia. It was established in 2004 through the merger of several colleges that had previously been affiliated with King Saud University and Imam Muhammad ibn Saud Islamic University. Since its foundation, Qassim University has developed—according to its own

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

statements—into one of the leading higher education institutions in the country and currently enrols more than 35,000 students.

The university offers a wide range of academic programmes across various disciplines, including health sciences, engineering, humanities, natural sciences, as well as administrative and social sciences. It is committed to providing an advanced educational and research environment that contributes to the development of the local community and promotes academic and scientific excellence.

The College of Engineering at Qassim University was established following a recommendation by King Saud University in 2002 to transform the Department of Agricultural Engineering into a fully-fledged College of Engineering, initially comprising three departments: Electrical, Mechanical, and Civil Engineering. In its early years, the College adopted study plans developed by King Saud University. Since the establishment of Qassim University as an independent institution in 2004, the College has continuously developed its academic structures and curricula in alignment with national priorities and international standards.

In the context of this accreditation procedure, Qassim University has submitted four engineering degree programmes for evaluation: the Bachelor and Master of Science in Civil Engineering and Mechanical Engineering. These programmes are situated within the College of Engineering. Qassim University maintains separate campuses for male and female students. Male students attend classes at the main campus in Al-Melidah, Buraydah, while female students are based at the Unaizah campus in Unaizah City. Currently, the programmes under review are only offered to male students. Equivalent programmes for female students are in preparation and not yet subject to accreditation.

Summary of the Experts' Assessment

The expert panel commends Qassim University for its strong commitment to academic excellence and continuous improvement across its engineering programmes. The teaching staff demonstrate a high level of dedication to student learning, ensuring that learners receive both academic guidance and practical support. The programmes benefit from strong and productive cooperation with industry, which provides students with relevant, practice-oriented experiences and enhances their employability.

The institution has established a robust quality management system that supports ongoing enhancement of teaching and learning, underpinned by secure financial resources. Laboratories are well equipped for teaching purposes, enabling the effective integration of theoretical knowledge with hands-on training. Sufficient human resources are in place to ensure high-quality instruction, supervision, and student support.

The university's attractive campus and performance-oriented incentive system contribute positively to both staff motivation and student satisfaction. Overall, these strengths create a solid foundation for maintaining and further developing the quality and relevance of the programmes. The high degree of relevance and practical applicability of the programmes is also reflected in the ASIIN student survey, in which 100 % of respondents indicated that they feel well prepared for their future careers and the positive feedback of the industry representatives.

While recognising these strengths, the expert panel also identifies areas in which further improvement is possible. The university currently provides individual course specifications, but these are not compiled into a comprehensive module handbook, which would facilitate a clearer overview of the curriculum. In addition, the existing course specifications lack information on the person responsible for each module and the amount of self-study time required. The Diploma Supplements issued for the Master's programmes differ in structure from those of the Bachelor's programmes and do not yet contain cohort statistics in line with the ECTS Users' Guide. In addition, all compulsory modules must be allocated credit hours.

With regard to programme structure and workload, the Bachelor programmes, at a duration of five years, appear lengthy even by national standards, and the panel therefore recommends reducing their length and redistributing the workload more evenly across semesters. Conversely, the Master's programmes seem to carry a comparatively low workload and would benefit from being strengthened by increasing academic demands and placing a greater emphasis on research.

From a content perspective, the panel notes that sustainability, despite being an important element of the university's mission and a key contemporary issue, is not sufficiently embedded across the curricula. Similarly, the handling of artificial intelligence (AI) has yet to be fully developed. In the Bachelor's programme in Civil Engineering, the topic of construction management is underrepresented, while in the Bachelor's programme in Mechanical Engineering programme, the area of mechanical vibrations should be reinforced and included in the compulsory modules. Beyond curriculum content, the panel also considers the opportunities for international mobility to be an important area for further strengthening. Although the university attracts a number of incoming international students, there is no comprehensive framework for supporting outgoing mobility, and students have expressed a clear interest in this area. It is therefore recommended to promote international exchange more actively and establish structured partnerships with universities abroad.

The panel also suggests further development of the examination system, in particular by increasing the proportion of competence-oriented assessment formats. Additionally,

students who fail an examination should be allowed to repeat it in the following semester without being required to repeat coursework that has already been successfully completed, thereby reducing the workload in the retake semester. Finally, while the laboratories are adequate for teaching, their suitability for research purposes is more limited, and modernisation would be beneficial. It is further suggested to expand the number of software licences available to students in order to provide more comprehensive support for both their learning and research activities. Overall, the panel concludes that Qassim University's engineering programmes are built on a strong foundation, and that addressing these points would further enhance their quality, international competitiveness, and long-term relevance.

Brief Descriptions of the Study Programmes

For the Bachelor's degree programme in Civil Engineering (Ba CE), the university has presented the following profile in its Self-Assessment Report (SAR):

"The CE BSc's curriculum covers a broad range of civil engineering topics, including structural engineering, geotechnical engineering, transportation engineering, water resources engineering, and environmental engineering. Students begin with foundational courses in mathematics and basic sciences, followed by specialized courses in various sub-disciplines of civil engineering. The program includes practical training and a capstone project to provide hands-on experience."

For the Master's degree programme Civil Engineering (Ma CE), the institution has presented the following profile in the SAR:

"The CE MSc's curriculum includes core courses in advanced structural analysis, geotechnical engineering, and water resources management. Students can choose from a range of elective courses to specialize in areas such as transportation engineering, environmental engineering, and construction management. The program also requires the completion of a research thesis."

For the Bachelor's degree programme Mechanical Engineering (Ba ME), the institution has presented the following profile in the SAR:

"The ME BSc's curriculum includes courses in thermodynamics, fluid mechanics, materials science, manufacturing processes, and mechanical design. Students gain a solid foundation in mathematics and basic sciences before moving on to more advanced topics. The program also includes laboratory work, internships, and a final year project to enhance practical skills."

For the Master's degree programme Mechanical Engineering (Ma ME), the institution has presented the following profile in the SAR:

"The ME MSc's curriculum includes advanced courses in areas such as dynamics and control, thermal systems, materials engineering, and manufacturing processes. Students are required to complete a research thesis, which allows them to explore a specific area of interest in depth. The program also includes elective courses to provide flexibility in specialization."

C 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
- Websites of all study programmes
- Programme handbook of each study programme
- Student handbook
- Course specifications
- Diploma Supplements
- Objective-module-matrix per programme
- Mapping between the PLOs of each programme and the LO of ASIIN
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts refer to the Subject-Specific Criteria (SSC) of Technical Committee 01 – Mechanical Engineering/Process Engineering and Technical Committee 03 – Civil Engineering, Geodesy and Architecture as a basis for assessing whether the intended learning outcomes of the four programmes correspond with the competences outlined in the respective SSCs.

In general, the experts note that the programme learning outcomes can be found on the websites of the four study programmes, in the programme handbooks, the student handbooks, the course specifications (module descriptions), the Diploma Supplements as well as in the Self-Assessment Report. They confirm that the intended learning outcomes are transparently anchored and published and thus are available to students, lecturers and

[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.

interested third parties. They also agree that the learning outcomes are described in a clear and concise manner. The learning outcomes are displayed in the appendix.

According to the Self-Assessment Report, the Bachelor's degree programmes in Civil Engineering and Mechanical Engineering aim to equip students with the knowledge and skills necessary to solve complex engineering problems in their respective disciplines. Both programmes place a strong emphasis on fostering innovation, critical thinking, and lifelong learning. For the Bachelor's programmes, the intended Programme Learning Outcomes (PLOs) are structured into three domains: knowledge and understanding, skills, and values.

For the Bachelor's programme in Civil Engineering, they encompass a solid grounding in mathematics, natural sciences, and core engineering principles, coupled with the ability to identify and address complex civil engineering problems and apply appropriate research methodologies. Students develop practical competencies in problem-solving, the use of modern engineering tools, design implementation, effective communication, research, and experimental work. Furthermore, the outcomes emphasise ethical and professional responsibility, commitment to lifelong learning, and the capacity to work effectively in and lead multidisciplinary teams, ensuring graduates are well-prepared for both technical and leadership roles in the field.

For the Bachelor's degree programme in Mechanical Engineering, they encompass a solid foundation in mathematics, natural sciences, and core mechanical engineering principles, alongside the ability to identify and address complex mechanical engineering problems and apply appropriate research methodologies. Students acquire practical competencies in problem-solving, the use of modern engineering techniques and IT tools, design implementation, effective communication through various engineering media, research, and experimental work. Furthermore, the outcomes emphasise ethical and professional responsibility, commitment to lifelong learning, and the capacity to work effectively in and lead collaborative teams, ensuring graduates are well-prepared for both technical and leadership roles in the field.

According to the Self-Assessment Report, the Master's degree programmes in Civil Engineering and Mechanical Engineering aim to prepare graduates for leadership roles in industry and academia by developing advanced technical expertise, research capability, and innovative thinking. For the Master's programmes, the intended PLOs are structured into three domains: knowledge and understanding, skills (cognitive, practical and physical, communication and ICT), and values, autonomy and responsibility.

For the Master's programme in Civil Engineering, they encompass an in-depth and specialised body of knowledge covering advanced theories, principles, and concepts in the field, as well as critical understanding of processes, materials, techniques, and terminology.

Students acquire advanced insight into recent developments and specialised research or inquiry techniques. The programme fosters high-level cognitive abilities, including the application of specialised theories, problem-solving in complex contexts, critical evaluation, and the execution of advanced research or professional projects. Practical and physical skills are developed through the use of advanced tools, techniques, and materials, and the execution of complex tasks in specialised areas. Communication and ICT competences enable graduates to disseminate knowledge effectively, process and analyse data, and employ advanced digital tools in support of research and innovation. The outcomes also emphasise integrity, professional and academic values, autonomous professional planning and decision-making, effective management of specialised tasks, leadership in collaborative projects, and contributions to enhancing community quality of life.

For the Master's programme in Mechanical Engineering, they encompass an in-depth and specialised body of knowledge covering advanced theories, principles, and concepts in the field, alongside critical understanding of processes, materials, techniques, and terminology. Students gain advanced insight into recent developments and a wide range of established and specialised research or inquiry techniques. The programme fosters high-level cognitive skills, including the application of specialised theories, problem-solving in complex contexts, critical evaluation, and the execution of advanced research or professional projects across areas such as mechanical design, manufacturing, dynamic control, and thermofluids. Practical and physical skills are developed through the utilisation of advanced tools, materials, and processes, and the performance of multifaceted tasks in specialised engineering contexts. Communication and ICT competences equip graduates to disseminate knowledge effectively, process and analyse data, and employ advanced digital tools in support of leading research and innovation. The outcomes also highlight integrity, professional and academic values, autonomous professional planning and strategic decision-making, effective management of specialised tasks, leadership in collaborative projects, and contributions to improving the quality of community life.

The experts have reviewed the documentation and confirm that the level of the objectives and intended learning outcomes of the four programmes adequately reflect EQF levels 6 (Bachelor) and 7 (Master). The programmes also meet the ASIIN Subject-Specific Criteria (SSC) of Technical Committee 01 – Mechanical Engineering/Process Engineering and Technical Committee 03 – Civil Engineering, Geodesy and Architecture. Overall, the reviewers consider that the targeted skill profiles of the four programmes will enable graduates to pursue appropriate professional opportunities both within Saudi Arabia and internationally.

Since Qassim University also applied for the EUR-ACE® label for the four programmes, the experts check whether the learning outcomes are aligned with the EUR-ACE® Framework

Standards and Guidelines (EAFSG) for engineering programmes. The EUR-ACE® Framework Standards and Guidelines require that engineering programs cover the following seven competence areas: Knowledge and Understanding, Engineering Analysis, Engineering Design, Investigations, Engineering Practice, Making Judgements, Communication and Teamworking, and Lifelong Learning. The Self-Assessment Report and the course specifications illustrate that the degree programmes under review cover all the required competence areas, such as engineering analysis, design, and practice, as well as communication and teamworking skills. The experts are convinced that the mentioned competences are conveyed in the respective courses. They conclude that the intended learning outcomes of all programs are aligned with the EAFSG.

The positive impression formed by the expert reviewers is shared by the industry representatives participating in the audit. They confirm that the learning outcomes of the four degree programmes are well aligned with current labour market requirements and that graduates of Qassim University enjoy a strong reputation and high demand among employers. The representatives commend the well-structured course offerings and highlight the institution's various mechanisms to ensure that the programmes remain responsive to industry needs. In particular, Qassim University maintains a professional advisory board composed of members from both the public and private sectors. These industry partners are invited to provide feedback each semester via structured surveys addressing the intended learning outcomes, curricula, and other programme-related aspects. Additional feedback channels are available, including direct communication with teaching staff. The experts value the close and continuous collaboration between the university and industry stakeholders and note positively that industry feedback is systematically incorporated into the formulation and periodic revision of the intended learning outcomes.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report
- Diploma Supplements

Preliminary assessment and analysis of the experts:

The expert panel confirms that the official Arabic and English names of the four degree programmes correspond to the intended aims, the defined learning outcomes and the academic content of each programme. They are used consistently across all relevant documents and online resources.

The programme names reflect the terminology commonly used within the international engineering community and are thus easily recognisable to both academic and professional stakeholders. The core curricula and elective modules clearly align with the subject areas indicated in the respective degree names, ensuring that graduates possess the competence profiles implied by the titles. No evidence was found of misunderstandings among students, employers or other stakeholders regarding the scope or content of the programmes.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Student handbooks
- Course specifications
- Student Manual
- Summer Training Program Manual
- Coop Training Manual
- Senior Design Project Course Manual
- MSc Thesis Manual
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Content and Structure of the Programmes

The Bachelor's degree programmes in Civil Engineering and Mechanical Engineering are each ten-semester courses of study, comprising a Preparatory-Year-Programme (PYP) in the first two semesters followed by eight semesters in the College of Engineering. All students enrolled in either programme must successfully complete the PYP before formal admission to the College. The PYP accounts for 34 credit hours and focuses on foundational subjects such as calculus, physics, statistics, computer programming and English. While these courses provide a general academic foundation, additional foundational modules relevant to the respective disciplines are introduced later in the Bachelor's studies. Upon completion of the PYP, students proceed with the respective core curriculum, which comprises a further 139 credit hours.

The Bachelor of Science in Civil Engineering equips students with knowledge across six key technical areas: structural engineering, geotechnical engineering, traffic and transportation engineering, construction engineering, environmental engineering and water resources

engineering. In addition, students are trained to conduct experiments, analyse data and interpret findings in laboratories dedicated to geotechnical engineering, materials science and fluid mechanics. The curriculum further develops skills in designing systems, components or processes within a range of civil engineering contexts, including reinforced concrete and steel structures, foundations, transportation infrastructure, sanitation and environmental systems, materials, and water resources. Elective courses are available to expand on foundational sciences beyond the programme prerequisites.

The Bachelor of Science in Mechanical Engineering covers several core technical areas, including materials and manufacturing, thermofluids, and design and control. Laboratory and project work are integrated throughout the programme to reinforce theoretical knowledge with practical application. As in the Civil Engineering programme, students may take elective courses that extend their understanding of foundational sciences beyond the required prerequisites.

In addition to the technical and scientific core curriculum, both Bachelor's programmes (excluding the PYP) include five compulsory modules on religious and ideological foundations: *Introduction to Islamic Culture*, *Islam and Community Building*, *Economic System in Islam*, and *Political System in Islam*. Each of these modules carries 2 credit hours, equivalent to 3.6 ECTS credits. Furthermore, students are required to complete two modules in *Linguistic Skills* and *Arabic Writing*, also amounting to 2 credit hours (3.6 ECTS credits) each.

Furthermore, both Bachelor's programmes incorporate a substantial practical component, which can be fulfilled through either a Summer Training (ST) initiative or a Cooperative Training (Coop) programme. These are organised in cooperation with public or private sector organisations in the students' areas of specialisation, enabling the application of academic skills and knowledge in real-world environments. The Summer Training option consists of two months of practical work, typically in a relevant industry, whereas the Cooperative Training extends over seven months and allows for more in-depth professional engagement.

The programmes culminate in a Senior Design Project (SDP) course, undertaken in teams under faculty supervision, which simulates real-world professional conditions and requires the application of comprehensive engineering skills. The SDP is mandatory for graduation in all Bachelor's programmes offered by the College of Engineering. The project extends over two consecutive semesters and is offered in two courses totalling five credit hours. The regulations governing the organisation, supervision and assessment of these training components and projects are set out in the respective programme manuals.

The Master of Science programmes in Civil Engineering and Mechanical Engineering are single-track programmes completed over four semesters. To earn the Master degree in

either discipline, students must complete a total of 30 credit hours, distributed as follows: 9 credit hours (three courses) of compulsory modules, 15 credit hours (five courses) of elective modules, and a 6 credit hour thesis. Students in both Master's programmes are required to take the same three compulsory courses. These courses focus on enhancing mathematics skills, modelling and simulation skills, and laboratory-related skills.

In the Master of Science in Civil Engineering, elective courses cover a range of specialised areas, including structural engineering, geotechnical and foundation engineering, construction and management engineering, transportation and traffic engineering, water resources engineering, and environmental engineering.

In the Master of Science in Mechanical Engineering, elective courses focus on three main areas of specialisation: materials and production, mechanical design and control, and thermofluids.

The thesis component of both Master's programmes is, according to the SAR, a research-intensive undertaking that enables students to deepen their knowledge and skills through extensive reading, writing and practical work. The taught modules in the programme are designed to prepare students for this final stage, with a focus on developing expertise in research methodology, data collection, analysis, and academic writing. Comprehensive details regarding the thesis requirements, supervision and assessment are provided in the Thesis Manual.

The experts review the curricula and conclude that the four programmes provide solid technical training in their respective fields, corresponding to their respective EQF levels. They are also convinced that the programmes are well organised and structured, with each module representing a coherent unit of teaching and learning. They are satisfied that the curricula enable students to achieve the intended learning outcomes.

However, the experts also identify certain areas for improvement. In particular, they express surprise at the duration of the Bachelor's programmes. At ten semesters, even excluding the Preparatory Year Programme (PYP), the length appears unusually long. The local experts confirm that this duration is considered lengthy even by Saudi standards. The experts therefore recommend shortening the Bachelor's programmes and focusing their content more sharply on the essential core areas.

Similarly, the experts question the duration of the Master's programmes. While officially structured as full-time, four-semester programmes, the workload appears relatively low compared to the Bachelor's level. In the experts' view, the current content could feasibly be delivered within two semesters. Students confirm that many of them work alongside their studies, giving the impression of part-time study despite the full-time designation. The

expert panel further notes that the compulsory modules in both Master's degree programmes are identical, and that differentiation between the Master in Civil Engineering and the Master in Mechanical Engineering is created solely through the selection of elective courses. In response, the university explained that this arrangement was deliberately chosen to provide students with greater flexibility in shaping their individual study paths. According to the institution, students are required to consult with their academic advisors before making their final course selections to ensure that the chosen electives are coherent with the intended specialisation and conducive to achieving the programme learning outcomes. Nevertheless, the experts therefore recommend strengthening the Master's programmes by making fuller use of all four semesters, for example by introducing a clearer differentiation between the Civil Engineering and Mechanical Engineering study pathways. This would also support the university's stated position that, while the Master's level remains predominantly practice-oriented, it is designed to place a somewhat greater emphasis on methodological and research-oriented elements compared to the Bachelor's level. It is therefore recommended to condense the Bachelor's programmes to four years and to strengthen the Master's programmes.

The experts also appreciate the extensive scope for electives and the opportunities for individual focus in the programmes. However, they note that none of the curricula explicitly address the topic of sustainability. This is particularly striking given that the Programme Educational Objectives (PEOs) for both Master's programmes in Civil and Mechanical Engineering include the aim of enabling graduates to "skillfully contribute to the sustainable development of the Saudi society." In the experts' view, sustainability is a crucial topic for both the Bachelor's and the Master's levels and should be integrated accordingly. It is therefore recommended to strengthen the content on sustainability in the curricula.

In addition, the discussions repeatedly touched on the benefits and risks of artificial intelligence (AI). The university does not yet appear to have adopted a common position on this matter. While some programme coordinators considered AI checkers sufficient to address the issue, others identified a need for more proactive measures. The experts also emphasise that AI should neither be simply banned nor ignored. Instead, students should be systematically educated in both the effective use and the limitations of AI technologies. It is therefore recommended to integrate AI systematically into the curriculum and to establish formal regulations for its use.

For the Bachelor's Civil Engineering, the experts note that the curricula reveal certain missing elements that would improve the programme. In particular, they identify construction management as an area whose significance is not adequately reflected in the current curriculum. Students confirm in the audit that the coverage of construction/project

management could be improved. It is therefore recommended to strengthen the content on construction management in the curriculum of the Bachelor's programme in Civil Engineering.

For the Bachelor's Mechanical Engineering, the experts also identify mechanical vibrations as a topic of major importance, which is not sufficiently covered in the current curriculum. Students report that vibrations are currently offered only as an elective and should be included as a compulsory course. The university states that it plans to make this change; however, the old curricula will remain in place until the current cohorts have graduated. It is therefore recommended to strengthen the content on mechanical vibrations and to introduce it as a mandatory course in the curriculum of the Bachelor's programme in Mechanical Engineering.

Student Mobility

According to the Self-Assessment Report, student mobility is not officially intended in any of the four programmes at Qassim University. As such, there are no cooperation partners or mobility offers in the programmes. Consequently, there are also no specific service units in place to systematically support students in their mobility endeavours. The experts are surprised by this and ask in the audit what the reason is for the complete absence of student mobility. They learn that it is uncommon in Saudi Arabia for students to spend a period abroad while actually completing their study programme in Saudi Arabia, since the education of every Saudi Arabian citizen is funded by the Ministry. Therefore, there are no units explicitly fostering students going abroad. Nevertheless, Qassim's management explains that it is technically possible for students to spend a semester or undertake an internship abroad, since they have regulations in place to recognise external qualifications. They also state that students have previously gone abroad and that in those cases, a learning agreement has been signed between Qassim University and another university. The management emphasises that they do not oppose mobility and will support any student who wishes to study or undertake an internship abroad. Nonetheless, the main responsibility for finding an adequate university or company abroad and organising the mobility lies with the student.

While the experts acknowledge that students are not discouraged from undertaking international mobility, they strongly recommend that Qassim University changes its policy and actively promotes student mobility. To this end, they suggest establishing adequate partnerships with institutions abroad in order to create a portfolio of mobility opportunities and administration units offering systematic support to interested students. The importance of student mobility is also emphasised by the students in the audit. They confirm their interest in going abroad if adequate mobility opportunities existed.

The experts also learn that, although there is no systematic outgoing mobility, Qassim University welcomes international students onto its Master's programmes. The university is open to international students, with admission criteria described as very open and supportive. As additional incentives, international students are offered benefits such as free housing and free medical care. The experts appreciate the open and friendly atmosphere, as well as the efforts made to welcome international students, and describe this as a strength of Qassim University.

Periodic Review of the Curriculum

At Qassim University, the curricula of all Bachelor's and Master's programmes in Civil and Mechanical Engineering are subject to a regular and structured review process to ensure continued alignment with programme objectives and responsiveness to developments in the academic, professional, and institutional environment. This review is conducted at least every five years, or earlier if significant internal or external changes occur. The process examines whether the content and sequencing of modules remain consistent with the intended Programme Learning Outcomes (PLOs) and enable graduation within the standard period of study.

The review is embedded in the university's quality assurance framework and combines continuous monitoring with formal periodic evaluations. Annual follow-up activities focus on performance monitoring and minor adjustments, while the five-year cycle addresses more substantial revisions. The process involves gathering and analysing feedback from a wide range of stakeholders, including faculty, students, alumni, and external partners, and assessing the effectiveness of the curriculum in achieving its intended outcomes.

Outcomes of the review may include the revision of strategic programme goals, updates to programme learning outcomes, and the adjustment of course specifications to ensure their linkage to the updated PLOs. Any proposed changes are discussed within the relevant academic units and approved by the Department, College, and University Councils before implementation. Between 2009 and 2021, the programmes were revised by converting selected elective courses into compulsory ones, introducing new required modules, adding flexible options for practical training, integrating term projects into several courses, updating laboratory experiments, and making targeted content adjustments in specific modules.

The expert panel notes that Qassim University has established a systematic and continuous process for curriculum review and improvement, with a clear focus on ensuring relevance and quality. They encourage the university to maintain this structured approach and to continue adapting its programmes in line with both emerging academic perspectives and anticipated developments in the engineering sector. In this context, the experts emphasise that the review process should also be used as a vehicle for the timely integration of current

and cross-cutting topics – such as artificial intelligence and sustainability (s. Content and Structure of the Programmes) – into the curricula, ensuring that graduates are well prepared to address the technological, environmental, and societal challenges of the future.

Criterion 1.4 Admission Requirements

Evidence:

- Self-Assessment Report
- Programme handbooks for each programme
- Diploma Supplements
- Websites of all study programmes
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Admission to the Bachelor programmes in Civil Engineering and Mechanical Engineering requires successful completion of secondary education with a focus on science subjects. National applicants must achieve a minimum GPA as specified by Qassim University and pass two national standardised tests: the General Aptitude Test (GAT), which evaluates verbal and quantitative reasoning as well as analytical abilities, and the Scholastic Achievement Admission Test (SAAT), which covers reading, writing, and mathematics. According to the Self-Assessment Report (SAR), both tests are essential for admission to the Bachelor programmes in the College of Engineering, as they ensure that applicants possess the foundational skills and knowledge necessary for academic success.

International applicants must hold equivalent secondary education qualifications recognised by the Saudi Ministry of Education, meet the GPA requirements set by the university, and demonstrate English language proficiency through standardised tests such as TOEFL, IELTS, or equivalent. Additional requirements may include a valid student visa and proof of health insurance.

In their first year, students are enrolled in a general engineering programme without being assigned to a specific major; upon successful completion of the third level, they are allocated to one of the three undergraduate programmes within the College of Engineering based on their academic performance (GPA) and stated preferences.

The intake capacity per cohort is 90 students for the Bachelor's programmes. On average, around 100 people apply for the Bachelor's programme in Civil Engineering, of whom 63 are admitted, resulting in an admission ratio of approximately 1:1.58. For the Bachelor's

programme in Mechanical Engineering, there are typically 90 applicants, with 63 admitted, corresponding to an admission ratio of about 1:1.42.

Applicants to the Master of Science in Civil Engineering must hold a Bachelor's degree in civil engineering with a minimum GPA of 3.25 out of 5, or equivalent. For the Master of Science in Mechanical Engineering, a Bachelor's degree in mechanical engineering, aerospace engineering, renewable energy engineering, materials engineering, manufacturing engineering, industrial engineering, mechatronic engineering, electrochemical engineering, or production engineering is required, with a minimum GPA of 3.0 out of 5, or equivalent. In both programmes, applicants must submit valid results from the Post-Graduate General Aptitude Test, as well as a recognised English language test taken during or before the application period. Minimum accepted scores include 65 (STEP), 8 (QUEPT), 49 (TOEFL iBT), 460 (TOEFL PBT), or an IELTS band score of 4.5.

Furthermore, applicants must be Saudi nationals or, if non-Saudi, must be supported by an official postgraduate scholarship. Non-Saudi applicants must also not exceed 30 years of age at the time of application. All applicants must pass a qualification exam and may be required to complete designated undergraduate complementary courses, depending on their academic background, within two semesters of enrolment. The application fee is SAR 100, and tuition fees amount to SAR 40,000 for the Master's programme. An additional SAR 5,000 applies for each supplementary semester, if needed.

The intake capacity per cohort is 20 students for the Master's programmes. On average, around 40 applicants seek admission to the Master's programme in Civil Engineering, of whom 14 are accepted, resulting in an admission ratio of approximately 1:2.86. For the Master's programme in Mechanical Engineering, there are typically 19 applicants and five admitted students, corresponding to an admission ratio of about 1:3.8.

In its Self-Assessment Report, the university states that admission requirements are regularly reviewed and adjusted to align with educational standards, industry needs, and stakeholder feedback. These reviews also assess whether the regulations ensure sufficient subject-related prior knowledge among students.

The experts review the admission requirements and procedures, finding them appropriate for supporting students in achieving the intended learning outcomes of their respective programmes. They also note that the admission requirements are transparent and binding for all stakeholders, and they welcome Qassim University's clear and binding rules on the recognition of external qualifications. The admission ratios also confirm the demand for the four programmes.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Document “Calculation of the Credit Load for ECTS”
- Student manual
- Student handbooks
- Programme handbooks
- Course specifications
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Qassim University uses a local credit system in which credit hours (CRH or CR) are awarded. A conversion into ECTS credits is available and is described in detail in the subsequent section.

The experts learn that the university systematically monitors and documents the total student workload for each module, forming the basis of the credit allocation. The workload is categorised into four components, reflecting the different modes of learning and instruction: lectures (LT), tutorials (TU), laboratory classes (LB), and self-study. While the full workload is monitored, the local credit system is primarily determined by contact hours. When awarding CRH, only lecture and laboratory hours are formally taken into account, whereas tutorials and self-study time are not included in the calculation.

To determine the precise number of CRH, Qassim University bases its calculation on the weekly hours spent in lectures and laboratory sessions. Specifically, one credit hour is awarded for each weekly contact hour of lectures.

However, laboratory sessions are in some cases assigned half the number of credit hours, as the number of hours spent per week is actually lower. For instance, if a module allocates two hours per week to laboratory work, only one CRH is awarded for the laboratory component (e.g., *Fluid Mechanics Laboratory*). This practice is not applied consistently, however, as evidenced by other modules (e.g., *Plane Surveying*), as illustrated in the table taken from the curricular overview of the sixth semester of the Bachelor’s programme in Civil Engineering below.

6th Level

Course Code	Course Title	CR	LT	LB	TU
STAT 328	Probabilities and statistics	3	3	-	1
GE 213	Introduction to Engineering Design-2	2	2	2	-
CE 205	Properties of Structural Materials	2	1	2	-
CE 230	Fluid Mechanics	3	3	-	1
CE 231	Fluid Mechanics Laboratory	1	-	2	-
CE 212	Plane Surveying	3	1	2	1
CE 206	Structural Analysis – 1	3	3	-	1
		17			

When calculating the workload, Qassim University assumes a certain amount of self-study time for each credit hour. In the Bachelor's programmes, each CRH corresponds to an additional two hours of self-study per week. In the Master's programmes, the expectation is higher: 4.21 hours of self-study per CRH, and 7.81 hours per CRH for thesis modules. The semester length is 15 weeks for the Bachelor's programmes and 16 weeks for the Master's programmes.

The total workload for *Plane Surveying* is calculated as follows: 15 hours of lectures, 30 hours of laboratory work, and 90 hours of self-study time (including tutorials), amounting to a total of 135 hours.

To convert the CRH into ECTS credits, Qassim University applies a conversion factor of 25 hours per ECTS. Using the previous example, 135 hours divided by 25 results in 5.4 ECTS.

For the entire semester, 17 CRH plus twice that amount of time for self-study over a 15-week period results in a total workload of 765 hours, which is equivalent to 30.6 ECTS.

Overall, the Bachelor's degree programmes comprise 160 local credit hours (CRH) across 10 semesters, including the preparatory year, corresponding to 288 ECTS credits. Although the distribution of the workload in the Bachelor's programme in Mechanical Engineering differs slightly, the absolute total remains unchanged.

Each of the Master's programmes consists of 30 CRH, equating to 120 ECTS credits over four semesters. In total, students acquire around 408 ECTS credits upon completing both the Bachelor's and Master's degrees.

For the calculation, the university provided the following table after the audit, using the Bachelor's programme in Civil Engineering as a representative example for both Bachelor's programmes in this cluster:

- Ratio of contact hours to self-study: 2:1
- Total number of weeks per semester: 15 weeks
- Total number of credit hours directly related to the degree: 160 CRH (equivalent to 289 ECTS) in the five-year programme

Year	**Level/ semester**	**CRH** (lectures and lab)	**Average self-study time** (h/week) (2 x CRH)	**Total work-load/week** (in h)	**Total workload/ semester** (15 weeks) (in h)	**ECTS Cred-its** (25 h = 1 ECTS)
1 (PYP)	1	10	20	30	450	18
	2	11	22	33	495	20
2	3	18	36	54	810	32
	4	18	36	54	810	32
3	5	17	34	51	765	31
	6	17	34	51	765	31
4	7	17	34	51	765	31
	8	16	32	48	720	29
5	9	17	34	51	765	31
	10	19	38	57	855	34
	Total	**160**	320	480	7200	**288**

The university has also prepared a corresponding table for the Master's programme in Civil Engineering:

- Ratio of contact hours to self-study for courses: 4.21:1
- Ratio of contact hours to self-study for the thesis: 7.81:1
- Total number of weeks per semester: 16 weeks
- Total number of credit hours directly related to the degree: 30 CRH (equivalent to 120 ECTS) in the two-year programme

Year	Level/ semester	Course	CRH	Average self-study time	Total workload/week	Total workload/semester (16 weeks)	ECTS Credits	ECTS/ semester
1	1	GE605	3	12.6	15.6	250	10	**30**
		GE608	3	12.6	15.6	250	10	
		MATH621	3	12.6	15.6	250	10	
		Total	9				30	
	2	CE6XX	3	12.6	15.6	250	10	**30**
		CE6XX	3	12.6	15.6	250	10	
		CE6XX	3	12.6	15.6	250	10	
		Total	9				30	
2	3	CE6XX	3	12.6	15.6	250	10	**30**
		CE6XX	3	12.6	15.6	250	10	
		Proposal	0	15.6	15.6	250	10	
		Total	6				30	
	4	Thesis [CE699]	6	46.9	46.9	750	30	**30**
		Total	**30**		**Total**	**3000**	**120**	**120**

Both the Bachelor's and Master's programmes show relatively low dropout rates, and statistics confirm that students generally complete their studies within the intended period.

The expert panel acknowledges the local credit system and its conversion into ECTS. However, the panel emphasises that a simple conversion of local credits into ECTS is not sufficient; the workload must be calculated for each individual module, taking into account both contact hours and self-study. The respective self-study time has to be listed in the module descriptions (see Criterion 4.1). Only in this way can the module descriptions demonstrate plausibly how the total workload per module results in the allocated ECTS credits and

ensures that approximately 30 ECTS are achieved per semester. From a formal perspective, the current distribution does not fully comply with the ECTS framework.

Furthermore, the experts note an uneven distribution of workload in the Bachelor's programmes. The Preparatory Year Programme appears to have a comparatively low workload, while some semesters, such as Level 10 in the Bachelor's programme of Civil Engineering, comprise as much as 34 ECTS. The experts suggest that the university could shift approximately 10 ECTS credits to the first year and implement around 30 ECTS credits per semester, resulting in 240 ECTS credits for the eight semesters of the main programme. The university needs to redesign the study plans to distribute the workload more evenly across all semesters. As a general rule, 60 ECTS credits should be awarded per academic year, with an approximately equal distribution across the two semesters.

The panel also discussed the topic of workload intensively with the students. Since the differing weighting of self-study time between the Bachelor's and Master's programmes was only submitted after the audit, it was not addressed in the discussions with the students. Nevertheless, the students confirmed that the actual workload in the Master's programmes is lower, which they welcomed, as many of them are already employed alongside their studies. In a subsequent meeting with the teaching staff, the experts were informed that most Master's students hold full-time jobs. To accommodate this, lectures are scheduled at the end of the week and in the evenings after 3 p.m. However, the panel found this difficult to reconcile with a nominal workload of 30 ECTS per semester, as it would appear challenging for most students to manage alongside full-time employment, although the majority still graduate within the standard period of study. As already outlined in Criterion 1.3 Curriculum, the panel therefore recommends condensing the Bachelor's programmes to four years and strengthening the Master's programmes. The panel would welcome the inclusion of specific workload surveys as described in the Self-Assessment Report, as there appear to be remaining inconsistencies in the current calculations.

With the provision of the revised conversion table from CRH to ECTS, one further issue became apparent. According to the Self-Assessment Report, all compulsory components of the study programmes are awarded credits. However, this does not appear to be the case for the *Proposal*, which represents a workload of approximately 10 ECTS but is not assigned local credit hours. It must be ensured that all compulsory modules are allocated credit hours.

In conclusion, the panel notes that Qassim University has developed a generally coherent local credit hour system with a transparent conversion to ECTS. Nevertheless, the current implementation does not fully comply with the formal ECTS framework. The workload must be calculated and documented at the level of each individual module, with explicit

indication of self-study time. The university has to ensure that approximately 30 ECTS credits are achieved per semester, and that the workload is distributed more evenly across all semesters. In this context, the Preparatory Year should be integrated with an appropriate share of workload. Furthermore, all compulsory components of the study programmes must be allocated credit hours.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Programme handbooks
- Course specifications
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, teaching methods at Qassim University are selected on the basis of clearly defined criteria, including their suitability for the targeted learning outcomes, the course content and nature, the educational system, the diversity of student backgrounds, and the available resources. The overall approach is rooted in student-centred learning and aims to foster active participation, critical thinking and practical application of knowledge.

Across all four programmes, traditional lectures are combined with a wide range of active learning strategies, including case studies, group projects, problem-based learning, mini-projects and senior design projects at Bachelor's level, as well as thesis research at Master's level. Real-world applications are emphasised throughout the curriculum. Innovative formats such as flipped classrooms, peer review, collaborative assignments and project-based learning are also used to deepen understanding and enhance engagement. Digital learning is supported by the online learning management system Blackboard, virtual classrooms and interactive tools, which are continuously monitored by the Deanship of E-Learning and Information Technology. This blended learning model ensures that in-person and online elements complement and enrich each other, while maintaining an appropriate balance between contact hours and self-study time.

A core component of the programmes is the structured introduction to independent scientific work. In the Bachelor's programmes, this is achieved through a two-semester senior design project and compulsory summer or cooperative training. In the Master's

programmes, students develop advanced research skills through the completion of a thesis. Additionally, students engage in seminars designed to foster competencies in scientific reading, writing and critical analysis.

The effectiveness of teaching and learning methods is systematically monitored. Programme committees collect and analyse feedback from students, faculty, alumni, employers and external reviewers. This is complemented by formative and summative assessments, curriculum mapping, and regular reviews of programme and course learning outcomes. Continuous quality improvement measures have included the introduction of additional project work, the adoption of technology-enhanced instruction, and expanded academic advising.

The expert panel is satisfied that the programmes make effective use of a variety of teaching methods and didactic approaches. This impression is supported by the students' feedback: In the on-site ASIIN survey, 93% of respondents awarded the highest or second-highest grade for the lecturers' teaching skills. The expert panel therefore shares the view that the teaching methods and tools applied in the programmes are appropriate for supporting students in achieving the intended learning outcomes and are well adapted to the specific subject areas, cultural context and study formats.

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

In regard to the requirement that the workload must be calculated and documented at the level of each individual module, the university states in its response that the ECTS calculations have been revised accordingly. In addition to contact hours, the respective self-study time has now been taken into account: for lectures with a factor of 2, for tutorials and laboratory sessions on a 1:1 basis, with higher allocations applied to particularly demanding design courses. Furthermore, English preparation courses in the Preparatory Year, which had previously been omitted, were included in the calculation, resulting in a total of approximately 60 ECTS. This explains why lower CRH/ECTS figures were shown earlier, as the actual workload in the Bachelor's programme is in fact higher. The panel acknowledges the university's efforts to revise the ECTS calculations and to include both contact hours and estimated self-study time in the documentation. However, the panel emphasises that all compulsory courses must be included in these calculations without exception. Moreover, the requirement is not simply about applying conversion factors, but about ensuring an accurate determination of student workload, ideally based on empirical data such as student surveys. Accordingly, the requirement is upheld.

With regard to the panel's requirement to ensure a balanced workload across all semesters in the bachelor's programmes, the university explains that the Preparatory Year Programme (PYP) is a nationally mandated component of higher education in Saudi Arabia, designed to prepare students linguistically, mathematically, and scientifically for engineering studies. The university emphasises that the PYP is an integral part of the academic pathway, ensuring equitable access and readiness for all students. The panel acknowledges these national requirements but notes that, even in the revised workload calculations, significant imbalances remain (e.g. 34.2 ECTS in Level 3 and 33 ECTS in Level 4, compared to only 27 ECTS in Level 8 of the Bachelor in Mechanical Engineering). Similar inconsistencies are also found in Civil Engineering. Therefore, the panel upholds its requirement to distribute the workload equally among the semesters.

In response to the panel's requirement that all compulsory modules in the programmes, including the research proposal, must be allocated credit hours, the university states that credit hours are assigned to all courses and, in this context, also included English preparation courses in the calculations. However, the statement does not address the specific case of the research proposal in the Master's programmes. Therefore, the requirement is upheld.

The other aspects raised are only recommendations and not requirements, and are therefore addressed here only briefly.

The panel takes note of the university's detailed response regarding the recommendation to shorten the Bachelor's programme in favour of strengthening the Master's level. As mentioned before, the university explains that the PYP is a nationally mandated element of Saudi higher education, anchored in NCAA (National Commission for Academic Accreditation and Assessment) standards. Regarding the Master's level, the university emphasises that the workload corresponds to international norms (maximum three courses per semester, 9–12 credit hours) and that the perception of a lighter workload reflects the intended focus on self-directed learning and research typical of postgraduate education. The panel acknowledges that the PYP is a national requirement. Nevertheless, the panel maintains its recommendation to review the overall structure: while a five-year study period may not be unusual, it is not mandatory. Given the comparatively light workload in the PYP, a more balanced distribution across the study years could be considered. Furthermore, student feedback does not fully support the assumption that all learners engage in independent study to the extent suggested. This remains, however, a recommendation only, and the university is free to decide whether and how to take it forward. Accordingly, the panel upholds its view and considers the recommendations as constructive suggestions for future enhancement but not as conditions for accreditation.

With regard to the recommendations on strengthening sustainability and the integration of artificial intelligence, the university reports that revised curricula for both Bachelor's and Master's programmes in Civil and Mechanical Engineering have already been developed and are currently undergoing formal approval by the departmental councils. These revisions include newly introduced courses explicitly addressing sustainability, aiming to provide students with comprehensive knowledge of sustainable engineering practices and their role in advancing sustainable development. Similarly, the curricula now incorporate dedicated content on artificial intelligence, covering both technical applications and critical aspects such as ethical considerations and limitations. In addition, the university is in the process of developing internal guidelines to ensure a consistent and responsible approach to the use of AI across programmes. The panel welcomes these developments but maintains its recommendations until the revised curricula have formally entered into force.

With regard to construction management in the Bachelor's programme in Civil Engineering, the university explains that the current curriculum already includes a core course in Project Management, covering a broad range of topics such as project scope and stakeholder management, time and cost estimating, project monitoring and control, risk management, procurement management, organisational structures, leadership and motivation, as well as an introduction to project management software tools. In addition, the curriculum offers a core course in Construction Engineering, ensuring that students gain exposure to this area. The university further reports that these aspects will be strengthened in the revised curriculum currently under preparation. The panel notes, however, that construction organisation, construction management, construction costing, cost accounting, tendering, and contracting are not included. In the panel's view, project management represents only one aspect of construction management and is often offered in addition to dedicated courses in this field. The panel therefore encourages the university to further strengthen the curriculum in this regard and maintains its recommendation.

With regard to the recommendation to strengthen the coverage of vibrations in the Bachelor's programme in Mechanical Engineering, the university reports that in the revised curriculum the relevant course has been moved from an elective to a mandatory component. The panel welcomes this development but maintains its recommendation until the new curriculum has formally entered into force.

With regard to the panel's recommendation to strengthen student mobility, Qassim University acknowledges its importance as a key element of internationalisation and graduate development. In its response, the university outlines several measures, including clearer policies for recognising external qualifications, the development of international partnerships, increased student awareness through workshops and advising, and full support for credit recognition to ensure that mobility does not delay graduation. The panel welcomes

these initiatives and recognises the university's commitment to building a more systematic framework. Nevertheless, the recommendation is upheld, as the measures will need to be fully implemented and sustained in the longer term.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Self-Assessment Report
- Student handbook
- Programme handbooks
- Student manual
- Course specifications
- Samples of the First Day Materials (FDM)
- Sample exams and theses
- Summer Training Program Manual
- Coop Training Manual
- Senior Design Project Courses Guidelines Manual for Control and Evaluation
- MSc Thesis Manual
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:

At Qassim University, all examination processes for the four programmes under review are governed by the relevant academic bodies, in accordance with the regulations of the Ministry of Education. The type, number, timing, and grade distribution of assessments in each course are specified in the course specifications. In the Bachelor's programmes, the minimum passing grade for a course is 60%, whereas in the Master's programmes it is 70%. In addition to final and mid-term examinations, assessment methods include quizzes, assignments, projects, presentations, and laboratory work, as outlined in the relevant course documents.

The university writes in the Self-Assessment Report that, at the beginning of each course, instructors provide students with the *First Day Materials* (FDM) document, which contains comprehensive information on the course syllabus, instructor contact details, teaching and assessment strategies, and communication channels. This document is made available on the Blackboard system and the college website, and is discussed in detail during the first lecture to ensure transparency.

Examination schedules for mid-term and final exams are published by the Vice Dean of the College of Engineering, while the Senior Design Project Committee, the Summer Training Committee, and the Graduate Studies Committee are responsible for the scheduling of their respective assessments. Information is disseminated via e-mail and the college website.

For Cooperative Training and Summer Training, grades are based on an evaluation of the student's performance during the internship and the internship report, as evaluated by the student's internship advisor and the program committee. The procedures and evaluation criteria for both internships are set out in detail in the respective Summer Training and Cooperative Training manuals.

At the end of the Bachelor's programmes, students complete a Senior Design Project (SDP) instead of a thesis which enables them to apply their knowledge in mathematics, general sciences, and engineering to a practice-oriented design task, closely resembling professional practice. Students work in groups to develop a comprehensive and efficient design, which is presented at the conclusion of the project.

The Master's degree programmes conclude with the completion of a Master's thesis worth six credit hours. The process is governed by programme-specific handbooks and a thesis manual, which outline preparation steps, ethical requirements, and evaluation procedures. The thesis work typically relates to the supervisor's research interests and combines an initial phase of investigating and understanding the topic with a subsequent phase of studying, researching, and writing, including the selection and analysis of relevant literature. The completed thesis must adhere to academic standards in form, accuracy, readability, and citation, and culminate in a formal defence before a specialised committee. Master's theses may be conducted within the faculty or in collaboration with industry; in all cases, the university retains responsibility for ensuring the quality, academic standards, and suitability of the work.

The university operates a comprehensive policy framework for students with special needs and for those who miss examinations due to illness or other excused absences. This includes clearly defined rules for make-up exams, alternative assessments, and

compensation for disadvantages, as set out in official manuals and supported by the Student Affairs Office.

The university explains that students may withdraw from a course, for example, after the mid-term examination. If a student fails the final examination, a re-sit is only permitted in cases of valid excuse, such as illness; otherwise, the course must be repeated in the following semester. Courses may, in principle, be retaken an unlimited number of times; however, in line with governmental regulations, the final grade is capped at a certain minimum score, meaning that repeated attempts cannot result in a grade lower than this threshold.

Results of examinations are published within defined timeframes: for most assessments within one week, and for final examinations within three working days. Students receive timely feedback, and academic advising reports are prepared after each mid-term to monitor progress and offer guidance where needed. The university reports that all programmes systematically evaluate whether students have sufficient time to prepare for and complete their examinations, using mechanisms such as student surveys, course folder reviews, advisor feedback, analysis of learning outcome assessments, independent reviewer opinions, and external benchmarking. Examinations are graded using transparent criteria, with opportunities for students to review and discuss their results. Disputes can be submitted to the Head of Department for re-marking by a specialist committee, whose recommendations, if resulting in a grade change, are approved by the relevant councils and forwarded to the university administration.

Academic integrity is a core value of Qassim University. Plagiarism detection software is used systematically, complemented by oral defences, interviews, and checks on references and sources. The rules governing academic integrity are set out in the student manual and programme handbooks.

The achievement of Programme Learning Outcomes (PLOs) is evaluated each semester through course reports, which include an analysis of strengths, areas for improvement, and recommendations for action. Results are discussed in programme committee meetings and incorporated into the annual programme report and operational plan. The process is informed by both direct and indirect assessment tools, including student surveys, reviews of course folders, advisor feedback, and external benchmarking.

The expert panel notes that the examination system at Qassim University is generally well structured and effectively implemented. In the audit, students expressed high levels of satisfaction with the organisation of examinations in all three study programmes, confirming that they receive all relevant information, including examination dates and assessment criteria, at the beginning of the semester. The examination policy, including compensation measures, is transparent to all stakeholders. In the ASIIN student survey, 100 % of

respondents were satisfied with the organisation of examinations, and the majority were also satisfied or very satisfied with the feedback provided.

After reviewing the documentation and samples of examinations and theses, the experts concur with the students' assessment and conclude that Qassim University has a robust examination system in place. However, the panel observes that competence-oriented examinations like oral exams or project works are underrepresented and therefore recommends strengthening their use. In addition, the panel suggests considering more frequent variation of examination questions to reduce the risk of academic misconduct.

Students also reported general satisfaction with the possibility of retaking examinations; however, some criticised the requirement to repeat the entire course, including all additional coursework, when failing a final exam. This significantly increases the workload for affected students. The panel therefore recommends considering the option of allowing students who fail an exam to retake it in the next semester without being obliged to repeat all additional coursework.

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

In regard to the panel's recommendation to increase the use of competence-oriented examinations, the university confirms that such formats (e.g. project-based work, oral exams, presentations, portfolio reviews) are already applied in many modules at both Bachelor's and Master's level. The university further states that these formats will receive stronger emphasis in the revised curriculum (Plan E). The panel welcomes this commitment but upholds its recommendation.

In regard to the panel's second recommendation, the university explains that failure is determined by the overall course grade, not by the final exam alone, and that current national regulations require students to repeat the entire course, including coursework, if they fail. The university also notes that credit hour limits per semester already prevent an excessive workload in retake situations. The panel accepts this explanation and withdraws its recommendation.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report

- QU Faculty Handbook
- ME and CE Faculty CVs
- SRIU Achievement Report
- QEC Training and Professional Development Manual
- Annual KPI Reports
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The Civil Engineering and Mechanical Engineering departments, which are responsible for the four programmes under review, each employ 38 full-time PhD faculty members covering all relevant specialisation areas. All faculty members contribute to both the Bachelor's and Master's programmes in their respective departments. The current student-to-faculty ratios are 5.8:1 for both Bachelor's programmes and below 1:1 for the Master's programmes. These ratios align with national and international benchmarks. Both departments also have teaching assistants currently pursuing doctoral degrees at internationally recognised institutions, who are expected to join the departments upon completion of their studies.

The distribution of academic ranks across both departments includes professors, associate professors, and assistant professors in all categories, and the faculty specialisations are evenly represented across the different subject areas. In Civil Engineering, 16 % of faculty members are full professors, 32 % are associate professors, and 52 % are assistant professors. In Mechanical Engineering, the corresponding figures are 29 %, 34 %, and 37 %. The teaching load for faculty members is assigned according to academic rank and published university regulations: professors teach 10 contact hours per week, associate professors 12, and assistant professors 14. Administrative responsibilities, such as department chair roles, can lead to a reduced teaching load, and thesis supervision is credited as one contact hour per student for both the supervisor and co-supervisor.

The adequacy of faculty staffing is monitored annually through programme specifications and defined Key Performance Indicators (KPIs), including student-to-faculty ratios, the distribution of academic ranks, and the alignment of specialisations with programme needs. These indicators are reported in the Annual KPI Report and feed into departmental action plans. The Deanship of Human Resources oversees faculty recruitment. All 76 faculty members in the two departments hold doctoral degrees in their engineering fields, with some also having post-doctoral experience or prior professional work in relevant industries.

According to the Self-Assessment Report, faculty members are actively engaged in academic and research activities, including participation in conferences, workshops, seminars, funded research projects, industry collaborations, patents, and scholarly publications. Research activities are coordinated by the College's Scientific Research and Innovation Unit (SRIU), which is linked to the university's Scientific Research Deanship and is responsible for developing the college's research strategic plan, promoting innovation and research ethics, and documenting research activities annually. Performance is measured using research-related KPIs.

Professional and didactic development is supported through multiple university entities, including the Deanship of Development and Quality, the Deanship of e-Learning and Distance Education, and the Leadership and Talent Development Centre. Training and development activities are also coordinated by the College's Training and Development Unit, which identifies training needs, particularly for new faculty, through end-of-year evaluations and subject committee coordinators' recommendations. Training is offered regularly and covers topics such as teaching and learning strategies, modern engineering education tools, research methods, and intellectual property rights. Participation and effectiveness of training are monitored through KPIs, surveys, and annual achievement reports.

Faculty performance is evaluated annually through a multi-source system including self-evaluation, student evaluations, evaluation by the Head of the Department, evaluation by the Quality Assurance Unit, evaluation by the vice dean for academic affairs, evaluation by colleagues, and evaluation by the Dean. Results feed into the identification of training needs and continuous improvement measures.

Faculty are also involved in a wide range of academic, administrative, and community engagement activities, including curriculum design, quality assurance processes, student advising, supervision of final-year projects, outcome assessment, and extracurricular student activities.

In the audit, faculty members confirm that they receive strong institutional support, enabling them to fulfil their teaching and research responsibilities effectively while also pursuing professional and didactic development. The experts acknowledge the well-structured mechanisms in place at Qassim University to ensure the adequacy of staffing, the alignment of specialisations with programme needs, and the continuous enhancement of academic and pedagogical competencies. Overall, the experts conclude that the composition, qualifications, and professional orientation of the teaching staff are highly suitable for delivering the degree programmes at the intended level. They particularly welcome the active engagement of faculty in research, innovation, and industry collaboration. Students confirm this positive impression, expressing high satisfaction with the accessibility and commitment

of the teaching staff, and noting that instructors are responsive to feedback and readily available to provide academic support when needed.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- Programme handbooks
- Student Manual
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:

At Qassim University, sufficient organisational structures and human resources are in place to provide individual academic and general counselling, supervision, and support to students, as well as administrative and technical assistance. In case of questions or problems, the Student Affairs Office is one of the first points of contact. It is headed by an engineer and supported by two full-time staff members, and operates in close coordination with the Deanship of Admission and Registration. Its responsibilities include assisting with student registration, organising examinations, monitoring attendance, and communicating important dates and announcements.

Students' academic progress is primarily monitored through cooperation between the Deanship of Admission and Registration and the respective programmes. In addition, the university operates an academic advising system in which each student is assigned to an academic advisor who maintains records of the student's progress and contacts them when needed. Students are advised to meet with their academic advisor at least once per semester, prior to course registration. Academic advisors assist students with understanding regulations, curriculum planning, course selection, and identifying opportunities such as scholarships, summer training, and undergraduate research. Master's students receive further supervision from dedicated thesis advisors who guide them through all stages of their research projects.

Apart from their academic advisor, students can also approach the Dean's and Heads of Departments' offices during open-door hours, and faculty members are available during posted office hours. At university level, the "Academic Advising and Support Unit" offers further support to develop students' skills, foster academic innovation, and promote personal growth, while also addressing psychological, health, financial, and professional

matters. The Scientific Research Deanship provides advice on research and innovation. The Alumni Unit also serves as a resource for career advice and networking opportunities.

In addition to academic guidance, a wide range of non-academic services is available. These include library and research support, as well as health care services offered in multiple specialised clinics. Housing and leisure services assist with both on-campus and off-campus accommodation, while the university's Alumni Unit organises annual job fairs and career counselling days. Financial aid in the form of full scholarships is available for both national and international students. Students also benefit from a variety of cultural and sports facilities, such as a mosque, a cafeteria, sports venues, and student clubs.

The experts conclude that sufficient resources and organisational structures are in place to provide individual guidance, counselling, and support to all students. In particular, the system of academic advising is regarded as highly effective; students confirmed during the audit that their advisors assist them with all issues, making additional support measures unnecessary. According to the student survey, all respondents stated that lecturers are easily approachable outside the classroom, and almost all agreed that they are open to questions and criticism.

The experts note that students are generally well informed about where to find support services on campus. The university has also established procedures for supporting students with disabilities or special needs. Such cases are handled individually by the "Student Serving Committee" upon submission of a request to the Vice-Dean, ensuring that appropriate measures are taken as required.

In discussions with the students, the experts learned that the conditions and number of scholarships per year are fluctuating. They therefore encourage that this be communicated clearly to the students. Overall, the experts are very satisfied with the range and quality of student support services available.

Criterion 3.3 Funds and Equipment

Evidence:

- Self-Assessment Report
- ME MSc Program Facilities and Equipment Guide
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The Qassim University Engineering College (QEC) is located on the main campus in Buraydah and occupies a total area of approximately 16,000 m², comprising the main building, the mechanical workshop, and the laboratories. The Mechanical Engineering Department is located on the ground floor, while the Civil Engineering Department occupies the first floor. According to the Self-Assessment Report, the college building is constructed to high-quality standards, features modern design and integrated services, and is equipped with the latest technology. The workshop building is directly connected to the main building through bridges on the first and second floors.

The QEC's infrastructure includes administrative and faculty offices, classrooms, meeting rooms, and laboratories. The three departments (Civil, Mechanical and Electrical Engineering) within the college share 33 rooms, comprising 24 classrooms, four lecture halls, four active learning rooms, and two drawing halls. Classroom sizes and capacities vary from 50 m² for 30 students to a 250 m² theatre-style lecture hall seating 185 students. All instructional rooms are air-conditioned and equipped with whiteboards and data projectors. Laboratories are equipped to support experimental coursework, senior design projects, research, and community service, with capacities of up to 25 students per session. The Mechanical Engineering programme operates 18 laboratories, while the Civil Engineering programme operates 11 laboratories.

Computing facilities include shared computer laboratories equipped with relevant engineering software (e.g., AutoCAD, SolidWorks, MATLAB), networked faculty offices with high-speed internet, and wireless connectivity throughout the building. University-level computing resources and licensed software are provided by the Deanship of Information Technology.

Library services are managed by the Deanship of Library Affairs, with the Central Library serving as the main resource for engineering students. The library's collection includes books in Arabic and English covering all engineering disciplines, and its electronic centre provides access to international databases and journals. A dedicated library for the College of Engineering is planned as part of the strategic development of the college.

As a public institution, Qassim University receives most of its funding from the government, and it also benefits from numerous grants that support its educational and research activities. According to the Self-Assessment Report, the QEC has adequate financial resources to maintain and enhance the quality of education, including funding for laboratory equipment, teaching materials, and technological infrastructure. Funding allocation and resource management follow defined procedures, with needs identified by departmental laboratories committees and coordinated through the College Laboratory Committee and the

Needs and Resources Development Committee. This committee is responsible for planning resource provision, coordinating with governmental and private sectors, supervising expenditures, and developing self-resources to support the college's educational and research activities.

Internal cooperation is regulated through the coordination between departments, committees, and administrative units within the college, while external cooperation is fostered through engagement with governmental and private sector partners.

The experts are of the opinion that the available equipment and financial resources are sufficient to deliver the study programmes appropriately. In the audit, students also confirm that they are very satisfied with the facilities at Qassim University. In the ASIIN student survey, the general equipment and laboratories were rated as very good or good, with some students noting that certain items might be somewhat old but still adequate. Almost all students stated that there are sufficient work spaces available on campus. The experts visited the facilities and laboratories and found them to be well-suited for teaching purposes, particularly at Bachelor's level. However, they found the laboratories less well equipped for research. They noted that this is already important at the Master's level, where better equipment would be beneficial. It is therefore recommended to update the research equipment for the Master's programmes.

Student feedback on software access was more varied, with several students expressing the wish for additional options such as Ansys. The experts consider this an important aspect and recommend providing more software licences to the students.

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

In response to the recommendation to strengthen laboratory facilities and expand their use for research, the university highlights that both Civil and Mechanical Engineering already have access to a wide range of specialised and well-equipped labs, including advanced facilities such as nanomaterials, high-temperature testing, digital manufacturing, and environmental engineering laboratories. These are actively used for graduate-level research and have led to numerous scientific publications. The university also commits to continuous upgrades and investments in research infrastructure. The panel acknowledges these efforts and withdraws its recommendation. Nevertheless, it emphasises that continuous attention should be paid to keeping the laboratories up to date.

In response to the recommendation to expand software licences, the university explains that students and faculty already have access to a wide range of licensed engineering software through the Deanship of Information Technology and shared computer labs. Ansys is

available in the Innovation and Intellectual Property Lab, and students can also obtain free licences for additional tools such as Ansys or Abaqus directly from the providers. The panel welcomes these measures but upholds its recommendation, as the key question is whether students are effectively able to use the available software.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report
- Course specifications of each course for each study programme
- Websites of all study programmes

Preliminary assessment and analysis of the experts:
The so-called course specifications are available on the internal college website, providing access to students and faculty. They are developed by subject-specific committees within each programme and undergo periodic review. Surveys conducted by the university show that students are highly satisfied with the availability and transparency of the information provided, see Criterion 4.3.

Having reviewed the individual course specifications provided for each module, the experts confirm that they contain most of the necessary information, including the module title, teaching methods, credits and workload, intended learning outcomes, module content, admission and examination requirements, forms of assessment and details explaining how the module mark is calculated, recommended literature, and the date of the last amendment.

However, the module descriptions lack information on the person(s) responsible for each module, and, concerning the workload, only the contact hours are indicated. The specifications do not provide the amount of time intended for self-study, which is required to reflect the full student workload. This information must be added to the course specifications.

Furthermore, the experts note that the information is currently spread across numerous separate files. For reasons of clarity and ease of use, they recommend compiling a single module handbook for each degree programme, in which all courses are included. This handbook should be complemented with the missing details on the responsible person(s) and the estimated self-study time for each module.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Exemplary Graduation Certificate per study programme
- Exemplary Diploma Supplement certificate per study programme
- Exemplary transcript per study programme

Preliminary assessment and analysis of the experts:

The experts confirm that all graduates are awarded a Graduation Certificate (diploma) and a Diploma Supplement in English after graduation. In addition, every graduate receives a transcript, which lists all the courses that the graduate has completed, the earned credit hours per module, grades, and cumulative GPA. These documents provide comprehensive information on the student's qualification profile and individual performance, as well as the classification of the degree programme within the respective education system. The marks of individual modules are presented, and the method of calculating the final mark is explained. For the Bachelor programmes, statistical data in accordance with the ECTS Users' Guide is included, enabling readers to assess the graduates' performance in relation to the respective cohort. This classification contains statistical data on the final results of other students in the cohort, enabling the graduate's performance to be compared with that of his peers. This classification needs to be included in all Diploma Supplements, including those of the Master programmes, where such statistical data is currently not provided.

Criterion 4.3 Relevant Rules

Evidence:

- Self-Assessment Report
- Website of the Deanship of Development and Quality
- Websites of all study programmes
- Student Manual
- Samples of the First Day Materials (FDM)
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Qassim University sets out all relevant rules and regulations in the Student Manual, and course materials are provided to students at the beginning of each semester (FDM). In

addition, comprehensive information about the programmes is made available on the respective programme homepages. Students confirm that they feel well informed; however, with regard to online resources, they suggested that the student portal should also be available in English and that announcements should be provided in both English and Arabic. The expert panel confirms that the rights and obligations of both Qassim University and its students are clearly defined and binding, and that they are published in a manner that ensures accessibility for anyone involved.

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

In response to the requirement that module descriptions must include information on self-study time and responsible persons, the university explains that the current NCAAA template does not provide fields for this. Course specifications are prepared collectively by subject committees rather than individuals, although the “first day material” identifies the instructor responsible for a given term. The university acknowledges the importance of these elements and expresses its willingness to incorporate them in future template revisions, subject to approval by the authorities. The panel welcomes this clarification as it is an integral part of the accreditation criteria and therefore remains subject to the requirement.

In response to the requirement concerning the Diploma Supplements, the university explains that the Bachelor’s supplements already include statistical data in line with the ECTS Users’ Guide. For the Master’s programmes, revised versions have now been prepared that add cohort statistics and clearly allocate credit hours for all compulsory modules. The panel welcomes this development but upholds the requirement until the revised supplements are fully implemented, noting positively that the university has already taken initial steps towards fulfilling this requirement.

In response to the panel’s recommendation to compile a comprehensive module handbook, the university states that handbooks for both Bachelor’s and Master’s programmes already exist, containing curriculum structures, course descriptions, study plans, and information on laboratories. In addition, short course descriptions are available online, and future versions will include estimated self-study time. The panel acknowledges these efforts and the availability of information but notes that the handbooks do not yet provide the same level of detail as the full course specifications. Therefore, the recommendation is upheld.

5. Quality Management: Quality Assessment and Development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- Quality System Manual
- Students' questionnaire
- Faculty members' questionnaire
- Annual KPI Reports
- ASIIN student survey
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the Self-Assessment Report, the quality management system at Qassim University is understood as a proactive process aimed at identifying and addressing potential sources of problems in the educational process before they occur, rather than simply monitoring outputs after deficiencies have arisen. Academic Quality Assessment and Development is an integral part of the University Performance Measurement System, designed to evaluate and enhance the key academic functions of teaching, learning, research, professional and creative work, and public service.

The quality management system operates according to the Plan–Do–Check–Act (PDCA) cycle, ensuring continuous strategic planning, implementation, monitoring and review. At the programme level, the process is led by the Undergraduate Programme Committee, supported by subject committees and coordinated with the College-level Quality Assurance Committee. Faculty members take primary responsibility for programme assessment and improvement, with active participation from all teaching staff. External input is sought from industry professionals, alumni, external faculty, and external visitors, whose feedback is used to update programme objectives and curricula in line with labour market needs and accreditation requirements.

Programme Learning Outcomes (PLOs) are assessed using a combination of direct measures (such as course work assessment, instructor evaluation reports, Senior Design Project evaluation, summer training assessment, and an Outcomes Achievement Examination) and indirect measures (including student course surveys, Professional Advisory Board feedback, external visitor reports, and Student Advisory Committee recommendations).

Assessment follows a structured cycle: formative assessment during the programme, summative assessment at graduation every three years.

In the Self-Assessment Report, the university states that students are regularly invited to provide feedback via end-of-semester surveys. Faculty surveys are also conducted annually to gather feedback on teaching, learning, and research facilities, with recurrent issues—such as laboratory practicum needs—being addressed in subsequent planning cycles. KPIs are employed to measure programme effectiveness against internal and external benchmarks, with regular reporting on performance trends, strengths and areas for improvement.

In the audit, students confirm that their contributions to the improvement of the programme are taken seriously by the university. A clear majority of students also demonstrate awareness of their representation in university boards and committees, reflecting an encouraging level of student engagement in institutional decision-making. Moreover, students emphasise that they are informed transparently about the survey results and any resulting actions. The experts welcome this exemplary practice, as it guarantees a closed feedback loop.

Overall, the experts are impressed by the university's commitment to inclusive and transparent quality management. They conclude that the quality management system at Qassim University is robust, well-structured, and highly effective in maintaining and continuously enhancing the quality of its engineering programmes.

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

The panel requested a detailed evaluation of workload calculation. The university responded by presenting the results of its student course evaluation surveys conducted via the "MyQu" portal. These surveys include a specific item (Question 14) on whether the workload is proportional to the assigned credit hours, thereby capturing students' perception of contact hours and self-study time. The results show an overall average satisfaction of 82.65%, with some courses rated very highly (e.g. CE 354 with 100%) and others significantly lower (e.g. CE 331 with 53.33%). Similar analyses have also been carried out for the Mechanical Engineering and Master's programmes.

D Additional Documents

Before preparing their final assessment, the panel ask 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:

D1. Student workload surveys

D2. Clarification of the number of credit hours required in the PYP

E Comment of the Higher Education Institution (01.09.2025)

The following quotes the comment of the institution:

The expert panel's comprehensive evaluation of our four engineering programs is greatly appreciated by College of Engineering (COE), Qassim University (QU), and we agreed with their overall evaluation. We are pleased that the experts highlighted numerous positive aspects of our programs, including the supportive environment, excellent laboratories, highly qualified faculty members, and robust quality management system.

In Response to Expert Requirements and Recommendations

Criterion 1.3 Curriculum

Summary of ASIIN Experts' Assessment: With regard to programme structure and workload, the Bachelor programmes, at a duration of five years, appear lengthy even by national standards, and the panel therefore recommends reducing their length and redistributing the workload more evenly across semesters. Conversely, the master's programmes seem to carry a comparatively low workload and would benefit from being strengthened by increasing academic demands and placing a greater emphasis on research (Recommendation in detail is available in **section C**).

Programmes Response: The Qassim Engineering College (QEC) appreciates the expert panel's thorough evaluation and constructive recommendations regarding the bachelor's and master's programs in civil and mechanical engineering at the QEC. The QEC would like to clarify that the duration of the Bachelor's programs is fully aligned with the requirements of the National Qualifications Framework (NQF) and is also in alignment with national benchmarking, and reflect international standards.

1.1. NQF-KSA Requirements

- Bachelor's: Minimum 150 credit hours for five-year engineering degrees (Level 6).
- Master's: Minimum 30 credit hours (Level 7).

Furthermore, the inclusion of the PYP is a **nationally mandated component** of higher education in Saudi Arabia, aimed at preparing students linguistically, mathematically, and scientifically for rigorous engineering studies. The PYP is not an extraneous addition but an

integral part of the academic journey, ensuring equitable access and readiness for all students.

1.2. BSc Benchmarking (including PYP):

University	QS Ranking	Duration	Total Credit Hours
King Abdulaziz Univ., Saudi Arabia	149	5 years	155
King Saud Univ., Saudi Arabia	200	5 years	165
King Fahd University of Petroleum & Minerals, Saudi Arabia	67	5 years	162
Cairo University, Egypt	350	5 years	175
National University of Singapore, Singapore	8	5 years	160
Stanford Univ., USA	6	5 Years	155

1.3. MSc Benchmarking

University	QS Ranking	No. of Semesters	Credit Hours
King Saud Univ., Saudi Arabia	149	4	30-36
King Abdulaziz Univ., Saudi Arabia	200	4	36
King Fahd University of Petroleum & Minerals, Saudi Arabia	67	4	30
Cairo University, Egypt	350	4	36
University of Wisconsin–Madison, USA	116	4	30

In addition, the curricula of the program have been aligned with the key learning outcomes and the specialized knowledge domains defined by the NCAAA, which is a prerequisite for the approval of any curriculum. Accordingly, the B.Sc. program are fully committed to meeting the content requirements, subject areas, and intended learning outcomes established by the NCAAA.

While the alignment with the ECTS framework is acknowledged and respected as an important international reference, it must be strongly emphasized that in the Kingdom of

Saudi Arabia, the alignment with the National Qualifications Framework (NQF) and the National Commission for Academic Accreditation and Assessment (NCAAA) standards is mandatory and serves as the official basis for curriculum authorization and approval. Therefore, the program ensures that while ECTS equivalency is maintained for transparency and mobility, the curriculum structure strictly adheres to the NQF and NCAAA requirements as the governing academic benchmarks.

2. The Structure of the Master's Programmes

2.1. Workload Considerations

While some students may engage in part-time employment, the university enforces academic advising to ensure that program learning outcomes are achieved within the standard duration. The apparent perception of a "light workload" may reflect the higher degree of self-directed study and research engagement expected at the postgraduate level, in line with international practice.

It is important to clarify that master's students are typically not permitted to register for more than three courses per semester. This aligns with international norms, where the standard full-time graduate course load is approximately 9–12 credit hours per semester, equivalent to 3–4 courses, depending on the institution (University of Massachusetts Lowell and King Saud Univ.).

Moreover, the nature of master level education differs significantly from undergraduate studies. While bachelor's program focusses on foundational knowledge and structured instruction, master's programs emphasize advanced, specialized learning through independent research, critical analysis, and reflective practice. Students are expected to engage in self-directed learning, which includes planning their own study schedules, identifying learning goals, and evaluating their progress independently. This pedagogical approach fosters deeper intellectual engagement and prepares students for professional and academic leadership roles.

Therefore, the perceived "light workload" is not a reflection of reduced academic rigor but may as well be a shift in learning methodology appropriate to the postgraduate level.

2.2. Program Differentiation

The current design, which shares core compulsory modules and allows students to specialize via elective courses, was deliberately chosen to promote academic flexibility while ensuring exposure to advanced engineering methodologies common to both disciplines. The **compulsory general courses** consist of three modules tailored to address the specific needs of the Civil and Mechanical Engineering MSc programs at QEC. These include:

- **Mathematical skills** are relevant to advanced engineering analysis,
- **Modelling and simulation skills** are essential for system-level design and evaluation, and
- **Lab-related skills** that support experimental techniques and data interpretation.

Course Code	Course Title
GE 605	Modeling and Simulation of Engineering Systems
GE 608	Experimental Methods and Analysis
MATH 621	Engineering Mathematics

These foundational courses are intended to equip all students with a robust methodological base before progressing into discipline-specific content. Nevertheless, in response to the panel's recommendation, the QEC agrees that clearer differentiation between Civil and Mechanical Engineering pathways will further strengthen the programs. As such, the QEC is in the process of reviewing elective course structures to ensure a stronger discipline-specific identity and a deeper integration of research-oriented components across the four semesters. This will enhance the coherence of each program and reinforce alignment with the NQF-KSA Level 7 expectations for Master's level education.

Summary of ASIIN Experts' Assessment: From a content perspective, the panel notes that sustainability, despite being an important element of the university's mission and a key contemporary issue, is not sufficiently embedded across the curricula (Recommendation in detail is available in **section C**).

Programmes Response: The QEC sincerely appreciates the expert panel's insightful observations and constructive recommendations regarding the Civil and Mechanical Engineering programs at the College of Engineering, Qassim University. The QEC fully acknowledges the importance of embedding sustainability within engineering education, particularly in light of the Program Educational Objectives (PEOs), which emphasize enabling graduates to contribute meaningfully to the sustainable development of Saudi society.

For the MSc in Civil Engineering, despite there is no explicit course that is named sustainability, the sustainability related topics already exist in the two group of courses related to Environmental Engineering and Water Resources Engineering.

In response to the panel's recommendation, the QEC is pleased to inform the panel that the Civil and Mechanical Engineering departments have completed the development of a revised curriculum for both the Bachelor's and Master's programs. These updated plans

explicitly incorporate dedicated coursework focused on sustainability. The newly introduced courses aim to equip students with a comprehensive understanding of sustainable engineering practices, environmental stewardship, and the critical role engineers play in advancing sustainable development.

The new curriculum (version E) for the BSc programs in Civil and Mechanical Engineering is currently undergoing formal approval through the respective departmental councils. Supporting documentation includes the CE BSc Study Plan (E), ME BSc Study Plan (E), the ME department council meeting minutes for the approval of the study plan (E), and the CE department council meeting minutes for the approval of the study plan (E).

Furthermore, the revised curriculum aligns with the **Specialized Learning Outcomes (SLOs)** outlined by the Education and Training Evaluation Commission (ETEC), particularly **KLO2 and KLO5**, which emphasize designing solutions with consideration for sustainability and evaluating sustainability-related constraints in engineering problem-solving (Evidence: Key Learning Outcomes for Civil Engineering, and Key Learning Outcomes for Mechanical Engineering). These outcomes are now embedded within the curriculum structure and reflected in the course content and learning objectives.

The QEC anticipates that the integration of sustainability content will significantly enhance the academic rigor and societal relevance of our programs, aligning them more closely with both national priorities and international accreditation standards. The QEC remains committed to continuous improvement and would like to thank the panel once again for their valuable feedback and guidance.

Summary of ASIIN Experts' Assessment: Similarly, the handling of artificial intelligence (AI) has yet to be fully developed (Recommendation in detail is available in **section C**)

Programmes Response: The QEC sincerely appreciates the expert panel's thoughtful observations and recommendations concerning the role of artificial intelligence (AI) in the Civil and Mechanical Engineering programs at the College of Engineering, Qassim University. The QEC fully recognizes the growing significance of AI technologies in engineering education and practice. The QEC agrees with the panel's view that AI should neither be disregarded nor banned but instead approached through structured education and clear guidelines.

In response to the panel's recommendation, the QEC is pleased to report that the Civil and Mechanical Engineering departments have initiated a comprehensive review of the curricula at both the Bachelor's and Master's levels. As part of this effort, a new curriculum has been developed that includes dedicated content on artificial intelligence. This includes

coursework aimed at educating students on the effective use, ethical considerations, and limitations of AI technologies in engineering contexts.

The newly developed curriculum (E) for the BSc programs in Civil and Mechanical Engineering is currently undergoing formal approval through the respective departmental councils (Evidence: CE BSc Study Plan (E), ME BSc Study Plan (E), the ME department council meeting minutes for the approval of the study plan (E), and the CE department council meeting minutes for the approval of the study plan (E)). In parallel, the QEC is working to establish formal regulations and guidelines for the responsible use of AI tools within academic settings, ensuring consistency across programs and promoting academic integrity.

The QEC believes that these measures will significantly enhance our students' preparedness for the evolving demands of the engineering profession and align our programs with international best practices. The QEC remains committed to continuous improvement and would like to thank the expert panel once again for their valuable feedback and guidance.

Summary of ASIIN Experts' Assessment: In the Bachelor's programme in Civil Engineering, the topic of construction management is underrepresented, while in the Bachelor's programme in Mechanical Engineering programme, the area of mechanical vibrations should be reinforced and included in the compulsory modules (Recommendation in detail is available in **section C**)

Programmes Response: The QEC sincerely appreciates the expert panel's valuable observations and recommendations concerning the Bachelor's programs in Civil and Mechanical Engineering at the College of Engineering, Qassim University. The QEC recognizes the importance of continuously aligning our curricula with evolving industry standards and academic expectations to ensure our graduates are well-prepared for professional challenges.

The current Civil Engineering curriculum incorporates construction engineering and project management courses. The current curriculum includes one core course in Project Management, which covers a comprehensive range of topics such as project scope and stakeholder management, time and cost estimating, Gantt charts, Critical Path Method (CPM), PERT, resource allocation and levelling, time–cost trade-off, project monitoring and control, risk management, procurement management, organizational structures, leadership and motivation, and an introduction to project management software tools. In addition, the curriculum offers a core course in Construction Engineering, further strengthening students' exposure to this field. In addition, the number of credit hours allocated to Construction Management subjects is consistent with the proportion specified by the Education and Training Evaluation Commission, which is 6 credit hours, based on a benchmarking comparison with 11 international programs. Evidence (Key learning outcomes-NCAAA-Page 7).

Nevertheless, QEC recognizes the importance of continuously aligning our curricula with evolving industry standards and academic expectations to ensure our graduates are well-prepared for professional challenges. In that regard, the Bachelor's program in Civil Engineering, has developed a revised curriculum that includes enhanced coverage of construction and project management topics. This revision aims to provide students with a deeper understanding of the principles, tools, and practices essential for effective management in construction projects (CE BSc Study Plan (E)). The updated curriculum is currently undergoing formal approval through the departmental council. In the updated curriculum, three specialized elective courses have been introduced to expand and deepen students' knowledge in this area:

- Construction Project Management.
- Quantity Surveying, Cost Estimating and Specifications.
- Building Information Modelling (BIM).

These additions ensure that construction/project management is adequately represented and provide students with both fundamental and advanced competencies in this area.

For the Bachelor's program in Mechanical Engineering, the QEC appreciates the panel's emphasis on the importance of mechanical vibrations. We are pleased to inform the panel that the **Mechanical Vibrations course has been elevated from an elective to a mandatory course** in the newly developed curriculum (version E). This change is supported by the updated ME BSc Study Plan (E) and the ME department council meeting minutes for the approval of the study plan (E).

This enhancement directly aligns with the **Specialized Knowledge Unit (SKU1.2): System Vibrations** outlined by the Education and Training Evaluation Commission (ETEC), which mandates that students be able to:

- Explain the fundamental principles of free and forced vibration of mechanical systems.
- Solve mechanical vibration problems.
- Use vibration response to design machine parts.
- Design basic vibration systems to meet specified needs and constraints.

These learning outcomes are now embedded within the curriculum and reflect our commitment to ensuring students gain essential competencies in this foundational area of mechanical engineering (Evidence: Key Learning Outcomes for Mechanical Engineering).

The QEC believes this curriculum enhancements will significantly strengthen the academic quality and professional relevance of our programs. We remain committed to continuous improvement and would like to thank the expert panel once again for their constructive feedback and support.

Summary of ASIIN Experts' Assessment: The panel also considers the opportunities for international mobility to be an important area for further strengthening. Although the university attracts a number of incoming international students, there is no comprehensive framework for supporting outgoing mobility, and students have expressed a clear interest in this area. It is therefore recommended to promote international exchange more actively and establish structured partnerships with universities abroad (Recommendation in detail is available in **section C**)

Programmes Response: Qassim University acknowledges the importance of student mobility as a key element of internationalisation and graduate development. While it is true that formalised student mobility units have not been traditionally established in QU. The University acknowledges the importance of structured opportunities for international exposure and is implementing the following steps:

a. Framework for Student Mobility: Regulations for recognizing external qualifications are already in place, and these will be further systematized through clearer policies and guidelines to facilitate student exchanges and internships abroad.

b. Partnership Development: Qassim University will actively explore cooperation agreements with reputable international universities and industry partners to create more structured pathways for student exchange, internships, and joint projects.

c. Awareness and Encouragement: Information sessions, workshops, and advising services will be offered to raise student awareness of international mobility opportunities and to guide them in preparing applications and documentation.

d. Commitment to Support: The University confirms that it will fully support any student who wishes to undertake a semester or internship abroad and will facilitate the recognition of credits earned, ensuring mobility does not delay graduation.

Through these measures, the University aims to transform the current approach into a more systematic framework, thereby strengthening international exposure and enhancing students' academic and professional experiences.

Criterion 1.5 Workload and Credits

Summary of ASIIN Experts' Assessment: Laboratory sessions are in some cases assigned half the number of credit hours. This practice is not applied consistently (Recommendation in detail is available in **section C**).

Programmes Response: We acknowledge the observation of the panel regarding the inconsistent allocation of credit hours for laboratory sessions. In response, the university has adopted a standardized approach in which all components of the modules' lectures, laboratories, and tutorials are treated consistently to ensure that credit allocations accurately reflect the actual workload. This approach eliminates previous discrepancies and establishes a transparent and uniform basis for workload calculation. The revised distribution of contact hours can be found in the following (BSc Program Plans) and the corresponding ECTS credit calculations are presented in Table 1for the CE program and Table 2 for the ME program.

Table 1: ECTS credit calculation summary of the CE BSc program

ECTS Calculation for BSc. in CE									
	Level	CrH*	Actual Contact Hr			Average Independent Study Hours/week (Th *2 +1*Tu+ Lab*1)	Total Workload/week (Actual + Independent)	Total Workload in the semester (Total workload * 15 Weeks)	ECTS Credits (25 Hr:1ECT)
			Theory		Lab				
			Lecture	Tutorial					
pyp year	Level 1	10	17	0	6	28	51	765	30.6
	Level 2	11	12	1	8	27	48	720	28.8
Freshman Year	Level 3	18	13	1	8	35	57	855	34.2
	Level 4	18	13	4	2	32	51	765	30.6
Sophomore Year	Level 5	17	11	3	6	31	51	765	30.6
	Level 6	17	9	4	8	30	51	765	30.6
Junior Year	Level 7	17	10	5	4	29	48	720	28.8
	Level 8	16	12	4	0	32	48	720	28.8
Senior Year	Level 9	17	9	5	4	32	50	750	30
	Level 10	19	12	4	2	34	52	780	31.2
Average		16	11.8	3.1	4.8	31	50.7	760.5	30.42
Total		160	118		48	310	507	7605	304.2

Table 2: ECTS credit calculation summary of the ME BSc program

ECTS Calculation for BSc. in ME									
	Level	CrH*	Actual Contact Hr			Average Independent Study Hours/week (Th *2 +1*Tu+ Lab*1)	Total Workload/week (Actual + Independent)	Total Workload in the semester (Total workload * 15 Weeks)	ECTS Credits (25 Hr:1ECT)
			Theory		Lab				
			Lecture	Tutorial					
pyp year	Level 1	18	17	0	6	28	51	765	30.6
	Level 2	16	12	1	8	27	48	720	28.8
Freshman Year	Level 3	18	13	1	8	35	57	855	34.2
	Level 4	19	13	4	4	34	55	825	33
Sophomore Year	Level 5	18	10	4	8	32	54	810	32.4
	Level 6	18	11	4	6	32	53	795	31.8
Junior Year	Level 7	16	11	3	4	29	47	705	28.2
	Level 8	15	11	2	4	28	45	675	27
Senior Year	Level 9	16	10	3	6	29	48	720	28.8
	Level 10	19	15	3	2	35	55	825	33
Average		17.3	12.3	2.5	5.6	30.9	51.3	769.5	30.78
Total		173	123		56	309	513	7695	307.8

Summary of ASIIN Experts' Assessment: The panel emphasises that a simple conversion of local credits into ECTS is not sufficient; the workload must be calculated for each individual module, taking into account both contact hours and self-study (Recommendation in detail is available in **section C**).

Programmes Response: The program thanks the expert panel for its valuable comments. In light of the recommendations, the calculation of ECTS credits has been revised based on the nature of each module. The ECTS credits for each module have been recalculated by considering both contact hours (lectures, laboratories, and tutorials) and the estimated self-study hours derived from these contact hours. This ensures that credit allocation is based on the actual workload rather than a simple conversion of local credits. Specifically, for theoretical courses, the workload was estimated by doubling the contact hours to account for the required self-study, while tutorials and laboratory sessions were assigned an equivalent additional workload (1:1 ratio). Furthermore, some courses, particularly the design courses offered in Levels 8, 9, and 10 of the CE program, were allocated additional self-study hours to reflect their intensive workload and complexity.

For the Preparatory Year, two English preparation courses that had previously been omitted in the credit and ECTS calculation were included, resulting in a total of approximately 60 ECTS. While these courses contribute to the student workload, they are not considered as part of the degree award. English courses generally require relatively low self-study effort, such as reading short texts, preparing presentations, or completing writing assignments. In contrast, technical courses (e.g., Structural Analysis or Concrete Design in the CE program, and Mechanical Design or System Dynamics and Automatic Control in the ME

program) demand significantly greater effort due to extensive problem-solving, laboratory sessions, and project activities, which justify their higher ECTS allocation.

The detailed breakdown of the calculations is provided in the attached Excel files (Calculation of ECTS of BSc in CE and Calculation of ECTS of BSc in ME). A summary of the revised workload and ECTS distribution is presented in Table 1 for the CE program and Table 2 for the ME program. Importantly, the new calculations clearly demonstrate that there is no significant variance in ECTS allocation across semesters from Level 1 to Level 10, thereby ensuring a balanced workload distribution throughout the programs. In addition, the university will update all module descriptions to explicitly include the number of self-study hours, thereby ensuring transparency and compliance with Criterion 4.1. With these measures, the programs are now in full conformity with the ECTS requirement of 60 ECTS per academic year, and the workload is reasonably balanced.

Summary of ASIIN Experts' Assessment: The panel therefore recommends condensing the Bachelor's programmes to four years and strengthening the Master's programmes (Recommendation in detail is available in **section C**).

Programmes Response: The QEC appreciates the expert panel's insightful recommendation regarding condensing the Bachelor's programs to four years and strengthening the Master's programs.

The response to this recommendation has been already tackled in our response to comment no. 1 (1.3) (page 44:45)

Criterion 2 Exams: System, Concept and Organisation

Summary of the Experts' Assessment: The panel also suggests further development of the examination system, in particular by increasing the proportion of competence-oriented assessment formats.

Recommendation in detail: After reviewing the documentation and samples of examinations and theses, the experts concur with the students' assessment and conclude that Qassim University has a robust examination system in place. However, the panel observes that competence-oriented examinations like oral exams or project works are underrepresented and therefore recommends strengthening their use. In addition, the panel suggests considering more frequent variation of examination questions to reduce the risk of academic misconduct.

Programmes Response: The QEC appreciates the expert panel's insightful suggestion regarding further development of the examination system in particular by increasing the proportion of competence-oriented assessment formats.

The QEC confirms its commitment to improving its examination system to be more competent oriented and the respected review panel commented that QEC has a robust examination system in place.

The QRC would like to assure that competence-oriented assessment formats such as self-assessments, interviews, observation-based assessments, project-based assessments, portfolio reviews are applied in many modules and are the main assessments in a number of modules such as GE211, GE213, SDP (491 and 492), etc. Also at the MSc level, such assessments are main part of course assessments, where each course contains a term project (assessed through report writing, oral exam, presentations, etc.) that is weighted to 20%, along with class activities that are weighted to 15% of the module total mark.

Despite this, the suggestion is part of the quality system that is ongoing yearly after reviewing the module report prepared by the instructors through the related subject committee and approved by the program committee including preventing the repetition of question and the variation of type of questions. This suggestion will be more taken in our consideration in Plan E for more emphases.

Summary of the Experts' Assessment: Additionally, students who fail an examination should be allowed to repeat it in the following semester without being required to repeat coursework that has already been successfully completed, thereby reducing the workload in the retake semester.

Recommendation in detail: Students also reported general satisfaction with the possibility of retaking examinations; however, some criticized the requirement to repeat the entire course, including all additional coursework, when failing a final exam. This significantly increases the workload for affected students. The panel therefore recommends considering the option of allowing students who fail an exam to retake it in the next semester without being obliged to repeat all additional coursework.

Programmes Response: The QEC appreciates the expert panel's insightful recommends considering the option of allowing students who fail an exam to retake it in the next semester without being obliged to repeat all additional coursework.

But, it is worthy to be noted that the failure in the course is not calculated on the final exam but it is calculated on the entire course grade including course work and including the final exam. The threshold for example for success in a course is for example 60% in most of the courses at the BSc level. Students can pass upon getting 60% in the sum of the course work and the final exam combined. So failure is for the sum of the course work and the final exam together, i.e. there is no threshold in failing in the final exam.

On the other hand the regulations of the system (Governmental Ministry/ University) does not support for this credit hours systems to only repeat the final Exam (upon failing in the course) the requirement is to repeat the entire course, including all additional coursework, when failing in the course.

Regarding reducing the workload in the retake semester, It is worthy to be noted that there is an upper limit for the number of credit hours (hence the work load for students each semester) so if a student repeats a course, he cannot exceed the upper limit in this semester including such course) this depends on the students GPA, and maximum allowed course to be taken. The upper limit in some cases in the QU Registration Portal could be as low as 14 Credit hours in some cases and as low as 16 credit hours in other cases [upon GPA].

Criterion 3.2 Student Support and Student Services

ASSIN Experts' Inquiry: Is the "Academic Support and Guidance Unit" mentioned in the SAR the same as the "Academic Advising and Support Unit" mentioned in the Student Manual?

Programmes Response: The QEC appreciates the expert panel's observation regarding the naming of the support unit referenced in the Self-Assessment Report (SAR) and the Student Manual. The QEC would like to clarify that the "Academic Support and Guidance Unit" mentioned in the SAR and the "Academic Advising and Support Unit" referred to in the Student Manual are indeed the same entity.

The discrepancy in naming is due to a translation variation and internal documentation updates. Both terms refer to the same unit at the QEC level that provides comprehensive academic and personal support services to students.

To ensure consistency and avoid future confusion, the QEC will standardize the naming across all official documents and communications to reflect the correct and unified title: "Academic Advising and Support Unit." The QEC thanks the panel for highlighting this point and remains committed to maintaining clarity and transparency in our documentation.

Criterion 3.3 Funds and Equipment

ASSIN Experts' Recommendation: They found the laboratories less well-equipped for research. They noted that this is already important at the Master's level, where better equipment would be beneficial. It is therefore recommended to update the research equipment for the Master's programmes.

Programmes Response: The QEC sincerely appreciates the expert panel's constructive recommendation regarding the enhancement of research equipment for the Master's programs in the Civil and Mechanical Engineering departments at the College of Engineering, Qassim University. The QEC fully acknowledges the critical role that well-equipped laboratories play in fostering high-quality research and innovation, particularly at the graduate level.

In this context, the QEC would like to clarify and highlight that the Mechanical Engineering Master's program is supported by a wide array of specialized research laboratories, many of which are equipped with advanced and high-technology instruments. These facilities are actively utilized by faculty and graduate students to conduct research aligned with national priorities and international standards. Some of the key research laboratories in the Mechanical Engineering department include:

1. **The Innovation and Intellectual Property Lab** is equipped with a high-speed computer (supercomputer) that assists master's students and faculty members in their research activities, such as simulation processes, yielding high-precision results.
2. **Nanomaterials Synthesis Lab** is focused on the synthesis and characterization of nanomaterials for advanced applications.
3. **The Advanced Materials Engineering Lab** supports research in material development, processing, and performance evaluation.
4. **The Advanced High Temperature Material Testing Lab** enables testing of materials under extreme thermal conditions.
5. **Digital Manufacturing Lab** is equipped with modern digital fabrication tools, including multiple 3D printers and CAD/CAM systems.

In addition to these labs, the program benefits from access to high-end equipment such as:

- **3D Profiler Microscope**: For surface topography and microstructure analysis.
- **Scanning Electron Microscope (SEM)**: For detailed imaging and analysis at the micro and nanoscale.
- **Ball Milling Machine**: Used for mechanical alloying and particle size reduction for developing nano structured materials with superior properties.
- **Multiple 3D Printers**: Supporting rapid prototyping and additive manufacturing research.

Furthermore, the QEC Workshop significantly enhances the research infrastructure. It houses several advanced machines and facilities, including:

- A **five-axis CNC machine** is equipped with the latest technology for precision manufacturing and complex geometries.
- A **Drop Hammer Test system** for evaluating the impact resistance of composite materials and nano structured materials.
- **Welding and Foundry Laboratories**, which support research and practical training in metal joining and casting processes.

Also, the Civil Engineering department has many labs that are used both for undergraduate and graduate students.

No.	Laboratory name
1	Concrete Technology
2	Materials Engineering
3	Structural Engineering
4	Geotechnical Engineering
5	Environmental Engineering
6	Traffic and Transportation engineering
7	Highway Engineering
8	Computer lab

Despite all labs are well equipped with recent equipment, some labs are equipped with state-of-the-art equipment that is being used specifically for research purposes, e.g.,

- Traffic and Transportation Engineering Lab
- Environmental Engineering Lab
- Materials Engineering Lab

As evidence of the use of these labs in the research is the numerous research papers that have been published as an output of performing research activities at those labs.

These resources collectively provide a robust platform for graduate-level research and innovation. As a result of the availability of these laboratory facilities, numerous scientific studies have been published by master's students and faculty members, as evidenced via

the following link. The QEC remains committed to continuous improvement and is actively pursuing further upgrades and strategic investments to enhance the research capabilities of its master's programs through its laboratories and the needs and resources development committees. The QEC trusts that this clarification reflects its dedication to maintaining a high-quality research environment and its ongoing efforts to support academic excellence.

ASSIN Experts' Recommendation: Student feedback on software access was more varied, with several students expressing the wish for additional options such as Ansys. The experts consider this an important aspect and recommend providing more software licences to the students. It is further suggested to expand the number of software licences available to students in order to provide more comprehensive support for both their learning and research activities.

Programmes Response: The QEC appreciates the expert panel's insightful recommendation regarding the expansion of software licenses to better support students' learning and research activities. Ensuring access to essential engineering software is indeed a critical component of delivering high-quality education and fostering innovation.

At Qassim University, the Deanship of Information Technology plays a central role in providing licensed versions of a wide range of educational software to all colleges. This includes access to industry-standard tools that are regularly updated to meet academic and research needs.

Within the QEC, computing facilities are designed to support both undergraduate and graduate students. These include:

- **Shared computer laboratories** equipped with relevant engineering software such as **AutoCAD**, **SolidWorks**, and **MATLAB**.
- **Networked faculty offices** with high-speed internet access.
- **Wireless connectivity** throughout the building to ensure seamless access to digital resources.
- **The Innovation and Intellectual Property Lab** is equipped with a high-speed computer (supercomputer) that assists master's students and faculty members in their research activities, such as simulation processes, yielding high-precision results. Additionally, **licensed Ansys software** is already available on this computer for all faculty members and master's students to support research activities.

In addition to these resources, the college will inform students that they can obtain free student licenses for any engineering software they need (such as Ansys or Abaqus) through the software company's websites. The QEC trusts that this clarification reflects our

commitment to providing a comprehensive and supportive digital learning environment. The QEC will continue to prioritize software accessibility and infrastructure development as part of its strategic enhancement of academic quality.

Criterion 4.1: Model Description

Summary of the Experts' Assessment: In addition, the existing course specifications lack information on the person responsible for each module and the amount of self-study time required.

Recommendation in detail: However, the module descriptions lack information on the person(s) responsible for each module, and, concerning the workload, only the contact hours are indicated. The specifications do not provide the amount of time intended for self-study, which is required to reflect the full student workload. This information must be added to the course specifications.

Programmes Response: The programmes appreciate the expert panel's comments. We would like to clarify that the current course specification template, as mandated by the National Commission for Academic Accreditation and Evaluation (NCAAA), is designed to be general and does not assign responsibility to a specific individual.

The programmes follow rigorous procedure in preparing course specifications, which are developed collectively by subject committees rather than by a single individual. Each subject committee, composed of all faculty members teaching the subject, assumes responsibility for preparing and reviewing the course specifications to ensure accuracy, consistency, and alignment with program objectives. For this reason, the name of a single person responsible for the course specification is not included. Similarly, the template does not currently provide a field for indicating the expected amount of self-study time.

However, in the first day material, where a given course is assigned to a given faculty member, there is dedicated section to provide information on the responsible instructor in the term of study (Evidence: Sample of first day material).

Nevertheless, the programmes fully recognize the importance of these elements and are ready to explore ways to incorporate them in future revisions of the template, subject to approval by the relevant authorities

Summary of the Experts' Assessment: The university currently provides individual course specifications, but these are not compiled into a comprehensive module handbook, which would facilitate a clearer overview of the curriculum.

Recommendation in detail: Furthermore, the experts note that the information is currently spread across numerous separate files. For reasons of clarity and ease of use, they

recommend compiling a single module handbook for each degree programme, in which all courses are included. This handbook should be complemented with the missing details on the responsible person(s) and the estimated self-study time for each module.

Programmes Response: The programmes already provided **Students' Handbook** for both the Bachelor and Master's levels **(**Evidence: CE-BSc. student handbook, ME-BSc. student handbook, CE-MSc. program handbook, and ME-MSc. Program handbook**)** that compiles all relevant information in a single document. This handbook includes the curriculum structure, course descriptions, civil engineering plan, and laboratories and equipment. Furthermore, the estimated self-study time for each module will be incorporated to enhance clarity and transparency. In addition to that all courses' descriptions are compiled in one document and available for students on the university web site as per the following URL, https://www.qu.edu.sa/wp-content/uploads/2025/07/Short-Descriptions-of-Courses-for-the-BSc-of-CE-Program.pdf, Short-Descriptions-of-Courses-for-the-BSc-of-ME-Program.pdf). The programmes will incorporate the estimated self-study time for each module in the revised handbook or specifications.

Criterion 4.2 Diploma and Diploma Supplement

Summary of the Experts' Assessment: The Diploma Supplements issued for the Master's programmes differ in structure from those of the Bachelor's programmes and do not yet contain cohort statistics in line with the ECTS Users' Guide. In addition, all compulsory modules must be allocated credit hours.

Recommendation in detail: For the Bachelor programmes, statistical data in accordance with the ECTS Users' Guide is included, enabling readers to assess the graduates' performance in relation to the respective cohort. This classification contains statistical data on the final results of other students in the cohort, enabling the graduate's performance to be compared with that of his peers. This classification needs to be included in all Diploma Supplements, including those of the Master programmes, where such statistical data is currently not provided.

Programmes Response: The QEC appreciates the expert panel's detailed observation and recommendation concerning the structure and content of the Diploma Supplements issued for the Master's programs in the Civil and Mechanical Engineering departments.

The QEC acknowledges the importance of aligning the Diploma Supplements with the standards outlined in the ECTS Users' Guide, particularly in terms of providing cohort statistics and ensuring that all compulsory modules are clearly allocated credit hours.

In response to this recommendation, the QEC would like to clarify the following:

- The **Diploma Supplements for the Bachelor's programs** already include statistical data in accordance with the ECTS Users' Guide. This data enables readers to assess individual graduate performance in relation to the respective cohort, thereby enhancing transparency and comparability **(**Evidence: Diploma Supplement CE BSc, and Diploma Supplement ME BSc**)**.
- For the **Master's programs**, the programs revised the Diploma Supplements for the master's programs to add missing data (Evidence: Diploma Supplement CE MSc, and Diploma Supplement ME MSc). This revision includes:
    - **Cohort statistics** reflecting the distribution of final results, allowing for comparative assessment of graduate performance.
    - **Clear allocation of credit hours** for all compulsory modules, in full alignment with ECTS guidelines.

These enhancements are part of our broader commitment to continuous improvement and international best practices in academic documentation and transparency. The QEC trusts that this response demonstrates our dedication to maintaining high academic standards and our responsiveness to the expert panel's valuable recommendations.

Criterion 4.3 Relevant Rules

ASSIN Experts' Recommendation: Qassim University sets out all relevant rules and regulations in the Student Manual, and course materials are provided to students at the beginning of each semester (FDM). In addition, comprehensive information about the programmes is made available on the respective programme homepages. Students confirm that they feel well informed; however, with regard to online resources, they suggested that the student portal should also be available in English and that announcements should be provided in both English and Arabic. The expert panel confirms that the rights and obligations of both Qassim University and its students are clearly defined and binding, and that they are published in a manner that ensures accessibility for anyone involved.

Programmes Response: The QEC appreciates the expert panel's recognition of the clarity and accessibility of the rules, regulations, and program information provided to students through the Student Manual, course materials, and program homepages. The QEC is pleased to note that students feel well-informed regarding their academic responsibilities and rights.

In response to the panel's observation and the students' suggestion concerning the bilingual accessibility of online resources, the QEC acknowledges the importance of ensuring that all students, both Arabic and non-Arabic speakers, have equitable access to academic

and administrative information. Accordingly, the QEC has initiated steps to enhance the student portal by incorporating English language support alongside Arabic. This includes:

- Translating key sections of the student portal interface into English.
- Ensuring that official announcements and notifications are published in both English and Arabic.
- Coordinating with the university's IT deanship to implement these changes in a phased manner, with priority given to areas most frequently accessed by international students.

These measures aim to foster a more inclusive and supportive learning environment for all students, in alignment with Qassim University's commitment to internationalization and academic excellence. The QEC thanks the expert panel for their valuable feedback and remain committed to continuous improvement in all aspects of our academic services.

The university has also submitted additional documents relating to the following supplementary submissions:

Response to Accreditation Review Committee Inquiry No. (1):

Thank you for your observation regarding the evaluation of student workload, particularly in relation to self-study time.

Students' course evaluation survey is a vital quality-assurance tool in B.Sc. program It captures students' firsthand experiences with course workload, teaching effectiveness, assessment fairness, and learning resources insights that are difficult to obtain from grades or syllabi alone. When analyzed systematically, survey results help departments identify strengths to preserve, pinpoint courses needing improvement, and track the impact of curriculum or policy changes over time.

This survey presents a comprehensive set of evaluation items designed to measure students' perceptions of the quality of their courses and instruction. The items cover multiple dimensions, including the clarity of the course outline, assessment methods, and sources of academic support, as well as the commitment, knowledge, enthusiasm, and availability of instructors. In addition, the survey evaluates the usefulness and currency of course materials, accessibility of resources, and the effective use of technology to support learning. It also emphasizes student engagement by addressing opportunities to ask questions, develop ideas, and perform at their best.

Furthermore, the survey explores whether class activities, assignments, and laboratories contribute to skill development, and whether the workload is proportional to the credit hours allocated. It includes items related to the timeliness and fairness of grading, the connection between courses within the program, and the relevance and future usefulness of knowledge gained. Beyond academic aspects, it also assesses how the course contributes to broader competencies such as critical thinking, teamwork, and communication skills. Finally, the survey concludes with an overall measure of student satisfaction with course quality, providing a holistic view of the learning experience.

Our standard course evaluation surveys in Qassim University students' portal "MyQu" for each course covers students' satisfaction and teaching effectiveness, including Question 14, which addresses the perceived workload in relation to the credit hours assigned to the course. This question directly reflects students' perception of the total workload, including self-study time.

Question 14: "The amount of workload on this course was proportional to the number of credit hours allocated to the course".

The table below shows the survey results for the students' satisfaction with the amount of work for the courses offered. The results show that the students are highly satisfied with the proportion of the workload to the number of credit hours allocated to the courses. (Evidence: Sample of Course Surveys)

Table: Survey results for the courses offered last year

Program	Students' Satisfaction with Workload (out of 5)	Remarks
CE BSc	4.029	Satisfied
ME BSc	4.025	Satisfied
CE MSc	4.434	Satisfied
ME MSc	4.707	Satisfied

This score suggests that students generally found the workload, including self-study, aligned with the course's credit hour expectations.

For example, the following Table displays the results of Item #14 from the student course evaluation survey in CE Program, (titled "The workload in this course was proportionate to the number of credit hours assigned to it."). It is organized into several columns: Course, Item statement, Number of Students, the five response categories (Strongly Agree, Agree, Not Sure, Disagree, Strongly Disagree), and the Average score for each course. Each row corresponds to a specific course, showing how many students participated, the percentage distribution of their responses, and the calculated average rating. This structured format

allows for easy comparison between courses and provides a clear overview of how students perceived the balance between workload and credit hours.

Fig.1 presents an analysis of Item #14 from the student survey, which evaluates whether the workload of each course was proportional to the assigned credit hours. The chart combines two sets of data: the number of students who evaluated each course (shown in blue) and the average survey result for this item (shown in green).

From the results, courses such as CE 306 (94.29%), CE 354 (100%), and Math 203 (89.45%) achieved the highest ratings, indicating strong alignment between workload and credit hours. On the other hand, courses like CE 331 (53.33%), GE 202 (70.90%), and CE 363 (73.33%) scored significantly lower, suggesting students perceived a mismatch between workload and assigned credits.

Overall, the average of the results across all courses was 82.65%, which is considered good and reflects a generally positive perception of workload-credit hour proportionality. In conclusion, these results indicate that students are overall satisfied with the workload assigned in their courses.

Similar analysis for the satisfaction of students about the workload is implemented in ME_ BSc, CE_ MSc and ME_ MSc programs.

Course	Item#14	No. of Students	Strongly agree	Agree	Not sure	disagree	Strongly disagree	Average
CE 202	The workload in this course was proportionate to the number of credit hours assigned to it.	9	55.55	22.22	22.22	0	0	86.66
GE 201		21	61.9	14.29	9.52	0	14.29	81.90
GE 202		11	27.27	36.36	18.18	0	18.18	70.90
GE 104		24	50	29.17	12.5	0	8.33	82.50
GEO 285		14	64.29	14.29	21.43	0	4.34	89.45
GE 211		12	41.67	41.67	8.33	0	8.33	81.67
CE 206		17	41.18	41.18	11.76	0	5.88	82.36
CE 205		17	41.18	41.18	11.76	5.88	0	83.53
CE 212		17	41.18	41.18	17.65	0	0	84.71
CE 230		18	50	22.22	22.22	0	5.56	82.22
CE 231		8	37.5	37.5	25	0	0	82.50
CE 306		7	71.43	28.57	0	0	0	94.29
CE 307		7	80	10	0	10	0	92.00
CE 318		18	47.37	31.58	15.79	0	5.26	83.16
CE 320		22	54.55	27.27	13.64	0	4.55	85.46
CE 330		8	50	25	12.5	12.5	0	82.50
CE 331		3	0	33.33	33.33	0	33.33	53.33
CE 343		3	66.67	0	0	33.33	0	80.00
CE 354		6	100	0	0	0	0	100.00
CE 363		18	33.33	11.11	50	0	5.56	73.33
CE 370		17	35.29	41.18	23.53	0	0	82.35
CE 375		18	50	27.78	16.67	5.59	0	84.46
CE 403		8	37.5	37.5	25	0	0	82.50
CE 448		8	50	25	25	0	0	85.00
CE 459		7	57.14	0	42.86	0	0	82.86
CE 474		6	33.33	33.33	33.33	0	0	79.99
STAT 328		17	52.94	23.53	17.95	0	5.88	83.71
Math 203		23	69.57	13.04	13.04	0	4.53	88.73
Math 208		22	40.91	36.36	18.18	0	0	80.91
Math 254		16	58.82	23.53	5.88	11.76	0	85.88
ECON401		15	13.33	46.67	33.33	6.67	0	73.33

Analysis of Item#4 from student's survey

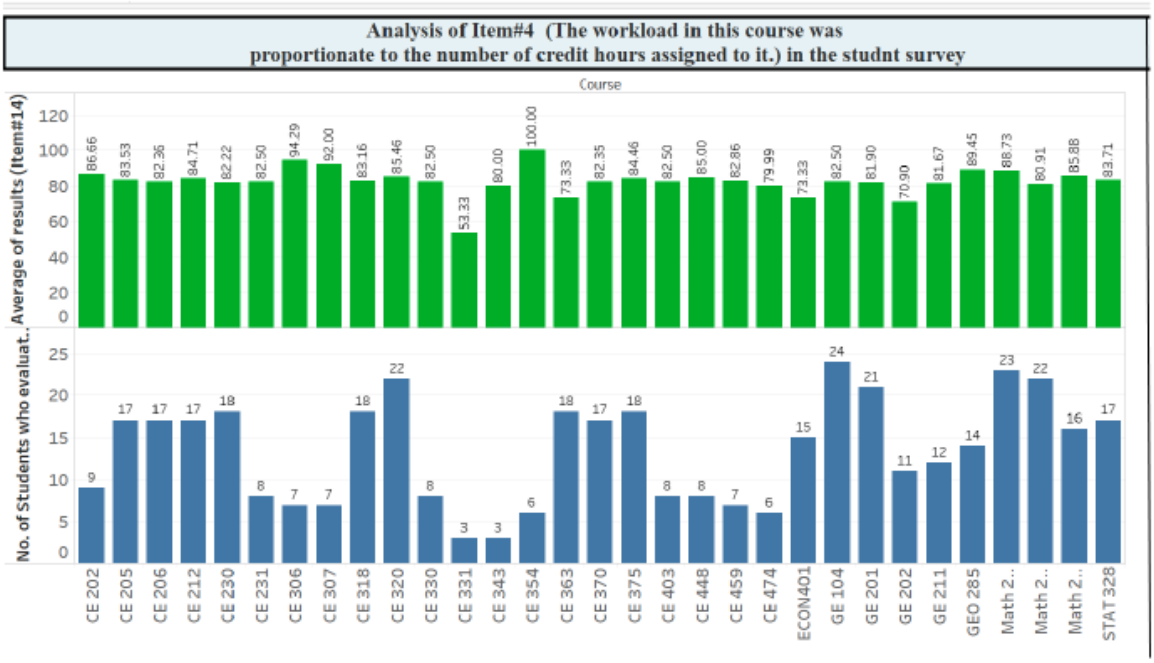


Fig.1: Analysis of Item#14 from students' course evaluation survey in CE program.

Response to Accreditation Review Committee Inquiry No. (2):

Thank you for your inquiry regarding the Preparatory Year Programme (PYP) at the College of Engineering, Qassim University, to clarify:

- The PYP consists of 34 credit hours, of which 21 credit hours are counted towards the student's GPA.
- The PYP is designed to equip students with foundational knowledge in Mathematics, Physics, Computer Skills, English, and General University Requirements (shown in the attached tables), preparing them for their engineering education. Only the credits from engineering-related courses (21 credits) are added to the student's GPA, while the remaining 13 credits from English language courses (ENG 0011 (8 CR) and ENG 0012 (5 CR)) do not count. Since the instruction language in the College of Engineering is English, these courses are intended to enhance students' language skills and ensure they can successfully pursue their engineering studies.
- Upon successful completion of the PYP, students advance to the core engineering curriculum. For example, the Mechanical Engineering program includes 139 credit hours spread over eight semesters. As such, the total credit hours for the whole program are 160 (139+21) credit hours.

- The PYP is a standardized requirement across the College of Engineering at Qassim University for students entering engineering disciplines. It ensures academic readiness and aligns with both national and international accreditation standards.

PYP Courses and CR

1st Level							
Comment	**Pre-Req.**	**TU**	**LB**	**LT**	**CR**	**Course Name**	**Course Code**
Not counted	-	-	4	8	8	Preparatory Year English- 1	ENG 0011
-	-	1	-	1	2	Statistics	STAT 100
-	-	-	2	2	4	Computer Skills	CSC 105
-	-	1	-	1	2	Physics- 1	PHYS 110
-	-	-	-	2	2	Thinking Skills and Learning Styles	PSYCH 101
		2	6	14	18	Total CR	
		2	2	6	10	Counted CR	

2nd Level							
Comment	**Pre-Req.**	**TU**	**LB**	**LT**	**CR**	**Course Name**	**Course Code**
Not counted	-	-	4	4	5	Preparatory Year English- 2	ENG 0012
-	-	-	1	2	2	English for Engineering and Computer Science	ESP 102
-	-	1	-	2	3	Calculus	MATH 105
-	-	-	1	2	3	Computer Programming	CSC 111
-	-	1	-	2	3	Physics- 2	PHYS 115
		2	6	12	16	Total CR	
		2	2	8	11	Counted CR	

F Summary: Expert recommendations (06.09.2025)

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

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ba Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

Requirements

For all degree programmes

A 1. (ASIIN 1.5) The workload must be calculated and documented at the level of each individual module.

A 2. (ASIIN 4.1) Rewrite the course specifications (module descriptions) so as to include information about the respective self-study time and the responsible person(s).

For both Bachelor's degree programmes

A 3. (ASIIN 1.5) Design the programme so that the workload is distributed equally among the semesters. Normally 60 ECTS credits are awarded per academic year.

For both Master's degree programmes

A 4. (ASIIN 1.5) Credit hours have to be awarded to all compulsory modules.
A 5. (ASIIN 4.2) Provide statistical data according to the ECTS Users' Guide.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to condense the Bachelor's programmes to four years and strengthen the Master's programmes.
E 2. (ASIIN 1.3) It is recommended to strengthen the content on sustainability in the curriculum.
E 3. (ASIIN 1.3) It is recommended to integrate AI systematically into the curriculum and provide formal regulations for the use of AI technologies.
E 4. (ASIIN 1.3) It is recommended to promote outgoing student mobility and establish partnerships with universities abroad.
E 5. (ASIIN 2) It is recommended to strengthen competence-oriented exams.
E 6. (ASIIN 3.3) It is recommended to provide more software licences to the students.
E 7. (ASIIN 4.1) It is recommended that the course specifications be consolidated into a single module handbook.

For the Bachelor's Civil Engineering

E 8. (ASIIN 1.3) It is recommended to strengthen the content on construction management in the curriculum.

For the Bachelor's Mechanical Engineering

E 9. (ASIIN 1.3) It is recommended to strengthen the content on vibration in the curriculum.

G Comment of the Technical Committees

Technical Committee 03 – Civil Engineering, Geodesy and Architecture (18.09.2025)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee 03 discussed the procedure and, on academic grounds, concurred with the opinion of the experts. Nevertheless, the Committee expressed serious concern about the fact that the degree programmes under review are currently offered exclusively for male students. Although the university explained that an equivalent offer for female students exists at a separate campus with identical content and facilities, these programmes were only established a few semesters ago and have not yet produced graduates. Consequently, they were not included in the present accreditation procedure.

The Ethics Committee had already issued a decision ten years ago stating that accreditation procedures should only be conducted if, in addition to programmes for men, adequate equivalent programmes for women are offered at the same university. In light of this position, the Technical Committee decided to include this as an additional requirement.

Assessment and analysis for the award of the EUR-ACE® Label:

The Technical Committee deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 03 – Civil Engineering, Geodesy and Architecture.

The Technical Committee 03 – Civil Engineering, Geodesy and Architecture recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

Requirements

For all degree programmes

A 1. (ASIIN 1.4) It must be documented that an adequate and equivalent programme for women is provided at the same higher education institution.

Technical Committee 01 – Mechanical Engineering/Process Engineering (23.09.2025)

Assessment and analysis for the award of the ASIIN seal:

Technical Committee 01 discussed the procedure and followed the assessment of the experts without any changes.

Assessment and analysis for the award of the EUR-ACE® Label:

The Technical Committee deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 01 – Mechanical Engineering/Process Engineering.

The Technical Committee 01 – Mechanical Engineering/Process Engineering recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Accredited by German Engineers	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

H Decision of the Accreditation Commission (26.09.2025)

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

The Accreditation Commission discusses the procedure and follows the assessment of the experts. They withdraw the additional requirement proposed by Technical Committee 03. However, the AC would welcome it if, in the future, the accreditation were also extended to include the women's study programmes. This remark is to be included in the decision letter to the university.

Assessment and analysis for the award of the EUR-ACE® Label:

The Accreditation Commission deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 03 – Civil Engineering, Geodesy and Architecture and the Technical Committee 01 – Mechanical Engineering/Process Engineering.

The Accreditation Commission decides to award the following seals:

Degree Programme	**ASIIN Seal**	**Accredited by German Engineers**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Ba Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Civil Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ba Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council
Ma Mechanical Engineering	With requirements for one year	With requirements for one year	30.09.2031	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

Requirements

For all degree programmes

A 1. (ASIIN 1.5) The workload must be calculated and documented at the level of each individual module.
A 2. (ASIIN 4.1) Rewrite the course specifications (module descriptions) so as to include information about the respective self-study time and the responsible person(s).

For both Bachelor's degree programmes

A 3. (ASIIN 1.5) Design the programme so that the workload is distributed equally among the semesters. Normally 60 ECTS credits are awarded per academic year.

For both Master's degree programmes

A 4. (ASIIN 1.5) Credit hours have to be awarded to all compulsory modules.
A 5. (ASIIN 4.2) Provide statistical data according to the ECTS Users' Guide.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to condense the Bachelor's programmes to four years and strengthen the Master's programmes.
E 2. (ASIIN 1.3) It is recommended to strengthen the content on sustainability in the curriculum.
E 3. (ASIIN 1.3) It is recommended to integrate AI systematically into the curriculum and provide formal regulations for the use of AI technologies.
E 4. (ASIIN 1.3) It is recommended to promote outgoing student mobility and establish partnerships with universities abroad.
E 5. (ASIIN 2) It is recommended to strengthen competence-oriented exams.
E 6. (ASIIN 3.3) It is recommended to provide more software licences to the students.
E 7. (ASIIN 4.1) It is recommended that the course specifications be consolidated into a single module handbook.

For the Bachelor's Civil Engineering

E 8. (ASIIN 1.3) It is recommended to strengthen the content on construction management in the curriculum.

For the Bachelor's Mechanical Engineering

E 9. (ASIIN 1.3) It is recommended to strengthen the content on vibration in the curriculum.

I Fulfilment of Requirements (25.09.2026)

Analysis of the Experts and the Technical Committees (11.09.2026)

Requirements

For all degree programmes

A 1. (ASIIN 1.5) The workload must be calculated and documented at the level of each individual module.

Initial Treatment	
Experts	fulfilled Justification: The workload was calculated and documented for each individual module.
TC 03	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.
TC 01	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.

A 2. (ASIIN 4.1) Rewrite the course specifications (module descriptions) so as to include information about the respective self-study time and the responsible person(s).

Initial Treatment	
Experts	fulfilled Justification: The module descriptions were revised and now include the self-study time and the responsible person(s).
TC 03	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.
TC 01	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.

For both Bachelor's programmes

A 3. (ASIIN 1.5) Design the programme so that the workload is distributed equally among the semesters. Normally 60 ECTS credits are awarded per academic year.

Initial Treatment	
Experts	fulfilled Justification: The workload is now distributed evenly with approximately 30 ECTS credits per semester, the only exception being the final semester, which also covers the summer training scheduled during the semester break.
TC 03	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.
TC 01	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.

For both Master's programmes

A 4. (ASIIN 1.5) Credit hours have to be awarded to all compulsory modules.

Initial Treatment	
Experts	fulfilled Justification: Credit hours have been awarded to all compulsory modules.
TC 03	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.
TC 01	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.

A 5. (ASIIN 4.2) Provide statistical data according to the ECTS Users' Guide.

Initial Treatment	
Experts	fulfilled Justification: The statistical data are provided in line with the ECTS Users' Guide and are included in the Diploma Supplement.
TC 03	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.
TC 01	fulfilled Justification: The TC discusses the requirement and follows the experts' assessment without amendments.

Decision of the Accreditation Commission (25.09.2026)

Degree programme	ASIIN-label	Subject-specific label	Accreditation until max.
Ba Civil Engineering	All requirements fulfilled	EUR-ACE®	30.09.2031
Ba Mechanical Engineering	All requirements fulfilled	EUR-ACE®	30.09.2031
Ma Civil Engineering	All requirements fulfilled	EUR-ACE®	30.09.2031
Ma Mechanical Engineering	All requirements fulfilled	EUR-ACE®	30.09.2031

Appendix: Programme Learning Outcomes and Curricula

According to the programme handbook, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme in Civil Engineering:

Knowledge and Understanding	
K1	Acquire knowledge of Basic sciences (Math, Physics, management, economy, etc.) and Basic Engineering sciences.
K2	Identify complex civil engineering problems by recognizing the principles of civil engineering subjects, basic sciences, and mathematics.
K3	Relate knowledge of Math, Statistics, basic sciences to their engineering specialization, together with in-depth knowledge of that specialization.
K4	Comprehensively Identify research and inquiry methodologies
Skills	
S1	Formulate, and solve complex civil engineering problems by applying principles of engineering, science, mathematics, and management
S2	Apply appropriate engineering techniques, and modern IT tools, including prediction and modeling to civil engineering constructions/installations/establishments to assess their characteristics and performance.
S3	Apply engineering design principles to produce solutions that meet specified needs, relevant to civil engineering, with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
S4	Communicate effectively with a range of audiences
S5	Conduct inquiries, investigations, and research for complex issues and problems.
S6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Values	
V1	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
V2	Acquire new knowledge, as needed, using appropriate learning strategies
V3	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

The following **curriculum** is presented:

The Preparatory Year Program (PYP) is taken into consideration as levels 1 and 2 in the graduation program. In these levels, students study the following courses:

1st Level

Course Code	Course Title	Credit Hours
CSC 105	Computer Skills	4
ENG 0011	Preparatory English (1)	8
PHYS 110	Physics (1)	2
PSYCH 101	Thinking Skills and Learning Styles	2
STAT 100	Statistics	2
Total Hours		**18**

2nd Level

Course Code	Course Title	Credit Hours
CSC 111	Computer programming	3
ENG 0012	Preparatory English (2)	5
ESP 102	English for Engineering and Computer Science	2
MATH 105	Calculus	3
PHYS 115	Physics (2)	3
Total Hours		**16**

3rd Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 101	Introduction to Islamic culture	2	2	-	-	-	-
ARAB 101	Linguistic skills	2	2	-	-	-	-
PHYS 131	General Physics	4	3	2	-	-	-
GE 104	Basics of Engineering Drawing	3	1	4	-	-	-
MATH 106	Integral Calculus	3	3	-	1	-	-
CHEM 111	General Chemistry	4	3	2	-	-	-
		18					

4th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 102	Islam and Community Building	2	2	-	-	IC 101	-
GE 105	Basics of Engineering Technology	2	1	2	-	GE 104	-
MATH 107	Linear Algebra & Analytic Geometry	3	2	-	1	-	-
MATH 203	Differential and Integral Calculus	3	2	-	1	MATH 106	-
GE 201	Statics	3	2	-	1	MATH 106	-
GEO 285	Engineering Geology	2	2	-	1	-	-
+++	Free Course – 1	3	-	-	-	-	-
		18					

5th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 103	Economic System in Islam	2	2	-	-	IC 101	-
MATH 208	Differential equations	3	3	-	1	MATH 203	-
GE 211	Introduction to Engineering Design-I	3	2	4	-	-	-
CSC 209	Computer Programming	3	2	2	-	MATH 107 MATH 203	-
GE 202	Dynamics	3	3	-	1	GE 201	-
CE 202	Mechanics of Materials	3	3	-	1	GE 201 MATH 203	
		17					

6th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
STAT 328	Probabilities and statistics	3	3	-	1	MATH 203	-
GE 213	Introduction to Engineering Design-2	2	2	2	-	GE 211	-
CE 205	Properties of Structural Materials	2	1	2	-	CE 202	-
CE 230	Fluid Mechanics	3	3	-	1	MATH 106 GE 201	-
CE 231	Fluid Mechanics Laboratory	1	-	2	-	-	CE 230
CE 212	Plane Surveying	3	1	2	1	MATH 107	-
CE 206	Structural Analysis – 1	3	3	-	1	CE 202	-
		17					

7th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
ARAB 103	Arabic Writing	2	2	-	-	-	-
CE 306	Structural Analysis - 2	2	2	-	1	CE 206	-
CE 307	Properties and Testing of Concrete	2	1	2	-	CE 205	-
CE 330	Hydraulics	2	2	-	1	CE 230	-
CE 353	Geotechnical Engineering	3	3	-	1	GEO 285	-
CE 354	Geotechnical Engineering Laboratory	1	-	2	-	-	CE 353
CE 343	Transportation and Traffic Engineering	3	3	-	1	MATH 203	-
ME 327	Building Thermal Loads	2	2	-	1	PHYS 131	
		17					

8th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 104	Political System in Islam	2	2	-	-	IC 101	-
CE 318	Design of Reinforced Concrete Structures	4	4	-	1	CE 306 CE 307	-
CE 370	Water and Wastewater Engineering	4	4	-	1	CE 330	-
CE 375	Steel Structures Design	3	3	-	1	CE 306	-
+++	College Elective – 1	3	3	-	-	-	-
		16					

9th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
ECON 401	Engineering Economy	3	3	-	1	Pass 90 cr	-
CE 363	Foundation Engineering	3	3	-	1	CE 353 CE 318	-
CE 331	Hydrology	3	3	-	1	CE 330	-
CE 447	Highway Engineering	2	2	-	1	CE 205 CE 343	-
CE 4++	Civil Engineering Elective -1	3	3	-	-	-	-
CE 491	Senior Design Project - 1	3	1	4	-	Pass 100 cr	-
		17					

10th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
MGMT 402	Project Management	3	3	-	1	Pass 90 cr	-
CE 320	Construction Engineering	3	3	-	1	Pass 90 cr	-
CE 4++	Civil Engineering Elective -2	3	3	-	-	-	-
+++	College Elective – 2	3	3	-	-	-	-
+++	Free Course – 2	3	3	-	-	-	-
CE 492	Senior Design Project- 2	2	1	2	-	CE 491	-
GE 406	Summer Training	2	2	-	-	Pass 100 cr	-
		19					

According to the programme handbook, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master's degree programme in Civil Engineering:

Knowledge and Understanding	
K1	Identify in depth and specialized body of knowledge and understanding covering theories, principles, and concepts in the field of civil engineering.
K2	Express critical knowledge and understanding of processes, materials, techniques, practices, conventions, and/or terminology relevant to civil engineering field.
K3	Define advanced knowledge and understanding of recent development in the field of civil engineering.
K4	Discover advanced knowledge and understanding of a range of established and specialized research and/or inquiry techniques in the field of civil engineering.
Skills: Cognitive	
S1	Apply specialized theories principles and concepts advanced contexts in the field of civil engineering.
S2	Solve problems in complex and advanced contexts in the field of civil engineering.
S3	Critically assess, review, and reflect on key concepts, principles, and theories; and provide creative solutions to current issues and problems in complex and advanced contexts in the field of civil engineering.
S4	Carry out advanced research or professional projects using specialized research and enquiry methodologies in the field of civil engineering.
Skills: Practical and Physical	
S5	Use processes, techniques, tools, and/or materials that are advanced and specialized to deal with complex and advanced practical activities in the field of civil engineering.
S6	Carry out complex and advanced practical tasks and procedures in specialized areas related to civil engineering field.
Skills: Communication and ICT	

S7	Communicate in various forms to disseminate knowledge, skills, research results, and innovations related to civil engineering field to specialist and non-specialist audiences.
S8	Process data and information quantitatively and/or qualitatively in complex and advanced contexts related to civil engineering field.
S9	Select, use, and adapt advanced digital technological and ICT tools and applications to process and analyze a variety of data and information sets to support and advance leading research and/or projects related to civil engineering field.
Values, Autonomy and Responsibility	
V1	Demonstrate integrity and professional and academic values when dealing with various issues.
V2	Initiate professional planning for learning and/or work, professional development, monitor learning and performance, and participate in academic and/or professional strategic decisions, with high autonomy.
V3	Effectively manage specialized tasks and activities in civil engineering and related discipline with high autonomy.
V4	Effectively collaborates and participates in research or professional projects, undertake leadership roles, and take high responsibility of the work.
V5	Contribute to the fostering of the community quality life.

The following **curriculum** is presented:

Year 1 – Level 1 (Semester 1)			
Course	Course Title	Cr. Hrs.	Prereq
GE 605	Modeling and Simulation of Engineering Systems	3	---
GE 608	Experimental Methods and Analysis	3	---
MATH 621	Engineering Mathematics	3	---
	Total	9	

Year 1 – Level 2 (Semester 2)			
Course	Course Title	Cr. Hrs.	Prereq
CE 6--	Elective 1	3	---
CE 6--	Elective 2	3	---
ECE 6--	Elective 3	3	---
	Total	9	

Year 2 – Level 3			
Course	Course Title	Cr. Hrs.	Prereq
CE 6--	Elective 4	3	---
CE 6--	Elective 5	3	---
	Total	6	

Year 2 – Level 4			
Course	Course Title	Cr. Hrs.	Prereq
CE 699	Thesis	6	---
	Total	6	

Total Hours in MSc- Civil Engineering Program	30 H

Table 4: Elective courses

Course	Course Title	Cr. Hrs.	Prerequisite
CE600	Concrete Technology	3	----------
CE601	Advanced Structural Analysis	3	----------
CE602	Finite Elements Method in Structural Analysis	3	----------
CE603	Theory of Plates and Shells	3	----------
CE604	Structural Dynamics	3	----------
CE605	Advanced Mechanics of Materials	3	----------
CE606	Building Structural Systems	3	----------
CE607	Structural Fire Engineering	3	----------
CE610	Advanced Concrete Design	3	----------
CE611	Prestressed Concrete	3	----------
CE 612	Earthquake Engineering	3	----------
CE 613	Advanced Steel Design	3	----------
CE 614	Design of Blast Resistant Structures	3	----------
CE 615	Advanced Foundation Engineering	3	----------
CE 660	Advanced Foundation Engineering	3	----------
CE 661	Dynamics of soils and foundations	3	----------
CE 690	Selected Topics in Structural Engineering	3	----------
CE 680	System Engineering Management	3	----------
CE 620	Construction Planning and Control	3	----------
CE 681	Construction Engineering Management	3	----------
CE 682	Risk Management in Construction Engineering	3	----------
CE 621	Cost Analysis and Control	3	----------
CE 622	Legal Aspects of Engineering and Construction	3	----------
CE 623	Computer Applications in Construction Engineering	3	----------
CE 624	Value Engineering	3	----------
CE 683	Human Resources Management for Engineers	3	----------
CE 691	Selected Topics in Construction Engineering and Management	3	----------
CE 670	Chemistry in Environmental Engineering	3	----------
CE 671	Microbiology in Environmental Engineering	3	----------
CE 672	Physical-Chemical Treatment Processes	3	----------
CE 673	Biological Treatment Processes	3	----------
CE 674	Unit Operations and Processes Laboratory	3	----------

CE 675	Planning and Design of Water and Sewerage Networks	3	----------
CE 676	Solid Waste Management	3	----------
CE 677	Environmental Air Pollution	3	----------
CE 678	Industrial Wastewater Treatment	3	----------
CE 692	Special Topics in Environmental Engineering	3	----------
CE 630	GIS and Natural Resources Management	3	----------
CE 631	Hydrometry	3	----------
CE 632	Drainage Engineering	3	----------
CE 633	Irrigation Engineering	3	----------
CE 634	Groundwater Hydrology	3	----------
CE 635	Probability and Statistics in Hydrology	3	----------
CE 636	Water Resources Planning	3	----------
CE 637	Applied Groundwater Flow Modeling	3	----------
CE 638	Design of Hydraulic Structures	3	----------
CE 639	Physical Hydrology	3	----------
CE 693	Special Topics Water Resources Hydraulics	3	----------
CE 640	Urban Transportation Planning & Modeling	3	----------
CE 641	Advanced Transportation Systems Analysis	3	----------
CE 642	Traffic Flow Theory and Control	3	----------
CE 643	Traffic Safety, Operations, and Maintenance	3	----------
CE 650	Advanced Asphalt Materials	3	----------
CE 651	Advanced Highway Design	3	----------
CE 652	Advanced Pavement Design	3	----------
CE 653	Pavement Management Systems	3	----------
CE 654	Airport Planning and Design	3	----------
CE 694	Special Topics in Transportation Engineering	3	----------

According to the programme handbook, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme in Mechanical Engineering:

Knowledge and Understanding	
K1	Acquire knowledge of Basic sciences (math, physics, management, economy, etc.) and Basic Engineering sciences.
K2	Identify complex mechanical engineering problems by recognizing the principles of mechanical engineering subjects, basic sciences, and mathematics.
K3	Relate knowledge of Math, Statistics, basic sciences to their engineering specialization (Design, Manufacturing, and Thermo-fluids), together with in-depth knowledge of that specialization.
K4	Comprehensively Identify research and inquiry methodologies.
Skills	
S1	Formulate, and solve complex mechanical engineering problems by applying principles of engineering, science, and mathematics.
S2	Be able to use the engineering techniques, and modern IT tools for modelling, predicting and assessing the performance of mechanical systems.
S3	Apply design concepts to produce solutions that meet specified needs in the mechanical engineering fields with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
S4	Communicate effectively with a range of audiences through engineering drawings, computer graphics, technical reports, and perform presentations.
S5	Conduct inquiries, investigations, and research for complex issues and problems.
S6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
Values	
V1	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
V2	Be able to acquire and apply new knowledge as needed, using appropriate learning strategies.
V3	Be able to function effectively on a team whose members together can provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

The following **curriculum** is presented:

The Preparatory Year Program (PYP) is taken into consideration as levels 1 and 2 in the graduation program. In these levels, students study the following courses:

1st Level

Course Code	Course Title	Credit Hours
CSC 105	Computer Skills	4
ENG 0011	Preparatory English (1)	8
PHYS 110	Physics (1)	2
PSYCH 101	Thinking Skills and Learning Styles	2
STAT 100	Statistics	2
Total Hours		**18**

2nd Level

Course Code	Course Title	Credit Hours
CSC 111	Computer programming	3
ENG 0012	Preparatory English (2)	5
ESP 102	English for Engineering and Computer Science	2
MATH 105	Calculus	3
PHYS 115	Physics (2)	3
Total Hours		**16**

3rd Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 101	Introduction to Islamic culture	2	2	-	-	-	-
ARAB 101	Linguistic skills	2	2	-	-	-	-
PHYS 131	General Physics	4	3	2	-	-	-
GE 104	Basics of Engineering Drawing	3	1	4	-	-	-
MATH 106	Integral Calculus	3	3	-	1	-	-
CHEM 111	General Chemistry	4	3	2	-	-	-
		18					

4th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 102	Islam and Community Building	2	2	-	-	IC 101	-
GE 105	Basics of Engineering Technology	2	1	2	-	GE 104	-
MATH 107	Linear Algebra & Analytic Geometry	3	3	-	1	-	-
MATH 203	Differential and Integral Calculus	3	3	-	1	MATH 106	-
GE 201	Statics	3	3	-	1		
ME 241	Mechanical Drawing	3	2	2	-	GE104	
EE 318	Fundamentals of Electric circuits	3	3	-	1	PHYS 131	
		19					

5th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
MATH 208	Differential equations	3	3	-	1	MATH 203	-
GE 211	Introduction to Engineering Design-I	3	2	4	-	-	-
CSC 209	Computer Programming	3	2	2	-	MATH 107 MATH 203	
GE 202	Dynamics	3	3	-	1	GE 201	
ME 251	Materials Engineering	3	3	-	1	PHYS 131 GE 105	
ME 252	Materials Engineering Lab	1	-	2	-		ME 251
EE 339	Electrical Machines	2	2	-	1	EE 318	
		18					

6th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
STAT 328	Probabilities and statistics	3	3	-	1	MATH 203	-
GE 213	Introduction to Engineering Design-2	2	2	2	-	GE 211	-
IC 103	Economic System in Islam	2	2	-	-	IC 101	-
ME 371	Thermodynamics -1	3	3	-	1	CHEM 111	
ME 360	Mechanics of Machinery	3	3	-	1	GE 202 CSC 209	
ME 363	Mechanics of Machinery Lab	1	-	2	-		ME 360
ME 350	Mechanics of Materials	3	3	-	1	GE 201	
ME 352	Mechanics of Materials Laboratory	1	-	2	-		ME 350
		18					

7th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
ARAB 103	Arabic Writing	2	2	-	-	-	-
ME 335	Manufacturing Processes	3	3	-	1	ME 241 ME 251 ME 350	
ME 336	Manufacturing Processes Lab	1	-	2	-		ME 335
ME 372	Thermodynamics – 2	3	3	-	1	ME 371	
ME 385	Fluid Mechanics	3	3	-	1	ME 371 GE 202	
ME 383	Thermo-fluid Laboratory -1	1	-	2	-		ME 385 ME 372
+++	College Elective Course-1	3	3	-	-		
		16					

8th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
IC 104	Political System in Islam	2	2	-	-	IC 101	-
+++	Free Course 1	3	3	-	-		
ME 395	Heat Transfer	3	3	-	1	ME 385	
ME 384	Thermo-fluid Laboratory -2	1	-	2	-		ME 395
ME 340	Mechanical Design -1	3	3	-	1	ME 335	
ME 344	Measurements and Instrumentation	3	2	2	-	ME 385 STAT 328	
		15					

9th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
ME 465	System Dynamics and Automatic Control	3	3	-	1	Math 208 CSC 209	
ME 468	System Dynamics and Automatic Control Lab	1	-	2	-		ME 465
ME 4xx	Elective Course - 1	3	3	-	-		
ME 441	Mechanical Design -2	3	3	-	1	ME 340	
MGMT 402	Project Management	3	3	-	1	Pass 90 cr	
ME 491	Senior Design Project - 1	3	1	4	-	Pass 100 cr	-
		16					

10th Level

Course Code	Course Title	CR	LT	LB	TU	Pre-Req.	Co-Req.
ECON 401	Engineering Economy	3	3	-	1	Pass 90 cr	-
ME 495	Thermal Fluid Systems	3	3	-	1	ME 372	-
+++	Free Course 2	3	3	-	-		
ME 4xx	Elective Course - 2	3	3	-	1		
+++	College Elective Course-2	3	3	-	-		
ME 492	Senior Design Project - 2	2	1	2	-	ME 491	-
GE 406	Summer Training	2	2	-	-	Pass 100 cr	-
		19					

According to the programme handbook, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master's degree programme in Mechanical Engineering:

Knowledge and Understanding	
K1	Reveal deep and specialized body of knowledge and understanding covering theories, principles, and concepts in the field of mechanical engineering.
K2	Demonstrate critical knowledge and understanding of processes, materials, techniques, practices, conventions, and/or terminology relevant to mechanical engineering field.
K3	Express advanced knowledge and understanding of recent development in the field of mechanical engineering.
K4	Exhibit excellent knowledge and understanding of a range of established and specialized research and/or inquiry techniques in the field of mechanical engineering.
Skills: Cognitive	
S.1	Apply specialized theories, principles and concepts in advanced frameworks in the field of mechanical engineering.
S.2	Solve problems in complex and advanced perspectives in the field of mechanical engineering.
S.3	Critically assess, review, and reflect on key concepts, principles, and theories; and provide creative solutions to current issues and problems in composite and advanced contexts in the field of mechanical engineering.
S.4	Carry out advanced research or professional projects using specialized research and inquiry methodologies in the fields of mechanical design, manufacturing, dynamic control, thermofluids, and other related fields.
Skills: Practical and Physical	
S.5	Utilize and apply tools, materials, processes and techniques that are advanced and specialized to deal with complex and advanced practical activities in the field of mechanical engineering.
S.6	Carry out multifaceted and advanced practical tasks and procedures in specialized areas related to mechanical design, manufacturing, dynamic control, thermos-fluids, and other related engineering fields.

Skills: Communication and ICT	
S.7	Communicate in various forms to disseminate knowledge, skills, research results, and innovations related to mechanical engineering field to specialist and non-specialist audiences.
S.8	Process data and information quantitatively and/or qualitatively in complex and advanced contexts suitable for mechanical engineering field.
S.9	Select, use, and adapt advanced digital technological and ICT tools and applications to process and analyze a variety of data and information sets to support and advance leading research and/or projects related to mechanical engineering field.
Values, Autonomy and Responsibility	
V.1	Demonstrate integrity and professional and academic values when dealing with various issues.
V.2	Initiate professional planning for learning and/or work, professional development, monitor learning and performance, and participate in academic and/or professional strategic decisions, with high autonomy.
V.3	Effectively manage specialized tasks and activities in Mechanical engineering and related discipline with high autonomy.
V.4	Effectively collaborates and participate in research or professional projects, undertake leadership roles, and take high responsibility of the work.
V.5	Contribute to the development of the quality level of community life.

The following **curriculum** is presented:

Year 1 – Level 1 (Semester 1)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
GE 605	Modeling and Simulation of Engineering Systems	3	---
GE 608	Experimental Methods and Analysis	3	---
MATH 621	Engineering Mathematics	3	---
	Total	**9**	

Year 1 – Level 2 (Semester 2)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
ME 6--	Elective 1	3	---
ME 6--	Elective 2	3	---
ME 6--	Elective 3	3	---
	Total	**9**	

Year 2 – Level 3			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
ME 6--	Elective 4	3	---
ME 6--	Elective 5	3	---
	Total	**6**	

Year 2 – Level 4			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
ME 699	Thesis	6	---
	Total	**6**	

Total Hours in M.Sc.- Mechanical Engineering Program	**30 H**

Table 4: Elective courses			
Course	**Course Title**	**Cr. Hrs.**	**Pre-req**
ME 630	Selected Topics in Manufacturing Processes	3	----------
ME 631	Advanced Manufacturing Processes	3	----------
ME 632	Advanced Engineering Materials	3	----------
ME 633	Advanced Mechanics of Materials	3	----------
ME 634	Polymer Processing	3	----------
ME 635	Manufacturing System Design and Simulation	3	----------
ME 636	CAM Applications	3	----------
ME 637	Design for Manufacturability	3	----------
ME 638	Automation in Manufacturing	3	----------
ME 639	Fracture Mechanics	3	----------
ME 640	Applied Finite Elements	3	----------
ME 659	Mechatronic Systems	3	----------
ME 660	Selected Topics in System Dynamics and Control	3	----------
ME 661	Advanced System Dynamics and Control	3	----------
ME 662	Advanced Mechanical Vibrations	3	----------
ME 663	Intelligent Control Systems	3	----------

Course	Course Title	Cr. Hrs.	Pre-req
ME 664	Dynamics of Mechanical Systems	3	----------
ME 665	Advanced Measurement s and Instrumentations	3	----------
ME 666	Robotics	3	----------
ME 667	Design of Digital Control Systems	3	----------
ME 668	Optimal Control	3	----------
ME 669	Flight Dynamics and Control	3	----------
ME 670	Selected Topics in Mechanical Power Engineering	3	----------
ME 671	Advanced Heat Transfer	3	----------
ME 672	Advanced Thermodynamics	3	----------
ME 673	Advanced Fluid Mechanics	3	----------
ME 674	Energy Conversion	3	----------
ME 675	Thermal Power Plants	3	----------
ME 676	Turbo-Machinery	3	----------
ME 677	Engineering Safety and the Environment	3	----------
ME 678	Combustion and Fuel	3	----------
ME 679	Solar System Engineering	3	----------
ME 680	Desalination	3	----------
	Total	**99**	