ASIIN Seal & EUR-ACE®

Accreditation Report

Bachelor's Degree Programme
Civil Engineering with Honours

Provided by
Universiti Teknologi Malaysia

Version: 25 September 2026

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Sarjana Muda Kejuruteraan Awam dengan Kepujian	Bachelor of Civil Engineering with Honours	ASIIN, EUR-ACE® Label	/	TC 03
Date of the contract: 23.12.2024 **Submission of the final version of the self-assessment report:** 07.11.2025 **Date of the onsite visit:** 21.–22.05.2026 **at:** Faculty of Civil Engineering				
Expert panel: Prof. Dr. Mike Gralla, TU Dortmund University Prof. Dr. Wolfgang Weber, Helmut Schmidt University / University of the Federal Armed Forces Hamburg Ir. Dr. Teh Tzyy Wooi, H&T Consulting Engineers Sdn Bhd Muhammad Idham Fahmi Bin Darul Naim, Universiti Kebangsaan Malaysia				
Representative of the ASIIN headquarter: Tamina Renner, M.A.				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				
Criteria used: European Standards and Guidelines as of May 15, 2015				

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

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

ASIIN General Criteria, as of March 28, 2023 Subject-Specific Criteria of Technical Committee 03 – Civil Engineering, Geodesy and Architecture as of June 26, 2020	

B Accreditation Status

Result Overview

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

Degree Programmes	ASIIN Seal	Accredited by German Engineers	Validity	European Label	Validity
Ba Civil Engineering with Honours	Accredited with requirements	Accredited with requirements	25.09.2026 – 16.10.2027	Accredited with requirements	25.09.2026 – 16.10.2027

Fulfilment of the Accreditation Criteria

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

ASIIN General Criteria / Subject-Specific Criteria	Ba Civil Engineering with Honours
3.1 Staff and staff development	Fulfilled
3.2 Student support and student services	Fulfilled
3.3 Funds and equipment	Fulfilled
4 Transparency and Documentation	
4.1 Module descriptions	**Not fulfilled** **Requirement A 2**
4.2 Diploma and Diploma Supplement	Fulfilled
4.3 Relevant rules	Fulfilled
5 Quality Management: Quality Assessment and Development	
5 Quality Management: Quality Assessment and Development	**Not fulfilled** **Requirement A 3**

Requirements

A 1. (ASIIN 1.4) The admission procedures must ensure equal access and must not contain any discriminatory criteria.

A 2. (ASIIN 4.1) Ensure that module descriptions are publicly available and accessible to all stakeholders.

A 3. (ASIIN 5) Ensure that students are informed about the evaluation results.

Accreditation History

The programme has not been previously accredited by ASIIN.

C Characteristics of the Degree Programme

a) Name	Final degree (original/English translation)	b) Areas of Specialisation	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
Ba Civil Engineering	Bachelor of Civil Engineering with Honours	/	6	Full time	/	8 semesters	137 credits/ 219.2 ECTS	Annually, 1972

Contextualisation

Universiti Teknologi Malaysia (UTM), as described in the SAR and on the university website, is one of Malaysia's leading universities in the fields of science, engineering, and technology. The origins of the institution date back to 1904 with the establishment of the Treacher Technical School in Kuala Lumpur. Over the course of the twentieth century, the institution developed from a technical school into a Technical College and was subsequently transformed into Institut Teknologi Kebangsaan (ITK) in 1972 before officially becoming Universiti Teknologi Malaysia in 1975. The university further expanded its academic and research infrastructure with the opening of its main campus in Skudai, Johor, in 1985.

UTM states that its institutional philosophy is based on the understanding that divine law constitutes the foundation of knowledge and emphasises excellence in science, technology, and engineering for the benefit of society. The university's vision is to provide world-class education and research, while its mission focuses on the development of globally competitive graduates and the contribution to societal prosperity through knowledge and innovative technologies.

According to the SAR, UTM currently enrols approximately 30,000 students, including nearly 5,000 international students. The university employs around 4,800 staff members, including approximately 1,500 academic staff, a large proportion of whom hold doctoral degrees.

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

Brief Descriptions of the Study Programme

The "Bachelor of Civil Engineering with Honours" at UTM's Faculty of Civil Engineering (FKA) is an 8-semester, full-time undergraduate programme first offered in 1972 and accredited by the Board of Engineers Malaysia. It admits around 250 students annually and provides a solid foundation in core civil engineering disciplines (structures, geotechnics, hydraulics/hydrology, transportation, and environmental engineering) in the first two years, followed by specialised electives, two Integrated Design Projects, industrial training, and a Final Year Project in the later years, preparing graduates for professional engineering practice.

The programme is aligned with FKA's institutional aspirations. FKA's vision is to be a globally prominent Civil Engineering Centre for education, research and innovation, pursued through its mission to spearhead excellence in the development of education, talent and innovative wellbeing and prosperity, guided by the faculty motto "ALWAYS AHEAD."

Summary of the Experts' Assessment

The experts gain a very positive impression of the programme and identify a number of strengths. The programme is embedded in a clearly communicated institutional strategy and offers a comprehensive and well-established curriculum covering the core areas of civil engineering. The curriculum is complemented by innovative elements such as the *Integrated Design Project* and by dedicated modules fostering transferable skills, including *Academic Communication Skills*, which reflects feedback received from industry in the previous years.

The experts further appreciate the close cooperation with industry and external stakeholders, which is reflected in guest lectures, technical visits, and other practice-oriented learning activities. They observe a highly committed teaching staff, including lecturers with substantial industrial experience, as well as highly motivated students who demonstrate a strong identification with the university. The teaching facilities, particularly the laboratories, are considered well equipped for teaching purposes, with appropriate safety regulations in place. In addition, students benefit from accessible academic staff and a well-functioning academic advisory system, while newly appointed academic staff receive structured support through a mentoring programme.

In addition to the strengths identified above, the experts see further potential for development in several areas. With regard to the curriculum, the programme could benefit from a more visible integration of sustainability aspects into the compulsory modules. The curricular profile could also be further enriched by giving greater consideration to building

construction and by making use of possible synergies with the Faculty of Built Environment & Surveying, particularly taking into account architectural aspects. In addition, further opportunities for student mobility could support the international orientation of the programme.

With respect to infrastructure, the experts note that the teaching laboratories are well equipped, while the research laboratories could be further enhanced.

The experts also identify some potential for improvement in the programme documentation and related formal aspects. Admission procedures should be designed in a way that ensures equal access and avoids any discriminatory criteria. Furthermore, the module descriptions should be complete, accurate, publicly available, and easily accessible to all relevant stakeholders. The documentation accompanying the degree could also be further aligned with international standards. In this context, the Malaysian Qualification Statement could be presented as a Diploma Supplement and should include information on the national higher education system, a transparent explanation of the calculation of the final grade, and statistical information on the distribution of final grades in line with the ECTS Users' Guide.

Finally, with regard to quality assurance, the feedback loop could be strengthened by informing students more systematically about the results of course evaluations and, where applicable, about measures derived from their feedback.

D Expert Report for the ASIIN Seal[4]

1. The Degree Programme: Concept, Content & Implementation

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

Evidence:

- Self-Assessment Report
- Programme website: *https://civil.utm.my/undergraduate/programme/*
- Undergraduate Academic Guidelines by the Faculty of Civil Engineering
- Sample of the Malaysian Qualification Statement (QMS)
- Mapping of Programme Learning Outcomes (PLOs) to Programme Educational Objectives (PEOs)
- SSC-based Objective-Module Matrix
- Alumni and Employer Survey Results
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the SAR, the Programme Educational Objectives (PEOs) form the basis for the development of the Programme Learning Outcomes (PLOs) and the Course Learning Outcomes (CLOs) of the "Bachelor of Civil Engineering with Honours" programme. The PEOs are aligned with the vision and mission of Universiti Teknologi Malaysia and the Faculty of Civil Engineering and are intended to reflect the needs of relevant stakeholders.

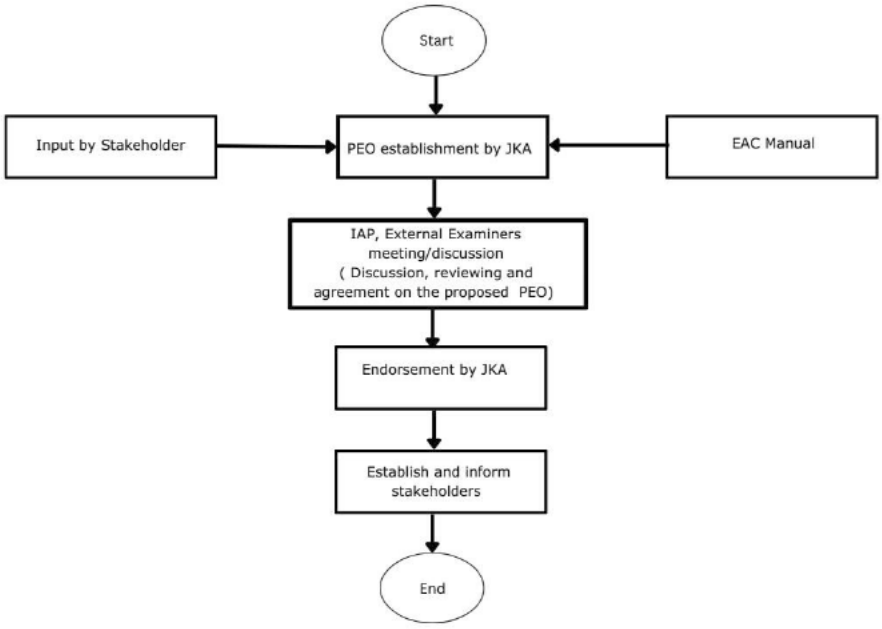
As described in the SAR, the PEOs define the expected abilities and professional profile of graduates three to five years after graduation. They are published in the Academic Guidelines and are

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

accessible via the FKA website. The PEOs and PLOs of the programme are included in the appendix to this report.

The SAR states that graduates are expected to acquire the necessary technical competences as well as generic and professional skills required for work as civil engineers. These include, among others, leadership, problem-solving, creativity, communication, ethical awareness, management skills, and entrepreneurship. According to the university, these objectives are in line with UTM's and FKA's aim to achieve a high level of academic quality and human capital development and to prepare graduates for competitive professional positions.

The university further explains that the PEOs are established and reviewed regularly in light of current university requirements and stakeholder needs. The process for establishing and reviewing the PEOs is illustrated in the following figure.



Flow chart of the process of establishing and reviewing PEOs

JKA = Faculty's Academic Committee, EAC = Engineering Accreditation Council, IAP = Industry Advisory Panel

According to the SAR, the achievement of the PEOs is measured through direct methods. This included alumni and employer surveys. The results of these surveys indicate a satisfactory attainment of all PEOs.

The SAR further relates the graduate profile to the European Qualifications Framework. According to the university, the programme profile corresponds to EQF level 6 and enables graduates to take up professional activities appropriate to this level of qualification. The profile includes

knowledge and understanding of natural sciences, mathematics, and engineering in the field of civil engineering; the ability to conduct engineering analysis and address complex civil engineering phenomena; competences in planning, design, calculation, and dimensioning of structures and systems; as well as social competences, including the ability to work independently and in teams and to communicate effectively.

In addition, the university has provided an objective-module matrix based on the ASIIN Subject-Specific Criteria (SSC). The matrix indicates how the relevant subject-specific criteria are addressed by the programme learning objectives and by the individual modules of the degree programme.

The experts refer to the SSC of Technical Committee 03 – Civil Engineering, Geodesy and Architecture (TC03) when assessing the objectives and learning outcomes of the programme. They confirm that the PEOs and intended PLOs of the degree programme are described in a concise and transparent manner and are aligned with the relevant SSC.

The panel further confirms that the PEOs and PLOs are clearly defined, formally anchored, and published in different formats, including the programme website, the Undergraduate Academic Guidelines, and the Malaysian Qualification Statement, which serves a function comparable to a Diploma Supplement. In addition, the experts note that the objectives and learning outcomes are made visible on campus through posters and notices. They are therefore accessible to students, teaching staff, and interested third parties.

Based on the documents reviewed, the experts confirm that the PEOs and PLOs reflect the targeted academic qualification level. For the Bachelor's degree programme, this corresponds to EQF level 6. The experts conclude that the intended competence profile is feasible and appropriate for this level, as graduates are expected to acquire advanced knowledge and critical understanding of theories and principles, to apply advanced skills to solve complex and partly unpredictable problems, and to manage professional activities and projects responsibly.

As the university has applied for the EUR-ACE® label, the experts also examine whether the learning outcomes are aligned with the EUR-ACE® Framework Standards and Guidelines for engineering programmes. These standards require engineering programmes to cover seven competence areas: Knowledge and Understanding, Engineering Analysis, Engineering Design, Investigations, Engineering Practice, Making Judgements, Communication and Team-working, and Lifelong Learning. The experts confirm that all required competence areas are covered by the programme and conclude that the intended learning outcomes are aligned with the EUR-ACE® Framework Standards and Guidelines.

The experts further confirm that the intended competence profile enables graduates to take up professional activities corresponding to the respective qualification level. This assessment is supported by the representatives from industry interviewed during the audit, who confirm that the programme is aligned with labour market needs and that graduates are in high demand. The experts also note positively that the relevance of the PEOs and PLOs for the labour market is regularly reviewed with the involvement of relevant stakeholders and that the objectives are revised where necessary.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report
- Sample of the Malaysian Qualification Statement (MQS)
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The degree programme submitted for ASIIN accreditation is entitled “Bachelor of Civil Engineering with Honours”. In Bahasa Melayu, the programme title is *Sarjana Muda Kejuruteraan Awam dengan Kepujian*. The SAR explains that the use of the addition “with Honours” follows the Malaysian Qualifications Framework and the accreditation practice of the Malaysian Qualifications Agency. Accredited Bachelor’s programmes in Malaysia are commonly classified at Honours level when they include more in-depth academic requirements, a final-year project or thesis, and a higher level of academic rigour compared to a simple pass degree.

As the information provided in the SAR does not fully clarify the specific significance of the designation “with Honours” in the Malaysian higher education context, the expert panel requests further explanation during the discussions with the programme coordinators, as this designation is uncommon in the German higher education context. The experts learn that the title follows national requirements and conventions and that other engineering programmes in Malaysia also use this designation. The university further explains that the addition is historically established and that civil engineering Bachelor’s programmes in Malaysia are generally offered with this designation. The experts accept the explanation provided. They consider that the central and subject-related element of the title is *Civil Engineering*.

Based on the documents reviewed and the discussions during the audit, the experts confirm that the title of the degree programme reflects the intended objectives and learning outcomes as well as the teaching and learning content. They also confirm that the English title and the title in

Bahasa Melayu are used consistently across the relevant programme-related documents. Overall, the experts consider the designation of the programme to be appropriate and transparent within the national higher education context.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Course Information (module descriptions)
- Mapping of Programme Learning Outcomes (PLOs) to Programme Educational Objectives (PEOs)
- SSC-based Objective-Module Matrix
- Website UTM International Unit: *https://international.utm.my/*
- Academic Regulations (incl. rules for credit recognition)
- Statistical data
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Content and Structure of the Programme

The "Bachelor of Civil Engineering with Honours" is an eight-semester study programme that is structured with the aim of providing a coherent and progressive learning experience. The curriculum is included in the appendix to this report.

According to the SAR, the first two years of the programme focus on the fundamental principles of civil engineering. The curriculum covers core areas such as structural engineering, civil engineering materials, environmental engineering, hydrology and hydraulic engineering, highway and transportation engineering, and geotechnical engineering. These courses are intended to provide students with the essential technical knowledge and problem-solving skills required for further study in the field.

In addition to the civil engineering-specific modules, students are required to complete university-wide curriculum components. These include general courses, such as *Integrity and Anti-Corruption*, service courses, such as *Mathematics*, language courses, entrepreneurship courses, and co-curricular activities.

As students progress through the programme, the curriculum increasingly includes more specialised and integrative elements. In the third and fourth years, students complete two integrated design project courses, *Integrated Design Project I* and *Integrated Design Project II*. These courses address, among other aspects, site planning, feasibility studies, preliminary design, implementation, and the integration of infrastructure and building design. In the final year, students also choose three elective courses, allowing them to further specialise according to their academic interests and career plans. In addition, students complete the *Final Year Project*, which serves as the final thesis component of the programme.

The university further explains in the SAR that students are advised to follow the semester-wise sequence of courses in order to complete the programme within the standard duration of four years.

Industrial Training constitutes the practical internship component of the programme. The SAR states that it is designed to provide students with practical exposure and professional experience in real engineering environments. Students are required to complete at least 12 weeks of training, preferably after the sixth semester. The training is supervised jointly by an industry supervisor and a faculty supervisor. The industry supervisor oversees the student's work plan and assesses performance using a logbook and an assessment form, while the faculty supervisor visits the training site during the training period to monitor progress and discuss the student's performance with both parties.

During the discussions with the programme coordinators, the expert panel asks how sustainability aspects are addressed within the curriculum. The programme coordinators explain that sustainability-related topics are mainly covered in elective modules. In the compulsory curriculum, *Environmental Management* in the third year is identified as a mandatory module that explicitly addresses sustainability-related aspects. The experts also ask whether topics related to renewable energy, such as geothermal energy, energy systems, and materials, are included in the programme. The programme coordinators explain that these aspects are addressed in the last session of the module *Civil Engineering Materials*.

The experts further inquire how building construction is covered in the curriculum, as the programme appears to have a strong focus on infrastructure, while residential and office buildings are less prominently represented. The programme coordinators refer to modules dealing with construction terminology and construction project management as well as to the *Integrated Design Project* courses, in which relevant construction-related aspects are addressed.

In addition, the experts ask about the coverage of mathematics in the curriculum. While mathematics is mentioned in the SAR, the corresponding module descriptions are not included in the

documentation submitted for review. The programme coordinators explain that the mathematics modules are not offered by the Faculty of Civil Engineering itself. However, students have online access to the relevant module information through their student accounts (see also Crit. 4.1).

The expert panel also discusses interdisciplinary cooperation with other faculties, in particular with the Faculty of Built Environment & Surveying. The programme coordinators explain that cooperation exists with surveying and with the Faculty of Science, while cooperation with the architecture department has not yet been established.

Based on the documents reviewed and the discussions during the audit, the experts assess the content and structure of the programme as appropriate for achieving the intended learning outcomes. They confirm that the curriculum enables students to acquire the intended knowledge, skills, and competences and to achieve the overarching programme objectives.

In this context, the experts note that each module represents a coherent and well-balanced unit of teaching and learning. Course Learning Outcomes are defined for each module and, taken together, enable the achievement of the programme objectives.

The experts further confirm that the structure and sequence of modules are suitable for enabling students to achieve the intended learning outcomes and to complete the programme within the standard period of study. This assessment is supported by statistical data on the average duration of studies.

The experts also note positively that the programme offers a broad range of elective modules. This allows students to pursue individual academic profiles and to develop study paths according to their interests and professional goals.

Furthermore, the experts consider the mandatory *Industrial Training* to be well integrated into the curriculum. The university assumes responsibility for ensuring the quality of the internship with regard to its content and structure by assigning each student an academic supervisor. In addition, the university maintains strong links with industry and is therefore able to place students with reliable and suitable companies. The university coordinates with the participating companies and supervises students throughout the internship period. Students confirm during the discussions that they are satisfied with the practical components of the programme.

At the same time, the experts identify some aspects where further development is needed. With regard to sustainability, they note that the topic is currently addressed mainly in elective modules and only to a limited extent in the compulsory part of the curriculum. In view of the relevance of sustainability for civil engineering practice, the experts consider the current integration of

sustainability aspects not yet sufficient. They therefore require that sustainability aspects be included more systematically in the compulsory modules of the curriculum, as they are also part of PLO 7.

The experts also see potential to further strengthen the coverage of building construction within the curriculum. While the programme provides a strong foundation in infrastructure-related areas of civil engineering, additional content related to building construction could broaden the professional profile of graduates and better reflect the range of tasks civil engineers may encounter in professional practice.

In this context, the experts also encourage the university to make greater use of possible synergies with the Faculty of Built Environment & Surveying, particularly with regard to architectural aspects. Since civil engineers and architects are expected to cooperate closely in professional practice, closer cooperation between the relevant disciplines could further support students in preparing for interdisciplinary project work and professional collaboration.

During the discussions, students also express an interest in an expanded offer of professional certificates, e.g. Primavera. The experts take note of this suggestion as a possible additional development opportunity. However, they do not derive a formal need for action from this point.

Student Mobility

The SAR describes that student mobility at the university is coordinated by UTM International. Through the UTM International Student Mobility Programme, the university facilitates both inbound and outbound mobility and aims to provide students with opportunities for international learning experiences.

For inbound mobility, the university offers several formats, including the UTM Student Exchange Programme, research internships or attachments, student academic visits, and the UTM Summer School. For outbound mobility, students may participate in study abroad or student exchange programmes, research internships abroad, UTM outbound academic visits or special programmes, the International Invitation Programme, and summer school programmes abroad.

As set out in the SAR, UTM offers both short-term and long-term mobility options. Short-term mobility usually takes place during the summer break from July to September and therefore does not affect the regular study plan. Long-term mobility options, such as student exchange programmes and research internships, normally require a minimum duration of one semester. For such long-term mobility, students must follow the UTM Academic Regulations. Applications are prepared in consultation with the academic advisor and the Deputy Dean (Academic) in order to

ensure that the selected courses at the host institution are relevant and can be transferred back to UTM. A learning agreement has to be prepared in accordance with UTM's academic regulations and endorsed by both UTM and the host institution. According to the university, this process is intended to ensure that students can complete their studies within the regular period of study.

The SAR further states that students may also make use of individual mobility opportunities, such as conferences, seminars, workshops, summer schools, and internships. These activities are supported by the faculty and the university through international partnerships.

The development of student mobility in the civil engineering programme from 2022 to 2025 is summarised in the following table.

Year	Incoming Students (Total)	Outgoing Students (Total)
2025	1	50
2024	9	48
2023	6	15
2022	4	88

The types of mobility in the "Bachelor of Civil Engineering with Honours" programme differ in scope and format. International internships have enabled 12 students to gain practical experience at international institutions. One student has participated in an Erasmus exchange programme. The highest participation is reported for mobility outreach visits, with 208 students taking part in short-term activities such as competitions, summer camps, and academic visits abroad. Overall, the SAR indicates an upward trend in student participation in international learning activities.

The rules for the recognition of credits or achievements obtained at other higher education institutions are set out in the Academic Regulations.

During the discussions with the university management, the expert panel asks how UTM promotes student mobility. The university explains that it is currently investing substantially in this area and that mobility budgets have increased in recent years. According to the university, a growing number of students participate in international mobility activities. The recognition of credits earned abroad is supported through the academic advisory and learning agreement processes. The university further states that its long-term aim is for each student to gain at least one international experience during their studies. Funding opportunities are available, although they are mainly awarded to high-performing students.

In the discussions with the students, the experts learn that students are generally satisfied with the range of mobility opportunities offered by the university, but also point out that access to particularly popular exchange destinations can be competitive. Students also confirm that different funding opportunities exist. They further express an interest in an expansion of long-term mobility options, as short-term stays are often extracurricular in nature and are not always credit-bearing.

Based on the documents reviewed and the discussions during the audit, the experts assess the framework for student mobility as generally appropriate. They are able to ascertain that the programme promotes international student mobility through established support structures and mobility opportunities.

The experts note positively that the university maintains cooperations with partner universities, for example in Korea, Lithuania and France. According to the SAR, it is generally possible for students to have credits earned abroad recognised without extending the standard period of study. The experts also appreciate that students are supported in planning their mobility through dedicated structures, including UTM International and programme-specific mobility coordinators. In addition, students have access to scholarship opportunities that may provide financial support for mobility activities.

At the same time, the experts see potential for further development. They welcome the university's active efforts in the field of internationalisation and student mobility. However, they gain the impression that the existing mobility activities mainly relate to shorter stays abroad and internships. The experts therefore encourage the university to further strengthen student mobility, in particular by expanding opportunities for long-term mobility with credit recognition, increasing available funding options, and exploring additional cooperation opportunities with universities in the region. During the discussions, students mention that cooperation with universities in Singapore would be of particular interest to them.

Periodic Review of the Curriculum

The SAR describes that the Faculty of Civil Engineering has established a periodic schedule for the academic review of its curriculum. The "Bachelor of Civil Engineering with Honours" programme is subject to internal quality assurance procedures, which involve different stakeholder groups. At faculty level, the Faculty Academic Committee (JKAF) plays a central role in the design, development, review, and approval of the curriculum. After approval at faculty level, curriculum proposals are submitted to the relevant higher-level academic committees and to the Senate for further approval.

As outlined in the SAR, the overall process for curriculum development and review starts with the identification of new curricular needs and includes input from various sources. These include customer requirements, external panels, the Undergraduate Studies School, the School of Graduate Studies, academic staff, industry representatives, and market studies. The collected input is reviewed in order to identify areas in which the curriculum may require enhancement or revision. Following approval at university level, the proposal is submitted to the Department of Higher Education under the Ministry of Higher Education for final approval. Once approved, an official approval letter authorises the implementation of the new or revised curriculum in the following semester.

The university states that this process is guided by national quality assurance frameworks and requirements, including those of the Malaysian Qualifications Agency (MQA), the Engineering Accreditation Council (EAC), and UTM's internal Curriculum and Academic Quality framework. According to the SAR, the curriculum review process is conducted every three to five years. During the discussions, the university clarifies that this corresponds to a three-year review cycle for Master's programmes and a five-year review cycle for Bachelor's programmes.

The experts are able to ascertain that the curriculum is periodically reviewed with regard to the implementation of the programme objectives. They welcome that the university takes into account feedback from various stakeholders when reviewing and further developing the programme. The experts also note positively that there are no apparent issues regarding compliance with the standard period of study, which indicates that the established curriculum review processes are generally effective.

The experts further encourage the faculty to complete the feedback loop with the Industry Advisory Panel (IAP) by systematically reporting the curriculum enhancements and improvements implemented following previous IAP recommendations. Such practice would further strengthen the continuous quality improvement (CQI) process by demonstrating that stakeholder feedback is not only collected and considered but also acted upon and communicated back to the relevant stakeholders.

Criterion 1.4 Admission Requirements

Evidence:

- Self-Assessment Report
- Undergraduate Academic Guidelines by the Faculty of Civil Engineering
- Website for undergraduate admission: *https://admission.utm.my/*

  - For international students: *https://admission.utm.my/undergraduate-international/*

- Academic Regulations (incl. rules for credit recognition)
- Statistical data
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The SAR describes that the "Bachelor of Civil Engineering with Honours" programme admits students through different academic pathways, including the Malaysian Higher School Certificate, matriculation, foundation, and diploma qualifications. Admissions are organised through two main entry routes: first-year entry and direct entry into higher years of study. For applicants entering the first year through high school certificate or matriculation qualifications, the selection process is managed by the Ministry of Higher Education. Admissions for diploma holders into upper years are overseen by UTM.[5]

The admission requirements are set out in the Academic Guidelines. They include general university requirements as well as programme-specific requirements. In general, applicants are required to have completed the relevant school-leaving or pre-university qualification, to fulfil requirements in Bahasa Melayu where applicable, and to provide evidence of English language proficiency through the Malaysian University English Test (MUET). For the programme itself, the requirements include minimum grades or CGPA values and adequate prior knowledge in core subjects such as Mathematics, Physics, Chemistry, or Biology, depending on the respective entry pathway. Diploma applicants are required to hold a relevant diploma qualification, for example in Civil Engineering or an equivalent field, and must submit the relevant academic transcripts and completion documents. The admission requirements also include a provision that applicants must not have disabilities that inhibit physical activities.

The university states in the SAR that these requirements are intended to ensure that admitted students possess the foundational knowledge in Mathematics, Physics, and English necessary for successful study in the programme.

The rules for the recognition of credits, qualifications, and prior learning obtained at other higher education institutions, including prior diplomas or degrees, are set out in the Academic Regulations.

[5] In this context, "diploma" refers to a post-secondary technical qualification below Bachelor's level, which may allow applicants with relevant prior education, for example in civil engineering, to enter the programme through the direct-entry route into higher years of study.

For international students, the SAR indicates that the admission requirements are generally comparable to those for local applicants, with adaptations for country-specific qualifications. International applicants are also required to demonstrate English language proficiency, typically through standardised tests such as IELTS or TOEFL. If international applicants do not fully meet the admission requirements, UTM may offer preparatory or bridging courses within the international degree programme. Applicants who do not meet the English language requirements are required to take an English competency test.

With regard to admission statistics, the SAR states that the admission trend has remained stable over the past five academic sessions from 2021/2022 to 2025/2026. The programme receives more than 500 applications per year through the central higher education admission system and other channels. According to the university, 250 places are available each year, and all available places have been filled during the period under review.

During the discussions with the university management, the expert panel addresses the provision in the admission regulations stating that applicants must have “no disabilities which inhibit physical activities”. The university explains that this regulation is no longer applied under the revised admission framework. According to the university, UTM supports students with disabilities through various measures and, for example, waives tuition fees for students with disabilities. The university further explains that the new admission regulations have only recently entered into force and were therefore not yet included in the documentation submitted prior to the audit.

Based on the information provided and the discussions during the audit, the experts note positively that the admission requirements and procedures are generally clearly defined, binding, and transparent. The statistical data provided by the university further indicate that the admission requirements ensure, in principle, that admitted students are able to successfully complete the programme.

However, the experts identify a need for improvement with regard to the formal documentation of the admission regulations. As long as the revised admission regulations have not been submitted to the experts and made available in the relevant official documents, the panel has to base its assessment on the documentation reviewed during the accreditation procedure. In these documents, the exclusion of applicants with disabilities from admission is considered discriminatory and is not in line with the accreditation criteria. The experts therefore consider it necessary that the admission procedures ensure equal access and do not contain any discriminatory criteria. UTM must provide the relevant official documents demonstrating that the regulation has been revised accordingly.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Course Information (module descriptions)
- Sample Course Assessment Report (CAR)
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The SAR states that the "Bachelor of Civil Engineering with Honours" curriculum comprises a total of 137 Malaysian credits distributed over eight regular semesters. In the case of the "Bachelor of Civil Engineering with Honours" programme, the average workload is described as approximately 18 credits per semester. In general, students are required to take a minimum of 12 credits per semester, except in the graduating semester, and a maximum of 18 credits. Any workload above this threshold requires approval by the Dean. According to the study plan provided in the appendix, the regular semesters include between 14 and 18 local credits. In addition, the curriculum includes two short semesters with 1 and 5 local credits respectively.

The university explains that the curriculum structure is designed with reference to Student Learning Time (SLT) in order to ensure an appropriate student workload. SLT includes the total time students are expected to spend on learning activities, including classroom teaching, laboratory work, independent study, projects, presentations, coursework, and examinations.

The SAR further explains that the Malaysian credit system differs from the ECTS credit system used in the European Higher Education Area. At UTM, in line with the Malaysian Qualifications Framework and the requirements of the Ministry of Higher Education, one local credit corresponds to 40 hours of Student Learning Time. By contrast, one ECTS credit usually corresponds to 25 to 30 hours of student workload. For the purpose of conversion, the university applies a factor of 1.6, based on the assumption that one ECTS credit corresponds to 25 hours of workload. On this basis, the 137 Malaysian credits correspond to 5,480 hours of Student Learning Time and approximately 219.2 ECTS credits.

As part of UTM's internal quality assurance and accreditation processes, workload estimates are reviewed on an annual basis or per academic session. The university also uses student feedback, gathered through surveys and course evaluations, to identify possible discrepancies between the estimated and actual workload. The feedback is documented in the Course Assessment Report, which serves as an input for continuous quality improvement. Where necessary, adjustments to Student Learning Time are made on the basis of student progress and feedback trends.

During the discussions with the programme coordinators, the expert panel addresses the student workload indicated in the SAR. The SAR initially states an average weekly workload of 51 hours, which appears comparatively high to the experts. Upon further clarification, it becomes apparent that the number of weeks per semester used for the calculation had been stated incorrectly. The university subsequently provides corrected workload calculations. Based on these revised figures, the weekly student workload appears appropriate.

On this basis, the experts assess the credit system and the distribution of workload across the programme. They find that a credit system based on student workload is implemented. The workload appropriately includes both contact hours and self-study time, and credits are awarded for each module in accordance with the respective workload. The experts further determine that all compulsory components of the study programme are fully covered within the credit system.

The Bachelor's degree programme comprises 137 local credits, corresponding to approximately 219 ECTS credits, and therefore meets the minimum requirement of at least 180 ECTS credits for a Bachelor's degree programme. The experts consider the estimated workload to be realistic and well founded. They conclude that the workload allows students to complete the programme within the standard period of study. Each regular semester comprises up to 18 local credits, corresponding to approximately 29 ECTS credits, with a certain degree of flexibility depending on the students' academic progress and performance. The experts therefore consider the workload distribution to be balanced and do not identify structural workload peaks. This assessment is confirmed by the students during the discussions.

The experts also note that the university regularly monitors whether the credits awarded for each module correspond to the actual student workload and whether the distribution of workload across semesters enables students to complete the programme within the standard period of study. Students are involved in these processes through regular surveys and course evaluations.

However, the experts note that the workload calculation for *Industrial Training* does not appear to be fully consistent. In the module descriptions for *Industrial Training* or similar practical components, the following note is included: "Please tick (/) if this course is Industrial Training/Clinical Placement/Practicum using 50% of Effective Learning Time (ELT)." This seems to indicate that the workload of such practical components is not fully taken into account.

For the programme under review, *Industrial Training* is allocated five credit hours, which corresponds to 200 hours of student workload according to the Malaysian credit system. Assuming a workload of approximately 40 hours per week during the internship period, this would correspond to only five weeks of training. However, the internship has a duration of twelve weeks and also includes additional assessment components, such as the preparation of a report.

In the experts' view, this calculation does not fully correspond to the understanding of student workload applied in the accreditation criteria, according to which all compulsory components of the curriculum must be reflected in the workload calculation. The university therefore has to ensure that all components of the curriculum are taken into account when calculating the workload and that credits are awarded accordingly.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report
- Course Information (module descriptions)
- Sample Course Assessment Report (CAR)
- Discussions during the audit

Preliminary assessment and analysis of the experts:
According to the SAR, Universiti Teknologi Malaysia applies various didactic and teaching methodologies in the delivery of its engineering programmes, including active learning, problem-based learning, and project-based learning approaches supported by blended learning elements. The teaching and learning methods are intended to accommodate different forms of learning activities, including face-to-face instruction and independent study.

As described in the SAR, course delivery is not limited to formal classroom lectures but also includes tutorial classes, laboratory work, design projects, survey camps, integrated design projects, civil engineering seminars, technical visits, industrial training, and final-year projects. The university further states that the selection of teaching and learning methods is aligned with the respective Course Learning Outcomes (CLOs) in order to support the achievement of the Programme Learning Outcomes (PLOs). The effectiveness of the teaching and learning methods and students' satisfaction with them are also evaluated through the Course Assessment Reports, which provide input for the university's continuous quality improvement processes.

The SAR further explains that students are introduced to academic and research-related work in particular through the Final Year Project (FYP). The FYP is intended to develop students' research aptitude, critical thinking, and lifelong learning skills and forms part of the requirements for the "Bachelor of Civil Engineering with Honours" degree. It extends over two consecutive semesters and consists of the modules SEAA 4022 *Research Methodology and Pre-Project* and SEAA 4034 *Final Year Project*.

In the Research Methodology and Pre-Project phase, students are introduced to the fundamentals of scientific work. This includes literature review techniques, research design, data collection methods, data analysis and interpretation, as well as academic writing. In addition, students acquire skills related to the preparation of journal-style papers and presentations. Between weeks 12 and 14, students present their project proposals to a panel in order to demonstrate that their planned work meets undergraduate research standards. This phase prepares students for the independent research and analytical work required in the subsequent Final Year Project.

In their assessment, the experts consider the didactic and teaching methodology of the programme to be appropriate for supporting the achievement of the intended learning outcomes. Based on the Course Information as well as the discussions with teaching staff and students, the experts observe that a variety of teaching methods and didactic approaches are employed. These include lectures, tutorials, laboratory work, project-based formats, design activities, field-related learning elements, and independent research work. In the experts' view, this variety supports student-centred learning and teaching.

The experts further note positively that the programme uses a balanced combination of digital and face-to-face teaching elements. Both formats, as well as the corresponding infrastructures, appear to be relevant for the implementation of the programme and mutually reinforce each other. The distribution between contact hours and self-study time also appears to be well balanced, which is confirmed by the students during the discussions.

The experts welcome that the introduction to independent scientific work constitutes an integral part of the study programme. In particular, the Research Methodology and Pre-Project module and the subsequent Final Year Project provide students with structured opportunities to develop research-related, analytical, and academic writing skills.

Finally, the experts note that the university regularly reviews whether the teaching and learning methods employed support the achievement of the course and programme learning outcomes. This is done, among other things, through regular student surveys and course evaluations.

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

Systematic Integration of Sustainability in Compulsory Modules (Crit. 1.3/Statement Item 1)

In its statement, the university explains that the finding relates to the curriculum presented in the 2025 Self-Assessment Report, in which sustainability was defined as a separate Programme Learning Outcome (PLO7) and addressed most explicitly in the module SEAA 3913 *Environmental Management*. Following a curriculum review, sustainability has been embedded more

systematically in the revised curriculum and is now distributed across several Programme Learning Outcomes (PLO2, PLO3 and PLO6), covering engineering problem analysis, design solutions and the evaluation of sustainable development impacts. The statement also refers to corresponding content in the compulsory courses SKAC 2022 *The Engineer and the World*, SKAC 2132 *Construction Technology and Building Services*, which includes a dedicated topic on sustainable development, and SEAA 3313 *Reinforced Concrete Design I*.

The experts welcome the revisions presented in the statement and acknowledge the distribution of sustainability across several Programme Learning Outcomes and compulsory modules. They consider the necessary coverage to have been achieved, although there remains room for further development. They therefore decide to convert this into a recommendation rather than a requirement.

Building Construction Strengthening (Crit. 1.3/Statement Item 2)

The university's statement clarifies that building construction, construction management and surveying are already established components of the SEAA curriculum evaluated during the accreditation exercise. At undergraduate level, the relevant knowledge is addressed in the compulsory courses SEAA 3123 *Construction Technology, Contract & Estimating*, SEAA 3412 *Building Information Modelling and Data Management* and SEAA 4113 *Construction and Project Management*, the latter covering construction management principles, the project life cycle, planning and scheduling, resource allocation, project monitoring and control and construction project cash flow. These courses are complemented by SEAA 3022 *Integrated Design Project I*, which includes infrastructure, building and geotechnical elements together with costing and estimation, and by SEAA 4032 *Integrated Design Project II*, which integrates road and drainage design, sewerage, structural analysis and design, reinforced concrete and foundation engineering. The institution adds that surveying competencies are covered by SEAA 1023 *Engineering Surveying* and SEAA 1031 *Surveying Camp*, the latter providing practical exposure to horizontal and vertical control, site detailing, earthwork volume computation and setting-out.

The experts welcome the clarification but maintain the recommendation, as they consider a more coherent presentation of these subject areas within the curriculum still desirable.

Interdisciplinary Collaboration the Faculty of Built Environment and Surveying (Crit. 1.3/Statement Item 2)

In their response to the report, UTM points out that the building-related and surveying areas of the programme are supported by in-house academic expertise within the Faculty of Civil Engineering (FKA). Construction Management is formally represented as one of the Academic Panels under the Department of Structure and Materials, and the faculty maintains a dedicated Surveying Unit which supports teaching and learning, research, consultancy and practical training with the relevant facilities and equipment. According to the statement, these areas are staffed by academics with the corresponding qualifications, professional experience and research and industry background. While the university recognises the potential value of interdisciplinary engagement with the Faculty of Built Environment and Surveying (FABU), it states that formal collaboration with FABU is not currently required for the delivery of these areas, as the programme is sufficiently supported by the established curriculum components and the in-house expertise available within FKA.

The experts take note of this information and acknowledge the in-house expertise described. They wish to clarify, however, that their recommendation does not refer to the surveying competencies but explicitly to a cooperation with the Department of Architecture, which is also located at FABU. In the view of the experts, cooperation between civil engineers and architects during their studies is a valuable preparation for their later professional practice, where the two disciplines work together closely. The experts point out that the recommendation is not binding and leaves the university free to decide how to take it up. The recommendation is therefore maintained.

<u>Expansion of Long-Term Credit-Bearing Student Mobility (Crit. 1.3/Statement Item 3)</u>

In its comments on the report, the institution refers to the existing institutional mechanism for long-term mobility, the UTM International Study Abroad and Student Exchange Programme, under which students may spend one or two semesters at an overseas university and transfer credits, either at partner universities or, in the case of the Study Abroad option, at non-partner institutions. The statement confirms that most FKA students have so far taken part in short-term formats such as academic visits, summer programmes and short internships, and that there is scope to increase participation in semester-long programmes. The institution adds that further short-term activities are planned for 2026 and that these complement rather than replace the efforts to increase longer-term, credit-bearing mobility. As a further step towards long-term mobility, the faculty has introduced overseas industrial training for students in the third year of study and sent one student to Korea for twelve weeks in 2025 under the supervision of Seoul National University and Hanyang University, for which five credits were transferred. The statement further explains that participation in semester-long, credit-bearing mobility is to be promoted by raising

student awareness of the available exchange opportunities, by providing early academic advice on course matching and credit transfer and by selecting partner universities whose academic calendars and course structures allow an exchange without delaying study progression, and that the faculty continues to work with UTM International and partner institutions to identify suitable long-term options while maintaining academic quality and credit recognition.

The experts welcome the measures described by the university and wish to clarify that they are aware of the existing long-term mobility options. Their recommendation refers to the level of uptake, as only a small number of students make use of these semester-long, credit-bearing formats, whereas participation is concentrated in short-term activities. The measures announced to raise awareness and to facilitate course matching and credit transfer are seen as suitable, but their effect on participation cannot yet be assessed. The recommendation is therefore maintained.

Equal Access and Non-Discriminatory Admission Criteria (Crit. 1.4/Statement Item 4)

UTM's statement clarifies that the admission criterion criticised by the experts, which required applicants to have no disabilities inhibiting physical activities, is no longer part of the admission requirements at university level. According to the statement, the current UTM Undergraduate Admission Guidelines for Semester I of the academic year 2026/2027, issued by the Student Recruitment and Admission Division, supersede the admission information contained in the documentation submitted for the accreditation review. The revised requirements are based on academic qualifications, programme-specific requirements and English language proficiency for the respective entry pathways, and the condition concerning physical disability is no longer stipulated. For Malaysian applicants, the requirements for the academic year 2026/2027 are published through the UTM Admission portal together with the current Undergraduate Admission Guidelines, and the corresponding entry requirements for international applicants, comprising recognised pre-university qualifications, English language proficiency and programme-specific or faculty-specific requirements where applicable, are likewise published there. The faculty adds that it follows the university's decision and that the Academic Guideline Handbook for the 2026/2027 intake contains no provisions relating to the previous no-disabilities criterion.

The experts welcome the fact that the criterion requiring applicants to have "no disabilities which inhibit physical activities" has been removed. However, the entry requirements submitted with the statement still contain the following provisions:

"1. Applications are open to Malaysian citizens only.

2. Applicants must be not more than thirty (30) years old at the time of application. […]

4. Applicants must be physically healthy, free from any mental or physical illness, and capable of undertaking the programme of study designed for the course."

The experts therefore find that discriminatory admission criteria remain in place, relating to citizenship, to the age of the applicants and, notwithstanding the deletion of the earlier wording, to their state of health. The panel maintains its requirement until the university has demonstrated that the admission procedures ensure equal access and are free from discriminatory criteria.

Student Workload and ECTS Credit Allocation for Industrial Training (Crit. 1.5/Statement Item 5)

In its statement, the university explains that the credit allocation for Industrial Training does not follow the conventional calculation of 40 Student Learning Time hours per credit applied to regular academic courses, but the university's established guideline for internship courses, according to which one credit hour corresponds to two weeks of industrial training. On this basis, a twelve-week industrial training corresponds to six credit hours. The institution acknowledges the panel's observation that the current allocation of five local credits, if converted using 40 Student Learning Time hours per credit, would amount to 200 hours, which may appear not to represent the total number of hours spent by students during the twelve-week placement. As the university points out, a different equivalency applies to internships and work-based learning, as the learning takes place predominantly through structured workplace experience and supervised practical training, complemented by assessment components such as the logbook and the final report. The statement also refers to the requirement of the Board of Engineers Malaysia, documented in the Engineering Accreditation Manual 2024, under which the degree programme is regularly accredited.

The experts acknowledge the explanation provided and recognise that the credit allocation for industrial training follows the requirements of the Board of Engineers Malaysia, which are binding for the university, even though this equivalency does not derive the credits from the actual student workload as is customary in the European framework. The experts do not question the admissibility of this approach under the national regulations. They note, however, that the equivalency set out in the statement, one credit hour for every two weeks of industrial training, would allow six credit hours for a twelve-week placement, whereas the programme awards five credits. The university thus remains below the number of credits available to it under its own national framework and does not make full use of the scope it has to reflect the workload completed by the students. As the calculation as such is in line with the national regulations, which take precedence for the university, the experts no longer regard this open aspect as critical for the fulfilment

of the criteria and convert the requirement into a recommendation to make full use of the scope provided by the national regulations when awarding credits for the industrial training, so that the credits awarded correspond to the workload actually completed by the students.

Overall, the experts consider Criterion 1 to be **partly fulfilled**.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Self-Assessment Report
- Sample exams and theses
- Course Information (module descriptions)
- Academic Guidelines
- Undergraduate Academic Guidelines by the Faculty of Civil Engineering
- Academic Regulations
- Website for students with disabilities: *https://www.utm.my/disability/*
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The SAR describes that assessment methods are designed to support the achievement of the Programme Learning Outcomes (PLOs) within the framework of outcome-based education. The examination formats and assessment methods are systematically mapped to the PLOs in order to verify the attainment of the intended learning outcomes.

According to the SAR, student performance is evaluated continuously throughout the semester. Grades are usually based on a combination of coursework and final examinations. For core, elective, and university courses, the assessment typically comprises both continuous assessment and a final examination, with final examinations usually accounting for 40% to 60% of the final grade. Final examinations take place during the designated examination period at the end of each semester, which usually lasts approximately two weeks.

The grading system ranges from A+ for marks of 90 and above to D- for marks below 35. The minimum passing mark for a course is 40% of the total marks. In order to pass a course, students are required to achieve at least 40% in the coursework component and to attend the final examination.

Continuous assessment includes different instruments, such as tests, quizzes, assignments, projects, and presentations. Mid-semester tests are commonly used to allow students to monitor their learning progress. In addition, non-traditional assessment formats are used, including problem-based learning activities and mini projects carried out in groups. These formats are intended to foster teamwork, critical thinking, and the application of knowledge to real engineering problems. In many cases, students work on open-ended design problems and submit comprehensive group reports. Some courses also require oral presentations or the submission of engineering design projects.

The SAR further states that all assessment rubrics, grading scales, and course learning outcomes are communicated to students through the course information and accompanying guidelines. Details of the grading system are provided in the Academic Guidelines for the Undergraduate Degree Programme of the Faculty of Civil Engineering as well as the general UTM Academic Guidelines.

While most courses follow the general assessment approach, some courses use specific assessment formats. In the *Integrated Design Project I* and *II*, students work in groups on open-ended civil engineering problems that require problem formulation and the development of suitable solutions. The projects culminate in a comprehensive report and an interview or presentation session, thereby also addressing teamwork and communication skills.

The final thesis component of the programme is the *Final Year Project*. According to the SAR, it is intended to develop students' research aptitude, critical thinking, and lifelong learning skills. It extends over two consecutive semesters and comprises *Research Methodology and Pre-Project* and *Final Year Project*. In the first phase, students are introduced to literature review techniques, research design, data collection methods, analysis and interpretation, academic writing, journal preparation, and presentation skills. Between weeks 12 and 14, students present their project proposals to a panel in order to demonstrate that the planned work meets undergraduate research standards. In the subsequent *Final Year Project* phase, students conduct independent work under the supervision of academic staff. This may include experimental work, computational analysis, design or development studies, software applications, or case studies related to civil engineering. Upon completion, students are expected to demonstrate the ability to conduct research systematically, analyse and interpret data, prepare a comprehensive technical report, and communicate their findings effectively.

The examination schedule is prepared and coordinated by the Faculty's Academic Office in order to ensure proper organisation and avoid scheduling conflicts. The final examination schedule is released four weeks before the start of the final examination period. An earlier draft schedule is made available in advance so that students can identify possible clashes and request corrections before the schedule is finalised.

The relevant academic guidelines and regulations define the general framework for examinations, including assessment procedures, grading, repeat examinations, course repetition, academic integrity, plagiarism, and other forms of academic misconduct, as well as appeal procedures. They also set out procedures for cases in which students are unable to complete an examination as scheduled or do not achieve the required performance level. Students who fail a course may be required to repeat it in order to acquire the necessary competences. Academic Advisors support students in planning their course registration and credit load so that repeated courses do not result in an excessive workload or significantly affect their learning progression.

For students with special needs or disabilities, UTM provides academic support and reasonable adjustments in line with the university's inclusive education policy through the Disability Support Unit.

Based on the sample examinations and final projects assessed during the on-site visit, and the discussions with students and teaching staff, the experts consider the examination system to be appropriate. They conclude that the examinations are designed to assess the extent to which the defined learning outcomes have been achieved and that they are related to the respective modules.

The experts note positively that the programme uses a variety of examination formats, including written examinations, coursework, projects, presentations, reports, and group-based assessment formats. They consider this variety suitable for assessing different types of competences. With regard to group-based assessments, the experts point out that it should always be ensured that the individual contribution and performance of each student are adequately assessed and that students are not assessed solely on the basis of the group result.

From the Course Information, the experts note that the types of examinations are clearly specified for each module. During the discussions, students report that they are informed about the requirements for completing each module, including coursework and examinations, at the latest at the beginning of the respective module. The experts further observe that examinations are assessed according to transparent criteria. Students have the opportunity to discuss their examination results with lecturers in cases where feedback is not provided automatically.

The experts confirm that transparent regulations regarding make-up examinations, non-attendance, cases of illness, repeat examinations, and compensation for disadvantages, for example for students with disabilities or special needs, are defined in the relevant Academic Guidelines and Academic Regulations and the website.

During the audit, students express their satisfaction with the examination system of the programme. They report that all relevant information, including examination dates and assessment criteria, is provided in a timely and transparent manner at the beginning of the semester. They also indicate that the workload and level of difficulty of the examinations are appropriate and manageable and express satisfaction with the number and distribution of examinations. The experts concur with the students' assessment and conclude that the overall examination load is appropriate, allows sufficient time for preparation, and supports a smooth progression of studies.

The experts note that, in contrast to common practice in the German higher education system, examinations at UTM may in principle be repeated as often as necessary until they are passed. The only limiting factor is the maximum duration of studies of eight years, corresponding to twice the standard period of eight semesters for the Bachelor's degree. As a general remark for further reflection, the experts mention that, for reasons of transparency towards students who pass an examination on their first attempt, the number of attempts required to pass a module could be indicated in the Transcript of Records.

The panel also notes that the university regularly reviews whether examinations adequately assess the achievement of learning outcomes, whether the level of requirements is appropriate for the degree programme, and whether students are given sufficient time for preparation and completion. This is ensured, among other things, through regular student surveys and course evaluations.

The experts further confirm that the study programme includes a final project in the form of the *Final Year Project*. The reviewed projects correspond to the expected level of a Bachelor's degree programme and demonstrate that students are able to independently address subject-specific tasks at EQF level 6.

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

Independent Assessment of Individual Contributions in Group Work (ASIIN 2/Statement Item 6)

UTM's statement clarifies that individual assessment is already integrated into the group-based courses so that individual performance can be distinguished from the performance of the group.

In *Integrated Design Project II*, students are assessed individually in Major and Minor Interview sessions on the basis of specific assessment rubrics, in addition to the group components consisting of the poster presentation and the project report, which allows their understanding, their contribution and their achievement of the relevant learning outcomes to be assessed independently. According to the statement, the same approach applies to the laboratory courses, where the practical work is carried out in groups whereas individual performance is assessed separately by means of individual rubrics, so that the final mark is not determined solely by the performance of the group.

The experts take note of this information and consider the procedure described to be appropriate. They point out that their observation on this point was intended as a comment and does not constitute a formal assessment.

Recording Exam Attempts on Academic Transcript (ASIIN 2/Statement Item 7)

According to the statement, the format and the content of the official Academic Transcript are determined centrally by Universiti Teknologi Malaysia and are not defined by the faculty. Repeat attempts are recorded in the central academic records system and documented in the Graduation Audit, where the status codes UM and UK denote “Repeat Subject” and “Repeat Course” and allow each attempt to be identified with the corresponding grade and semester. The university submits the regulations on course repetition, the Graduation Audit and the current Official Academic Transcript as supporting evidence.

The experts take note of this information and consider the documentation of repeated attempts in the central academic records system to be traceable. They point out that their observation on this point was intended as a comment and does not constitute a formal assessment, and that neither a requirement nor a recommendation is derived from it.

Overall, the experts consider Criterion 2 to be **fulfilled**.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report
- Staff handbook/CVs (incl. research activities)
- Staff Training Calendar (overview of didactic training courses)
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The SAR states that the staff involved in the "Bachelor of Civil Engineering with Honours" programme comprises academic staff and support staff. Academic staff are responsible for teaching, supervision, research, consultancy, and professional services, while support staff assist in the administration of academic and student affairs. The number of academic staff by department is presented in the following table.

Post	Number		Departments		
	Full Time	Part Time	JSB	JGP	JKAAS
Professor	10	7	9	5	3
Associate Professor	19	5	15	5	3
Senior Lecturer	71	4	29	18	29
Lecturer	2	0	2	0	0
Tutor	0	0	0	0	0
Total	**102**	**16**	**55**	**28**	**35**

JSB = Department of Structures and Materials, JGP = Department of Geotechnics and Transportation, JKAAS = Department of Water and Environmental Engineering

The university explains that the Malaysian Engineering Accreditation Council requires a staff-to-student ratio of 1:20 or better. According to the SAR, the average ratio in the programme has ranged between 1:9 and 1:10 over the past five years. The programme is further supported by 28 administrative staff and 49 technical staff at faculty level.

Staff development is organised systematically at UTM. Newly appointed lecturers attend an induction programme that introduces them to the fundamentals of teaching, learning, and assessment. In addition, all academic staff, including both early-career and senior lecturers, are required to complete at least 42 hours of structured training per year. These training activities cover areas such as pedagogy and teaching methods, outcome-based education, active learning, student-centred teaching, assessment and evaluation methods, digital and blended learning tools,

curriculum design, programme learning outcomes, and academic supervision. The SAR states that participation in these training activities is mandatory and that completion is monitored.

The university further reports that academic staff are actively involved in research, consultancy, professional services, and industrial projects. Detailed information on staff members' research activities, publications, and consultancy work is provided in the staff handbook.

Based on the documents reviewed and the discussions during the audit, the experts conclude that the composition, professional orientation, and qualifications of the teaching staff are appropriate for the successful delivery of the degree programme. They consider the staff-to-student ratio to be suitable and note that the available academic, administrative, and technical staff provide an adequate basis for implementing the programme.

The experts further observe that the research activities and professional experience of the teaching staff are integrated into the programme and contribute to achieving the intended academic level. They also welcome the availability of structured further training opportunities in higher education didactics. Lecturers are supported in continuously developing their professional and didactic competences and are encouraged to make use of these opportunities. During the discussions, teaching staff express a high level of satisfaction with the range and quality of the professional development measures available at UTM.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- Website of the Counselling Centre: *https://studentaffairs.utm.my/counsellingcentre/*
- Website of the Student Affairs Office: *https://studentaffairs.utm.my/clubs-association/*
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The SAR describes that UTM provides a range of student support and counselling services. The university operates counselling centres with twelve professional counsellors, located at the Johor Bahru Counselling Centre, the Kuala Lumpur Counselling Centre, the Career Centre, and the Human Resource Department of the Registrar Office. These centres offer personal, psychological, and career counselling through individual sessions, activities, and dedicated facilities. According to the SAR, the counselling services are accessible to students through the relevant university website.

The university further explains in the SAR that academic support is provided through the Academic Advisory System. Each student is assigned an academic advisor from the academic staff for the duration of their studies. The system is designed to support students individually in academic matters and to help them plan their studies. According to the SAR, each lecturer is typically assigned no more than 20 students. Students are encouraged to meet their academic advisors regularly and may seek advice on academic or related matters throughout their studies at the Faculty of Civil Engineering.

In addition to formal counselling and academic advising, students are encouraged to participate in student organisations, professional engineering bodies, and extracurricular activities. The Student Representative Council (SRC) represents students at university level and provides opportunities for students to develop leadership skills. It addresses matters related to student welfare and discusses relevant issues with the university administration. Representatives are elected through a campus-wide election coordinated by the UTM Student Affairs Division, and all faculties are represented in the SRC. The council organises activities such as awareness campaigns, seminars, exhibitions, sports activities, and other events within and outside UTM.

At faculty level, the SAR highlights the role of *Persatuan Kejuruteraan Awam UTM* (PEKA), the civil engineering student association. PEKA serves as a platform for students in the Faculty of Civil Engineering and organises activities such as workshops, seminars, guest lectures, site visits, and other events related to academic and professional development. The association also provides information on developments in the civil engineering sector and supports interaction between students, faculty members, and external partners.

The faculty further encourages students to take part in professional activities through societies and clubs, including seminars, short courses, industrial visits, faculty open days, and technical talks by members of the Industrial Advisory Panel or other industry experts.

Based on the documents reviewed and the discussions during the audit, the experts assess the student support system as comprehensive and appropriate. They welcome that students have access to both subject-specific and general counselling, as well as to academic supervision and support services. These services are complemented by administrative and technical assistance.

The experts further note positively that students report being well informed about the available support services and express a high level of satisfaction with the support structures in place. In the experts' view, sufficient resources are available to provide individual guidance, counselling, and support to all students. The support system effectively assists students in adapting to the university environment, achieving the intended learning outcomes, and successfully completing their studies.

Criterion 3.3 Funds and Equipment

Evidence:

- Self-Assessment Report
- Employee Satisfaction Index (ESI) and Customer Satisfaction Index (CSI) surveys and results
- List with Details of Teaching Laboratory Staff, Apparatus and Typical Tests Conducted
- Visitation of the relevant facilities
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Funds

The SAR describes that UTM, as a public university, receives funding through a range of sources. These include government allocations, research grants, scholarships, industry partnerships, alumni contributions, tuition fees, and other sources of income. According to the university, this diversified funding structure supports the provision of education, research activities, and infrastructure development.

As set out in the SAR, the main source of funding consists of allocations from the Ministry of Higher Education (MoHE). The Malaysian government allocates funds for higher education as part of the national budget, which are then distributed to public universities by MoHE on the basis of criteria such as student enrolment, research output, and infrastructure needs. UTM uses these funds to cover operational costs, research grants, scholarships, and infrastructure development.

The university further explains that research funding is managed by the Research Management Centre (RMC). The RMC oversees internal and external research grants and supports faculty members and students in obtaining the resources required for research activities. In addition, industry partnerships contribute to UTM's funding base by supporting collaborative research, innovation, and development initiatives. International collaborations with universities and companies are also described as contributing to the university's research capacity.

Based on the information provided and the discussions during the audit, the experts consider the financial resources specified to be sufficient to ensure the sustainability of the degree programme for the duration of the accreditation period.

Equipment

The SAR describes that the faculty and the university provide a range of facilities for students and staff, including classrooms, libraries, sports facilities, teaching laboratories, and research laboratories. For the Faculty of Civil Engineering, the university reports 30 lecture rooms, one smart classroom, one active learning room, two problem-based learning rooms, and laboratory briefing rooms to support the teaching and learning activities of the programme.

The university libraries provide extensive resources related to civil engineering, including more than 59,000 books and over 39,000 titles. The libraries also offer facilities such as carrel rooms, discussion rooms, seminar rooms, meeting rooms, and a computer laboratory.

As set out in the SAR, the Faculty of Civil Engineering provides laboratory facilities for both teaching and research purposes. These laboratories include testing facilities and equipment relevant to the civil engineering curriculum and research activities in areas such as structures and materials, hydraulics and hydrology, geotechnical engineering, highway and transportation engineering, and environmental engineering. In addition, scaled-down physical models are available to support students' understanding of fundamental civil engineering concepts. The faculty also offers equipment rental and testing services for other universities and industry partners.

The SAR further states that the quality of university and faculty facilities is evaluated through instruments such as the Employee Satisfaction Index and the Customer Satisfaction Index. According to these surveys, staff express overall satisfaction with the quality of the facilities, while areas for further improvement are identified and addressed as part of the faculty's continuous development processes.

During the discussions with students, the expert panel asks about their perception of the available infrastructure and equipment. The students indicate that they are generally satisfied with the facilities. They mention only minor points of criticism, for example that flip tables are not always convenient in courses where several books or materials are used.

The teaching staff also express general satisfaction with the available equipment. They explain that funding for equipment is provided by the Ministry as well as through industry cooperation. According to the teaching staff, equipment procurement takes into account the needs expressed by the faculty. They also report that cooperation with other faculties allows access to additional laboratory facilities where needed, and that cooperation with industry provides opportunities to use external equipment. At the same time, the teaching staff indicate that, while the laboratories are sufficient for the delivery of the programme, the research laboratories and their equipment could be further enhanced.

Based on the inspection of the facilities and laboratories and the discussions during the audit, the experts conclude that the equipment and infrastructure provide a sustainable basis for the

delivery of the degree programme and are adequate in both quantity and quality. They consider the teaching facilities and teaching laboratories to be suitable for supporting the intended learning outcomes.

At the same time, the experts identify potential for further development with regard to the research laboratories. They share the view expressed by the teaching staff that the equipment of the research laboratories could be further improved in order to better support research activities. The experts therefore recommend improving the equipment in the research laboratories.

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

Research Laboratory Equipment Upgrades (Crit. 3.3/Statement Item 8)

In its comments on the report, the institution announces a structured modernisation plan for its research facilities. Between 2026 and 2027, research laboratory equipment is to be replaced and upgraded in order to support Final Year Projects, postgraduate research and staff-led research. According to the statement, the funding has been secured through phased allocations from the Ministry of Higher Education under its rolling plans and through special funds, and an additional facility enhancement fund has been allocated to the Hydraulics and Hydrology Laboratory of the Faculty of Civil Engineering. As the university points out, the phased approach is intended to modernise the research laboratories systematically while maintaining the standard of the teaching laboratories, so that students and staff have access to advanced infrastructure.

The experts welcome the modernisation plan and the funding secured for it. As the investments are scheduled for 2026 and 2027, their implementation cannot yet be verified. However, while this is positively acknowledged, the panel maintains its recommendation.

Overall, the experts consider Criterion 3 to be **fulfilled**.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report

- Course Information (module descriptions)
- Current Study Plan
- Programme website: *https://civil.utm.my/undergraduate/programme/*
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The SAR states that all lecturers in the "Bachelor of Civil Engineering with Honours" programme are required to prepare and update the module descriptions, referred to as Course Information. These documents serve as the main reference for the teaching and learning process throughout the semester. The university explains that the Course Information is revised every semester or whenever necessary in order to update content, methodology, or other relevant information. In addition, the module descriptions are reviewed by the industrial panel from time to time in order to take stakeholder requirements into account.

According to the SAR, the Course Information is made available to students through UTM's e-learning platform once they enrol in the respective module. Each module description is prepared for the individual module and includes the course title and course code, course synopsis, lecturers involved and responsible for the course, Course Learning Outcomes and Programme Learning Outcomes, teaching and learning methods, credit hours and Student Learning Time, weekly schedule and module content, admission and examination requirements, assessment methods and weighting, and references.

Based on the review of the Course Information, the experts conclude that the submitted module descriptions generally contain the required information. In particular, they include the module title, the person or persons responsible for the module, the teaching and learning methods, credits and workload, the intended learning outcomes, the module content, admission and examination requirements, the forms of assessment and information on the calculation of the module grade, recommended literature, and the date of the most recent revision.

At the same time, the experts identify a need for improvement with regard to the completeness, consistency, and accessibility of the Course Information. While the required categories of information are generally provided in the submitted Course Information, the documentation is not complete for all modules of the curriculum. For example, information is missing for some programme-specific modules, including *Introduction to Civil Engineering* and *Mechanical and Electrical Systems*. In addition, the Course Information for mathematics modules, language modules, and university-wide modules, such as *English for Professional Purposes* and *Value and Identity*, are not included in the submitted documentation. The elective modules are also not documented in the Course Information provided.

The experts further note inconsistencies between different documents. For example, some course codes differ between the current study plan (included in the appendix) and the Course Information, with modules being listed under SEAA in one document and under SEAB in another or with different numbers, such as *Civil Engineering Materials* and *Wastewater Engineering*. In addition, the experts identify smaller inconsistencies and omissions, including missing credit hours for *Final Year Project* and differing credit hours between the study plan and the Course Information for certain modules, such as *Integrated Design Project I*, *Geotechnics 2*, and *Civil Engineering Seminar*. As a consequence of these inconsistencies, the study plan provided in the appendix amounts to only 134 Malaysian credits and therefore does not fully correspond to the total of 137 Malaysian credits stated in the SAR. Furthermore, some module titles are not used consistently across the documents, for example *Soil Mechanics* and *Advanced Soil Mechanics* or *Environmental Management and Sustaianbility* [sic] and *Environmental Management*. It is also noted that some fields are cut off, meaning that their content is not fully readable, for example the *Course Synopsis* for *Integrated Design Project* or the *Disclaimer* for *Construction Economics and Estimating*.

The experts also note that the Course Information documents are not fully publicly available and accessible to all stakeholders. The programme website provides information on the modules and an overview of the study plan; however, complete module descriptions are only available through the internal e-learning platform and only after students have enrolled in the respective module. As a result, enrolled students and teaching staff have access to the full Course Information, whereas interested third parties and prospective students do not.

The experts therefore consider it necessary that the module descriptions are corrected and completed for all modules of the curriculum and that they are made publicly available and accessible to all relevant stakeholders. This includes ensuring consistency of course codes, credit hours, and module information across all relevant programme documents.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Samples of the Degree Certificate
- Sample of the Academic Transcript
- Sample of the Malaysian Qualification Statement (MQS)
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The SAR states that graduates receive a degree certificate during the annual graduation ceremony. The degree certificate is issued in two versions, English and Bahasa Melayu, and includes information such as the student's name, the degree programme, the certificate serial number, and the date of award as approved by the Senate.

In addition to the degree certificate, graduates receive an Academic Transcript. The transcript lists the modules completed in each semester, the grades obtained, the credit hours allocated to each module, the Grade Point Average (GPA), the Cumulative Grade Point Average (CGPA), the credits earned per semester, and the cumulative credit hours.

The university further explains in the SAR that graduates are provided with a Malaysian Qualification Statement (MQS). This document contains information identifying the qualification holder, including name, ID number, and student number. It also provides information on the qualification itself, such as the degree title, accreditation status, awarding institution, and language of instruction. In addition, the MQS outlines the qualification level, programme duration, credit requirements, entry qualifications, programme content, learning outcomes, grading system, overall classification of results, access to further study, additional achievements or activities, and certification information.

Based on the documents reviewed, the experts confirm that graduates are awarded a degree certificate and a Malaysian Qualification Statement in English, which is comparable in function to a Diploma Supplement, shortly after graduation. In addition, each graduate receives a Transcript of Records. Taken together, these documents provide a comprehensive overview of the graduate's qualification profile and individual academic performance.

At the same time, the experts identify some aspects where the documentation could be further aligned with international transparency standards. They note that the Malaysian Qualification Statement contains almost all information required for transparency and comparability. However, the document should be supplemented by clearer information on the national higher education system concerned and by a transparent explanation of how the final grade is calculated. In addition, it does not yet include a classification of the final grade based on statistical data from the respective cohort, as recommended by the ECTS Users' Guide. The inclusion of such cohort-specific grade distribution data is necessary to enable a meaningful comparison of the graduate's performance with that of their peers.

The experts therefore consider it necessary that the Diploma Supplement, or the document serving an equivalent function, includes information on the national higher education system, a clear

explanation of the calculation of the final grade, and statistical data on the distribution of final grades in accordance with the ECTS Users' Guide.

Furthermore, the experts recommend aligning the title and terminology of the Malaysian Qualification Statement with international practice by referring to it as a "Diploma Supplement", as this is the internationally established term for this type of document.

Criterion 4.3 Relevant Rules

Evidence:

- Self-Assessment Report
- Statute of Universiti Teknologi Malaysia
- Programme website: *https://civil.utm.my/undergraduate/programme/*
- Website for Rules and Regulations: *https://ugs.utm.my/academic-rules/*
- Academic Guidelines
- Undergraduate Academic Guidelines by the Faculty of Civil Engineering
- Academic Regulations
- Website for students with disabilities: *https://www.utm.my/disability/*
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The SAR states that the Statute of Universiti Teknologi Malaysia constitutes a central governing document of the university. It defines the institutional structure, roles, responsibilities, and regulations of UTM. In particular, it sets out the functions of key bodies such as the Senate and the Board of Directors and contains provisions concerning academic matters, student conduct, staff duties, and financial management.

The university further explains in the SAR that the Undergraduate Academic Regulations provide binding rules for students, including regulations on course registration, the grading system, credit transfer, and examinations. In addition, the Faculty of Civil Engineering provides students with the Academic Guidelines Handbook. This handbook contains programme specifications, the syllabus, and more detailed academic guidelines relevant to the "Bachelor of Civil Engineering with Honours" programme.

Based on the documents reviewed and the discussions during the audit, the experts confirm that the rights and obligations of both the university and the students are clearly defined and binding.

They note positively that the relevant rules and regulations are published on the university's website and are therefore available to students, teaching staff, and other relevant stakeholders.

The experts further note that students receive the necessary course materials at the beginning of each semester. In addition, comprehensive information on the study programme is available on the respective programme websites.

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

Completeness, Consistency, and Public Accessibility of Course Information (Crit. 4.1/Statement Item 9)

With its statement, the university submits the course information documents that were missing from the report, among them *Introduction to Civil Engineering* (SEAA 1011), *Mechanical and Electrical Systems* (SEAA 2032), the mathematics modules, the language modules, the university-wide general modules *English for Professional Purposes* and *Value and Identity* as well as elective modules. The statement explains that the differing course codes result from the curriculum review carried out every five years, as the code SEAA belongs to the curriculum implemented from 2018 to 2022 and the revised curriculum uses the code SEAB. The former SEAA curriculum comprised 137 credit hours and the revised SEAB curriculum comprises 135 credit hours, and a new university policy exempts students who achieve in the Malaysian University English Test Band 4.0 (corresponding to a B2 level) from one English course, which accounts for the differences in the overall credit requirements and the course structure. During the evaluation, both versions were being implemented in parallel, with students in the first and second year enrolled under the SEAB curriculum and students in the third and fourth year still following the SEAA curriculum, so that the occurrence of both codes reflects the transition between the two versions. For the accreditation procedure, only the documents relating to the SEAA curriculum were used and subsequently updated.

The university further submits the course information for *Integrated Design Project I*, *Geotechnics 2* and *Civil Engineering Seminar*, states that the discrepancies concerning the credits for the Final Year Project have been reviewed and clarified on the basis of the current course information, and confirms that the degree programme comprises a total of 137 official credits. The truncated and illegible passages in the course information for the *Integrated Design Project* and for *Construction Economics and Estimating* have been corrected.

Regarding public accessibility, the university acknowledges that the complete course information documents are available only to registered students via the e-learning platform, but points out that the programme structure and study plan, including course codes, course titles, credit values

and course synopses, are publicly available in the FKA Undergraduate Academic Guidelines on the faculty website, which allows prospective students, employers and other external stakeholders to obtain an overview of the content of the degree programme. As the statement concludes, the publicly available course synopses are regarded as equivalent to the complete course information documents.

The experts take note of the information provided and state that the course information documents are now available in full. They also follow the explanation concerning the two course codes and note that the SEAA curriculum was the subject of the accreditation procedure. The experts further acknowledge that lacking information have been added and the formatting errors in the course information have been corrected. However, no publication beyond the course synopses is envisaged. In the view of the experts, it is important that the complete module descriptions, and not only a summary of their content, are accessible to external stakeholders, as this information is needed to assess the learning outcomes, the workload and the examination arrangements of the individual modules. The panel therefore maintains its requirement until the university has demonstrated that the complete module descriptions are publicly available.

<u>Diploma Supplement Alignment with International Transparency Standards (Crit. 4.2/Statement Item 10 and 11)</u>

The university replies that the Malaysian Qualification Statement for the Bachelor of Civil Engineering with Honours has been revised to address the three points raised by the expert panel. A new Section 8 provides information on the national higher education system and the Malaysian Qualifications Framework, covering the structure of Malaysian higher education, the qualification levels, the academic and TVET sectors, the national credit system, progression pathways and quality assurance mechanisms, and identifying the bachelor's degree as a Level 6 qualification under the framework. Section 4.7 explains the calculation of the Grade Point Average and the Cumulative Grade Point Average and includes the relevant formulae, definitions and worked examples, in line with the methodology laid down in the UTM Academic Guidelines. Section 4.8 contains statistical information on the distribution of the final CGPA for the relevant graduating cohort, stating the number and the percentage of graduates in each CGPA range, which allows the individual result to be interpreted in relation to the performance of the cohort.

The university further explains that it retains the official title "Malaysian Qualification Statement (MQS)", as this is the terminology used within the Malaysian national quality assurance framework, but that the revised document has been explicitly labelled a "Diploma Supplement Equivalent" in order to support international transparency and recognition. The university therefore

considers the revised Malaysian Qualification Statement to provide the supplementary information needed for the transparency and international comparability of the qualification.

The experts note that a revised template of the Malaysian Qualification Statement has been submitted with the statement and consider it to be in line with the ASIIN criteria, as it now contains information on the national higher education system, an explanation of the calculation of the final grade and statistical data on the distribution of the final grades. The experts also welcome the addition of a note below the title indicating that the document constitutes an equivalent of the Diploma Supplement.

Overall, the experts consider Criterion 4 to be **partly fulfilled**.

5. Quality Management: Quality Assessment and Development

Criterion 5 Quality Management: Quality Assessment and Development

Evidence:

- Self-Assessment Report
- Website UTM Centre for Curriculum and Academic Quality (UTM CAQ): *https://dvcai.utm.my/utmcaq/*
- Faculty's Quality and Strategy Activities
- Sample Course Assessment Report (CAR)
- Minutes and analyses of the IAP meetings
- External Examiner's Reports
- Alumni and Employer Survey Results
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The SAR describes that quality assurance in Malaysian higher education is embedded in the national framework overseen by the Malaysian Qualifications Agency (MQA). Higher education quality assurance is organised as a dual system consisting of internal quality assurance

mechanisms established by the universities and external quality assurance procedures implemented by MQA through accreditation processes.

At UTM, academic quality assurance is managed centrally by the UTM Centre for Curriculum and Academic Quality (UTM CAQ) and the UTM Accreditation Centre (UTM ACe). In addition, the Faculty of Civil Engineering has developed its own Continuous Quality Improvement framework, which defines the faculty's approach to ensuring and enhancing the quality of its academic programmes. According to the SAR, the faculty implements a comprehensive quality assurance framework based on several key activities, which are summarised in the following table.

No.	Activities	Descriptions
1	Meeting with Faculty's Internal Quality Assurance Taskforce (JJKDF)	• Held twice a year. • A strategic engagement session with JJKDF to discuss academic quality enhancement, course assessment monitoring, and alignment of follow-up actions based on internal and external audit feedback.
2	Meeting with Industrial Advisory Panel (IAP)	• Held once a year. • A consultative meeting with IAP to gather industry insights on curriculum relevance, graduate employability, and recommendations for academic programme improvement in line with current market needs.
3	Manage presentation of Course Assessment Report (CAR)	• Held twice a year. • Overseeing the preparation and presentation of CAR to ensure comprehensive and consistent reporting of course learning outcomes, in support of quality assurance and continuous improvement efforts.
4	Faculty's Action Plan	• Coordinating and monitoring the implementation of the Faculty's Action Plan each academic semester to ensure alignment with strategic objectives • The Quality and Strategic Unit is responsible for tracking progress, identifying gaps, and facilitating follow-up actions to support continuous academic and operational excellence.
5	Academic Quality Award (AKA)	• An institutional recognition initiative by Universiti Teknologi Malaysia to honour excellence in academic quality enhancement.
6	Internal Audit Discussion and Implementation	• Facilitating structured discussions and coordinating the execution of internal academic audits to ensure compliance with university standards, identify areas for improvement, and support

		continuous quality enhancement across programmes and departments.
7	Quality Management System (QMS) Review and Documentation	• Conducting regular reviews and maintaining accurate documentation of the faculty's Quality Management System to ensure alignment with UTM's quality assurance framework, institutional policies, and accreditation requirements. This includes updating procedures, records, and evidence to support transparency and accountability.

The SAR further explains that each faculty has a Quality Assurance Manager who plays a central role in the implementation of quality assurance processes at faculty level. The QA Manager provides strategic leadership in maintaining academic integrity, supporting continuous improvement, and promoting evidence-based quality enhancement. The responsibilities include coordinating internal monitoring through the Internal Quality Assurance Taskforce (JJKDF), facilitating consultations with the Industrial Advisory Panel, overseeing the preparation and presentation of Course Assessment Reports, and managing the implementation of the faculty's action plan. The QA Manager also leads internal audits and reviews of the Quality Management System in order to ensure compliance, transparency, and systematic documentation in line with institutional policies and external accreditation standards.

External perspectives are also integrated into the quality assurance system. In addition to the Industrial Advisory Panel mentioned in the table, which provides input on the relevance of the curriculum for professional practice, the faculty appoints External Examiners from other universities. These External Examiners monitor and evaluate the implementation of the academic programme and thereby contribute to the external review of programme quality.

At course level, the Course Assessment Report forms an important basis for quality assessment and improvement. It is prepared by the responsible teaching staff and documents, among other aspects, the achievement of course learning outcomes and possible improvement measures. At programme level, the Annual Programme Assessment Report (APAR) aggregates PLO data from all courses of a graduating cohort. It is used to assess the overall achievement of the programme learning outcomes and to identify systematic strengths and weaknesses of the programme. The mechanisms for reviewing the Programme Learning Outcomes and the curriculum are described in more detail under Crit. 1.1 and 1.3.

Student feedback is incorporated into the Quality Management System through both indirect and direct mechanisms. Indirect feedback is mainly collected through the Course and Lecturer Evaluation system, e-PPP via MyAIMS, in which students evaluate the quality of the course and the lecturer's performance at the end of each semester and may provide additional comments.

Broader perspectives on programme effectiveness are collected through further surveys, including employer surveys, entry surveys, exit surveys, alumni PEO surveys, and meetings between administrators and representatives of the Civil Engineering Association (PEKA). Feedback from industrial training provides information on students' workplace readiness, while survey camp feedback is used to evaluate experiential learning in the area of land surveying. In addition, the Customer Satisfaction Index enables students to submit online comments on issues related to support services and facilities.

Direct student feedback is obtained through regular meetings between the faculty management and student representatives. These meetings are held every semester and are chaired by the Dean. They allow students to raise issues directly with the faculty management team, including the Deputy Registrar, the Deputy Dean Academic, and the Heads of Department. The minutes of these meetings are formally documented in order to support follow-up and accountability.

During the discussions with the students, the expert panel asks about their perception of the quality assurance system implemented at UTM. The students explain that anonymous course evaluations are conducted every semester. They state that they feel their feedback is taken seriously and that their contributions help to improve the programme. Overall, the students describe a supportive and open atmosphere in which feedback is encouraged.

The experts also discuss the involvement of external stakeholders with the representatives from industry and the Industrial Advisory Panel. The industry representatives express their satisfaction with the cooperation with the university and with their involvement in quality assurance processes. At the same time, they indicate that they would appreciate receiving more explicit feedback on recent curriculum adjustments and on how their input has been taken into account.

Based on the documents reviewed and the discussions during the audit, the experts assess the quality assurance system of the programme as generally well established. They note that the study programme is subject to regular internal quality assurance processes involving relevant stakeholder groups, including students and representatives from industry. The results of these processes are systematically used for the continuous development of the programme.

The experts further confirm that the processes and responsibilities for the further development of the programme are clearly defined. They also note that relevant information is published on the website of the Centre for Curriculum and Academic Quality.

At the same time, the experts identify a need for further development with regard to the feedback loop. During the discussions with the programme coordinators and students, it becomes apparent that students are not systematically informed about the results of course evaluations. While students feel that their feedback is taken seriously and observe improvements in the

programme, they do not receive regular information on the evaluation results or on measures derived from their feedback.

In the experts' view, closing the feedback loop is an important element of a functioning quality assurance system. Informing students about evaluation results and follow-up measures helps to make quality assurance processes transparent, strengthens student participation, and demonstrates how student feedback contributes to programme development. The experts therefore consider it necessary that students are informed about the results of course evaluations and, where applicable, about the measures taken in response to their feedback.

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

Lack of feedback to students on evaluation results (Crit. 5)

In the statement, the faculty describes how the feedback obtained through the anonymous course evaluation system e-PPP via MyAIMS is reviewed by the lecturers concerned, the programme coordinators and the faculty management as part of the continuous quality improvement process. The resulting measures are at present communicated to students mainly in an informal way, in lectures, meetings with students, academic advisory sessions and other student engagement activities, and the faculty acknowledges that this does not yet constitute a systematic and sufficiently documented mechanism for informing all students consistently about the actions taken in response to their feedback. The faculty is therefore developing a more structured and transparent form of communication and is expanding the announcement channels on its official website and its social media platforms, including Telegram and Facebook, which are to be used to inform students about the main issues identified in the course evaluations, the measures taken and the improvements implemented. The statement also emphasises that the anonymity and confidentiality of the individual responses are maintained, as only aggregated findings and the related improvement measures are communicated.

The experts appreciate the steps the faculty has initiated and regard the intention to replace the informal communication of the evaluation results with structured channels as the appropriate direction. At present, however, the faculty is still exploring these forms of communication, and the announced channels have not yet been put into operation, so that their effect cannot yet be assessed. However, while this is positively acknowledged, the panel maintains its requirement until its full implementation has been demonstrated.

Closing the Quality Loop with the Industry Advisory Panel (IAP) (Crit. 5/Statement Item 13)

The university's statement clarifies that a structured closing report documents how the recommendations of the previous Industry Advisory Panel meeting were deliberated within the faculty, which actions were taken and how these were incorporated into curriculum revisions and other improvement measures. The report of the previous cycle is presented to the panel members before each new meeting, which allows them to review how their earlier recommendations have been addressed. The faculty adds that the format and the documentation of the report will be strengthened further, so that future reports link the recommendations, the deliberations, the actions taken, the evidence of implementation and the resulting effects on the degree programme more explicitly.

The experts welcome the procedure described and the intention to document the feedback loop more explicitly in future. They point out that their observation on this point was intended as a suggestion and does not constitute a formal assessment, and that neither a requirement nor a recommendation is derived from it.

Overall, the experts consider Criterion 5 to be **not fulfilled**.

E Additional Documents

No additional documents needed.

F Comment of the Higher Education Institution (28.08.2026)

The following quotes the comment of the institution:

CRITERION 1: THE DEGREE PROGRAMME: CONCEPT, CONTENT AND IMPLEMENTATION

Item 1: Systematic Integration of Sustainability in Compulsory Modules

ASIIN Finding / Issue	Currently, sustainability is primarily addressed in elective modules and only one compulsory third-year module: SEAA 3913 Environmental Management [SAR S. 1.3.1, p. 22]. ASIIN recommends a broader, program-wide integration into other mandatory courses.
Report Reference	Criterion 1.3: Curriculum
HEI Response & Justification	The faculty acknowledges and appreciates the experts' recommendation to strengthen the systematic integration of sustainability across compulsory modules. The finding was based on the **SEAA curriculum presented in the 2025 Self-Assessment Report (SAR)**, in which **PLO7 was defined as "Environment and Sustainability."** The faculty acknowledges the experts' observation that sustainability was most explicitly addressed through **SEAA 3913 Environmental Management**, while its integration across other compulsory modules was less apparent in the curriculum documentation submitted for the accreditation exercise. Following curriculum review and enhancement, sustainability has been more explicitly and systematically embedded in the **revised curriculum** (latest curriculum revision). In the current curriculum, sustainable development is incorporated across several Programme Learning Outcomes rather than being represented through a single PLO. PLO2 incorporates holistic considerations for sustainable development in engineering problem analysis; **PLO3** requires engineering design solutions to consider whole-life cost, net-zero carbon, resources, societal and environmental considerations; and **PLO6** addresses the analysis and evaluation of sustainable development impacts on society, the economy, health and safety, legal frameworks and the environment.

	This programme-level integration is also reflected in compulsory courses. **SKAC 2022 – The Engineer and the World** introduces sustainability within the broader context of engineering practice, including sustainable practices, clean energy and financial sustainability. **SKAC 2132 – Construction Technology and Building Services** explicitly integrates sustainability into its weekly course content, including a dedicated topic on **Sustainable Development**, covering the Sustainable Development Goals (SDGs), engineering for sustainable development, skills and challenges associated with sustainable development, and green building. Sustainability-related content is also evident in the existing **SEAA 3313 – Reinforced Concrete Design I**, which includes a specific weekly topic on **Professionalism and Sustainability**. The revised curriculum therefore demonstrates a broader and more systematic integration of sustainability across engineering problem analysis, design, construction and professional engineering practice. The faculty continues to monitor the implementation and assessment of sustainability-related learning outcomes through its established curriculum review and continuous quality improvement processes. Notes: 2018 – 2022 : Curriculum with course code SEAA (137 credits) 2023 – 2025 : Curriculum with course code SEAB (135 credits) 2026 – now : Curriculum with course code SKAC (135 credits)
Evidence / Documents Attached	**E1.1 FKA Undergraduate Academic Guidelines 2025/2026: Revised Programme Learning Outcomes and Integration of Sustainability in Compulsory Courses** Relevant sections include: ● Programme Learning Outcomes (PLO2, PLO3 and PLO6), **page 12** ● SKAC 2022 – The Engineer and the World, **page 56** ● SKAC 2132 – Construction Technology and Building Services, **page 56–57** ● SKAC 3313 – Reinforced Concrete Design I, **page 59** **E1.2 Course Information (CI): SKAC 2022 - The Engineer and The World** **E1.3 Course Information (CI): SEAB/SKAC 2132 – Construction Technology and Building Services** **E1.4 Course Information (CI): SEAA 3313 – Reinforced Concrete Design I**

Item 2: Building Construction Strengthening & Interdisciplinary Collaboration

ASIIN Finding / Issue	The FKA curriculum has a strong historical focus on heavy infrastructure (bridges, roads, geotechnics). Traditional building construction is less prominent. Furthermore, there is no formal academic collaboration with the architecture department (Faculty of Built Environment & Surveying - FABU) [SAR S. 1.3.1, p. 23-24].
Report Reference	Criterion 1.3: Curriculum
HEI Response & Justification	The Faculty acknowledges and appreciates the experts' observation regarding the prominence of traditional building construction in the curriculum and the potential benefits of interdisciplinary collaboration with the Faculty of Built Environment and Surveying (FABU). The Faculty would like to clarify that building construction, construction management and surveying are established components of the SEAA curriculum evaluated during the accreditation exercise and are supported by relevant in-house academic expertise and facilities within FKA. At undergraduate level, construction and building-related knowledge is addressed through compulsory courses including **SEAA 3123 – Construction Technology, Contract & Estimating**, **SEAA 3412 – Building Information Modelling and Data Management**, and **SEAA 4113 – Construction and Project Management**. The official course information for SEAA 4113, for example, covers construction management principles, the construction project life cycle, planning and scheduling, resource allocation, project monitoring and control, and construction project cash flow. These courses are complemented by **SEAA 3022 – Integrated Design Project I** and **SEAA 4032 – Integrated Design Project II**, which provide multidisciplinary design experience. As documented in the SAR, Integrated Design Project I includes **infrastructure, building and geotechnical elements, including costing and estimation**, while Integrated Design Project II integrates road and drainage design, sewerage, structural analysis and design, reinforced concrete, and foundation engineering. Thus, building-related applications are incorporated not only through individual courses but also through integrated multidisciplinary design activities. Surveying competencies are also established within the programme through **SEAA 1023 – Engineering Surveying** and **SEAA 1031 – Surveying Camp**. The Surveying Camp provides practical exposure to surveying activities required before and during construction,

	including horizontal and vertical control, site detailing, earthwork volume computation and setting-out. In addition to the undergraduate curriculum, FKA has established **in-house academic expertise and dedicated support in Construction Management and Surveying**. Construction Management is formally represented as one of the **Academic Panels under the Department of Structure and Materials**, demonstrating an established academic structure and expertise within the Faculty. The Faculty also maintains a dedicated **Surveying Unit**, which supports the surveying and geomatics needs of FKA and provides teaching and learning, research, consultancy and practical training using relevant surveying facilities and equipment. These areas are supported by dedicated academic structures and academic staff with relevant qualifications, professional experience, research and industry expertise, as demonstrated by the selected staff CVs provided in **E1.6 and E1.7.** While the Faculty recognises the potential value of interdisciplinary engagement with FABU, **formal collaboration with FABU is not currently required for the delivery of these areas**, as the programme is sufficiently supported by established curriculum components and relevant in-house academic expertise within FKA.
Evidence / Documents Attached	**E1.5 SEAA Curriculum and Course Information: Construction, Building and Surveying Components** Relevant undergraduate courses: ● SEAA 1023 – Engineering Surveying (**page 1**) ● SEAA 1031 – Surveying Camp (**page 1**) ● SEAA 3022 – Integrated Design Project I (**page 5**) ● SEAA 3123 – Construction Technology, Contract & Estimating (**page 6**) ● SEAA 3412 – Building Information Modelling and Data Management (**page 7**) ● SEAA 4032 – Integrated Design Project II (**page 9**) ● SEAA 4113 – Construction and Project Management (**page 10**) **E1.5(a) Course Information (CI) SEAA 4113 – Construction and Project Management** **E1.6 Selected CVs of Academic Staff in Construction Management** **E1.7 Selected CVs of Academic Staff in Surveying**

Item 3: Expansion of Long-Term Credit-Bearing Student Mobility

ASIIN Finding / Issue	While FKA student mobility is robust but mainly comprises short-term study visits, summer camps, or short internships. Students expressed strong interest in semester-long exchange programs, particularly with regional universities in Singapore, that carry transferable credits.
Report Reference	Criterion 1.3: Student Mobility
HEI Response & Justification	The Faculty acknowledges and appreciates the experts' recommendation to further strengthen student participation in **long-term, credit-bearing international mobility programmes**. The Faculty would like to clarify that UTM already has an established institutional mechanism for long-term international mobility through the **UTM International Study Abroad / Student Exchange Programme**. Under this programme, students may spend **one or two semesters at an overseas university** and undertake regular academic courses with opportunities for **credit transfer**. Student Exchange is available through UTM partner universities, while the Study Abroad option also enables participation at non-partner universities, subject to the applicable requirements. The FKA **Self-Assessment Report submitted to ASIIN** also documents the Faculty's existing international mobility activities, including research internship/attachment, student exchange and short-term mobility programmes. The mobility statistics reported for **2022–2025** demonstrate active international participation, while also highlighting the opportunity to further increase participation in semester-long mobility programmes. This is reflected in **Tables 1.10(a) and 1.10(b) of the SAR (pp. 25–26)**. The Faculty acknowledges the experts' observation that, although student mobility participation has been active, the majority of FKA students have participated in **short-term programmes**, including academic visits, summer programmes and short internships. The mobility records reported in the SAR demonstrate active international participation while also highlighting the opportunity to increase participation in longer-term programmes. As part of its continuing internationalisation efforts, FKA is also actively planning and implementing additional international mobility activities in 2026. These include the **UTM Go Beyond: Oxford Academic and Educational Visit Program 2026** at the University of Oxford, United Kingdom, scheduled for **18–23 October 2026**, and the **GOP – Disaster Resilience and Climate Change Technology (DireccT) 2026** in Japan, scheduled for **25–31 October 2026**.

	These programmes provide further evidence of the Faculty's continued efforts to expand students' international academic exposure and strengthen engagement with overseas institutions. **As these are short-term mobility programmes, they complement, rather than replace, the Faculty's efforts to increase participation in longer-term, credit-bearing student exchange opportunities.** The faculty has taken an initiative to support long-term mobility through the oversea industrial training for Year 3 undergraduate students. In 2025, the faculty managed to send one student for international industrial training in Korea for 12 weeks, under the supervision of supervisors at Seoul National University and Hanyang University. Upon completion, the student was given credit transfer, equivalent to 5 credits as fixed by our curriculum. The detail of oversea industrial training is as per given in Attachment E.1.11. In response to the recommendation, FKA encourages participation in **norm semester, credit-bearing mobility** by increasing student awareness of available exchange opportunities, providing early academic advice on course matching and credit transfer, and promoting suitable partner universities whose academic calendars and course structures facilitate student exchange without adversely affecting normal study progression. The Faculty continues to work with **UTM International** and relevant partner universities to identify appropriate long-term mobility opportunities, including suitable regional and international institutions, while ensuring that academic quality and credit recognition requirements are maintained.
Evidence / Documents Attached	**E1.8 UTM International: Study Abroad / Student Exchange Programme** Evidence of established semester-long international mobility opportunities (one or two semesters) with credit-transfer opportunities. **E1.9 UTM Go Beyond: Oxford Academic and Educational Visit Program 2026 – University Approval and Supporting Documents** **E1.10 GOP Disaster Resilience and Climate Change Technology (DireccT) 2026, Japan – Programme Approval and Supporting Documents** **E1.11 Supporting Documentation for International Industrial Training and Credit Transfer**

Item 4: Equal Access & Non-Discriminatory Admission Criteria

ASIIN Finding / Issue	The FKA Academic Guidelines Handbook currently includes a clause in all three entry pathways (STPM, Matriculation, Diploma) stating that candidates must have 'no disabilities that inhibit physical activities' [SAR S. 1.4, pp. 29-31]. ASIIN considers this clause exclusionary and discriminatory.
Report Reference	Criterion 1.4: Admission Requirements
HEI Response & Justification	The Faculty acknowledges the experts' concern regarding the admission criterion previously stated in the documentation submitted for the accreditation review, which required applicants to have "no disabilities that inhibit physical activities". The Faculty wishes to clarify that this criterion is **no longer** included in the current admission requirements at the level of University. The latest official **UTM Undergraduate Admission Guidelines for Semester I, Academic Session 2026/2027**, issued by the Student Recruitment and Admission Division, Universiti Teknologi Malaysia, supersede the admission information presented in the earlier documentation. The revised admission requirements are based on academic qualifications, programme-specific requirements and English language proficiency, as applicable to the respective entry pathways. The previous condition concerning physical disability is no longer stipulated in the current admission requirements. For Malaysian applicants, the current admission requirements for Academic Session 2026/2027 are officially published by UTM through the UTM Admission portal and supported by the latest Undergraduate Admission Guidelines. In this regard, the Faculty of Civil Engineering fully complies with and adheres to the University's decision. Accordingly, the Academic Guideline Handbook for the 2026/2027 intake does not include any provisions or requirements related to the "no-disabilities" issue. For international applicants, UTM similarly publishes the applicable undergraduate entry requirements through the official UTM Admission portal. These include recognised pre-university qualifications, English language proficiency requirements and programme/faculty-specific requirements, where applicable. Accordingly, the current admission framework demonstrates that admission to the Bachelor of Civil Engineering with Honours programme is based on relevant academic and programme

	requirements without the previously stated exclusion based on physical disability. The Faculty therefore considers that the concern identified by the experts has been addressed in the revised official admission documentation.
Evidence / Documents Attached	**E1.12 [English Translation] UTM Malaysian Undergraduate Entry Requirements, Academic Session 2026/2027** Official UTM Admission webpage presenting the current general admission requirements for Malaysian undergraduate applicants. **E1.13 – UTM Admission: Entry Requirements for International Undergraduate Applicants** **E1.14 - Faculty's Academic Handbook for 2026/2027 (Draft ver.) (Page 9)**

Item 5: Student Workload & ECTS Credit Allocation for Industrial Training

ASIIN Finding / Issue	Industrial Training (SEAA 3045) is allocated 5 local credits, which converts to 200 student learning hours (40 hours per credit) [SAR S. 1.5, p. 33]. At 40 hours of work per week, this represents only 5 weeks of workload. However, the internship duration is strictly 12 weeks, and students also have additional assessment workloads such as logbook maintenance and final report preparation. ASIIN notes these under-credits the actual workload of students.
Report Reference	Criterion 1.5: Workload and Credits
HEI Response & Justification	The Faculty would like to clarify that the credit allocation for Industrial Training is determined based on the University's established guideline for internship courses, whereby **1 credit hour of internship is equivalent to 2 weeks of industrial training**. Accordingly, the **12-week Industrial Training programme is allocated 6 credit hours** based on this calculation. The credit allocation is therefore determined specifically according to the nature and duration of industrial training, rather than by applying the conventional calculation of 40 Student Learning Time (SLT) hours per credit used for regular academic courses. The Faculty acknowledges the ASIIN panel's observation that, if the current allocation of **5 local credits** is converted using the conventional 40 SLT hours per credit, this would amount to 200 hours, which may appear not to represent the total number of hours spent by students during the 12-week placement. However, for internship and work-based learning activities, the credit calculation follows a different equivalency, as the learning takes place predominantly through

	structured workplace experience and supervised practical training. In addition to the industrial placement itself, students are required to complete assessment components, including logbook maintenance and the preparation of a final report. The Faculty appreciates the ASIIN panel's constructive observation. The clarification and supporting documentation on the internship credit calculation is strengthened to demonstrate that the credit allocation is based on the established equivalency of **1 credit hour for every 2 weeks of industrial training**, with due consideration given to the additional learning and assessment activities undertaken by students. This calculation is based on the requirement specified by the Board of Engineers (BEM). This explanation has been clearly documented in **Section 8.3.1 and 8.3.2 (Page 17) Engineering Accreditation Manual 2024 (EAC2024)** as this academic programme is regularly accredited under Board of Engineers Malaysia. In addition, students completing the 12-week internship are eligible for a monthly allowance of RM600. This program is registered under the National Structured Internship Programme (MySIP), which allows participating companies to claim a double tax deduction on allowances paid. This arrangement is mutually beneficial, as it provides financial support to students while offering tangible tax incentives to industry partners as outlined in E1.16.
Evidence / Documents Attached	**E1.15 Engineering Accreditation Council Manual 2024 (page 17)** **E1.16 National Structured Internship Programme MySIP Brochure**

CRITERION 2: EXAMS: SYSTEM, CONCEPT AND ORGANISATION

Item 6: Independent Assessment of Individual Contributions in Group Work

ASIIN Finding / Issue	Group-based design projects (such as IDP I & II) and laboratory reports are widely used. While they promote teamwork and communication, the grading mechanisms must be strengthened using individual assessment rubrics (such as peer evaluation, individual presentation scores, or viva sessions) to isolate and grade personal performance.
Report Reference	Criterion 2: Exams (Group Assessments)

HEI Response & Justification	The Faculty acknowledges the experts' recommendation regarding the assessment of individual contributions in group-based activities. The Faculty would like to clarify that individual assessment is already incorporated into group-based courses to distinguish individual student performance from the group's overall performance. For example, in Integrated Design Project II (IDP II), students are individually assessed through Major and Minor Interview sessions using specific assessment rubrics, in addition to the group-based components such as the poster presentation and project report. This allows individual students' understanding, contribution, and achievement of the relevant learning outcomes to be assessed independently. An example of the rubric is given in **E2.1**. A similar approach is used in laboratory courses, where students work in groups on laboratory activities, but individual performance is assessed separately using individual assessment rubrics. Therefore, the final assessment is not determined solely by the group's performance. An example of the rubrics is given in **E2.2**.
Evidence / Documents Attached	**E2.1 IDP II Marking Form and Individual Assessment Rubrics** **E2.2 Laboratory Individual Assessment Rubrics**

Item 7: Recording Exam Attempts on Academic Transcript

ASIIN Finding / Issue	Under UTM Academic Regulations, students are permitted to retake failed courses repeatedly within the maximum study period (8 years). However, the number of attempts taken to pass is not currently shown on the final Academic Transcript.
Report Reference	Criterion 2: Exams (Repeat Attempts)
HEI Response & Justification	The Faculty would like to clarify that the format and information presented in the official Academic Transcript are governed centrally by Universiti Teknologi Malaysia in accordance with the University's academic regulations and records management procedures. The Faculty therefore does not independently determine or modify the information displayed in the official transcript. However, students' course registrations, academic results, and repeat attempts are maintained in the University's academic records system for academic monitoring and progression purposes. For instance, the Graduation Audit record provides evidence of this practice by documenting each repeated course attempt, including the corresponding grade, repeat status and semester. The supporting evidence demonstrates the University's regulations governing course repetition (**E2.3 - Article 18, Page 24**) and the systematic recording of individual course attempt history in the Graduation Audit (**E2.4**). In the Graduation Audit, the status codes **UM** and **UK** denote **"Repeat Subject"** and **"Repeat Course"**, respectively, allowing repeated attempts to be identified together with the corresponding grade and semester of each attempt. In addition, the current Official Academic Transcript is provided as reference (**E2.5**) to demonstrate the information formally presented in the University's academic transcript.
Evidence / Documents Attached	**E2.3 UTM Academic Regulations: Provisions on Repeating Courses (Article 18, page 24)** **E2.4 Sample Student Academic Record Showing Course Attempt History (Graduation Audit)** **E2.5 Current Official Academic Transcript**

CRITERION 3: RESOURCES

Item 8: Research Laboratory Equipment Upgrades

ASIIN Finding / Issue	Teaching laboratories are highly praised as well-equipped, but research laboratories require ongoing modernization and funding to support high-impact FYP and postgraduate/staff research [SAR S. 3.3, p. 60].
Report Reference	Criterion 3.3: Funds and Equipment
HEI Response & Justification	The faculty and the university have consistently maintained well-equipped teaching laboratories that meet international standards, as well as initiated a structured modernization plan to ensure that research facilities remain at the forefront of innovation. Between 2026 and 2027, targeted investments will be made to replace and upgrade research laboratory equipment, thereby supporting high-impact Final Year Projects (FYP), postgraduate research, and staff-led investigations. Funding is secured through allocations from the Ministry of Higher Education (MOHE) under Rolling Plan 1 (**RP1**), Rolling Plan 2 (**RP2**), and special funds. A total of RM15,997,251 has been approved, distributed in phases as follows: RM2,999,300 (**E3.1 - RP1**), RM7,681,204 (**E3.2 - RP2**), RM3,500,000 (**E3.3 - Special Fund RP2**), and RM1,788,747 (**E3.4 - RP2 Savings Fund**). Additionally, a Facility Enhancement Fund (**E3.5**) of RM28,000 has been allocated specifically for the Hydraulics and Hydrology Laboratory, Faculty of Civil Engineering. This phased investment strategy demonstrates the faculty's commitment to sustaining excellence in teaching while systematically modernizing research laboratories. It ensures that students and staff have access to advanced infrastructure, thereby strengthening competencies in experimental methods, innovation, and applied engineering research.
Evidence/Documents Attached	**E3.1 RM2,999,300 (RP1 Fund Allocation and List of Equipment).** **E3.2 RM7,681,204 (RP2 Fund Allocation Fund and List of Equipment).** **E3.3 RM3,500,000 (RP2 Special Fund Allocation and List of Equipment).** **E3.4 RM1,788,747 (RP2 Savings Fund Allocation and List of Equipment).** **E3.5 RM28,000 (Facility Enhancement Fund for the Hydraulics and Hydrology Laboratory, FKA - Letter of Award)**

CRITERION 4: TRANSPARENCY AND DOCUMENTATION

Item 9: Completeness, Consistency, and Public Accessibility of Course Information (CIs)

ASIIN Finding / Issue	ASIIN detected several critical omissions and inconsistencies: (1) Missing Course Information (CIs) for: Introduction to Civil Engineering (SEAA 1011), Mechanical and Electrical Systems (SEAA 2032), SSCE mathematics modules, language modules, university-wide general modules (English for Professional Purposes, Value and Identity), and elective modules. (2) Code Inconsistencies: Course codes differ between study plan and CI (e.g., SEAA vs SEAB for Civil Engineering Materials and Wastewater Engineering). (3) Credit/Title Inconsistencies: Discrepancies in credits for Integrated Design Project 1, Geotechnics 2, Civil Engineering Seminar, and missing credits for Final Year Project (FYP) in certain tables. The study plan in the appendix sums to only 134 credits, failing to match the official 137 credits. (4) Cut-off Text: Synopsis for IDP and Disclaimer for Construction Economics and Estimating are cut off and unreadable in the PDF. (5) Accessibility: CIs are currently locked behind the internal e-learning portal and not accessible to the public, prospective students, or employers.
Report Reference	Criterion 4.1: Module Descriptions
HEI Response & Justification	(1) The Course Information (CIs) for the modules that were missing from the report have been provided as an **Attachment E4.1** These include Introduction to Civil Engineering (SEAA 1011), Mechanical and Electrical Systems (SEAA 2032), SSCE Mathematics modules, language modules, university-wide general modules (English for Professional Purposes and Value and Identity), elective modules, and other relevant modules that were not included in the report. (2) The difference in course codes is due to changes made during the curriculum review process. The curriculum is reviewed every five years, and SEAA was the course code used under the curriculum implemented from 2018 to 2022. Following the curriculum review, the revised curriculum was approved and implemented using the new course code SEAB. The previous SEAA curriculum comprised 137 credit hours, while the revised SEAB curriculum comprises 135

	credit hours. In addition, UTM introduced a new policy whereby students who achieve MUET Band 4.0 are eligible for an exemption from one English course. These changes contributed to differences in the overall credit requirements and course structure between the two curriculum versions. **Attachment E4.2** provides the approval letters for the curriculum reviews of this programme. During the ASIIN evaluation period, both curriculum versions were still being implemented concurrently. First- and second-year students were enrolled under the SEAB curriculum, while third- and fourth-year students were still following the SEAA curriculum. Therefore, the presence of both SEAA and SEAB course codes in the study plan and CI documents reflects the transition and overlap between the two curriculum versions, rather than an inconsistency in the curriculum documentation. For the purpose of the ASIIN accreditation reporting, only the documents related to the SEAA curriculum were used and subsequently updated to ensure consistency and accuracy in the submitted documentation. (3) The CI documents for Integrated Design Project 1, Geotechnics 2, and Civil Engineering Seminar have been attached for verification. The discrepancies in the credit information for the Final Year Project (FYP) in certain tables have also been reviewed and clarified based on the latest CI. Based on the latest CIs, the programme comprises a total of 137 official credits. (4) The previously cut-off and unreadable text in the CI for the Integrated Design Project (IDP) and Construction Economics and Estimating, has been corrected and improved. (5) The faculty acknowledges the experts' observation that the complete CI documents are currently accessible to registered students through UTM's e-learning platform and are not publicly accessible. The faculty wishes to clarify, however, that essential information on the courses offered in the Bachelor of Civil Engineering with Honours programme is already publicly available through the FKA Undergraduate Academic Guidelines on the Faculty's official website. The Academic Guidelines provide information on the programme structure and study plan, including course codes, course titles, credit values and course synopses. This enables prospective students, employers and other external stakeholders to obtain an overview of the courses and academic content of the

	programme without requiring access to UTM's internal e-learning platform. The faculty recognises that the publicly available synopses of courses available in the Academic Guidelines are equivalent to the complete Course Information (CI) documents.
Evidence / Documents Attached	**E4.1 Course Information (CI) for SEAA curriculum** **E4.2 Approval letters for the curriculum reviews**

Item 10: Diploma Supplement Alignment with International Transparency Standards

ASIIN Finding / Issue	The Malaysian Qualification Statement (MQS) currently issued by UTM serves as the Diploma Supplement equivalent. However, it lacks: (1) Explicit details on the Malaysian higher education system, (2) A clear explanation of CGPA/final grade calculation, and (3) Statistical data showing grade distribution of the student cohort as recommended by ECTS guidelines.
Report Reference	Criterion 4.2: Diploma and Diploma Supplement
HEI Response & Justification	UTM acknowledges the experts' observation regarding the further alignment of the Malaysian Qualification Statement (MQS) with international transparency and comparability standards. In response to the requirement, the MQS for the Bachelor of Civil Engineering with Honours programme has been revised and enhanced to address the specific elements identified by the expert panel. First, the revised MQS now includes a dedicated section on the **Malaysian higher education system and the Malaysian Qualifications Framework (MQF) under Section 8: Information on the National Higher Education System**. This section provides information on the structure of Malaysian higher education, qualification levels, academic and TVET sectors, the national credit system, progression pathways, and quality assurance mechanisms. It also clearly identifies the Bachelor's Degree as a **Level 6 qualification under the MQF**. Second, the revised MQS now incorporates a **clear explanation of the Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA) calculation methodology under Section 4.7: Calculation of GPA and CGPA**. The relevant formulae, definitions and calculation examples have been

	included directly in the MQS to provide greater transparency on how students' academic results are calculated. This information is consistent with the grading and GPA/CGPA calculation methodology established in the UTM Academic Guidelines. Third, **statistical information on the distribution of final grades/CGPA for the relevant graduating cohort has been incorporated under Section 4.8: Statistical Distribution of Final CGPA for the Relevant Graduating Cohort**. The information provides the distribution of graduates across the relevant CGPA ranges, including the number and percentage of graduates within each range. This enables the individual graduate's final academic performance to be interpreted in relation to the performance distribution of the relevant graduating cohort and supports greater international transparency and comparability. Accordingly, the revised MQS has addressed the three elements identified by the expert panel through: ● **Section 8: Information on the National Higher Education System** – information on the Malaysian higher education system and Malaysian Qualifications Framework (MQF); ● **Section 4.7: Calculation of GPA and CGPA** – explanation of the GPA and CGPA calculation methodology; and ● **Section 4.8: Statistical Distribution of Final CGPA for the Relevant Graduating Cohort** – statistical information on the distribution of final grades/CGPA for the relevant graduating cohort. The revised MQS therefore provides the supplementary information required to enhance the transparency and international comparability of the qualification.
Evidence / Documents Attached	**E4.3 Faculty Academic Guidelines - page 38** **E4.4 Revised Malaysian Qualification Statement (MQS) – Diploma Supplement Equivalent**

Item 11: Standardizing Diploma Supplement Terminology (KIV)

ASIIN Finding / Issue	The Malaysian Qualification Statement (MQS) currently issued by UTM serves as the Diploma Supplement equivalent. To align with global transparency standards, the expert panel recommends renaming or explicitly labeling the document as a 'Diploma Supplement'.

Report Reference	Criterion 4.2: Diploma and Diploma Supplement
HEI Response & Justification	UTM acknowledges and appreciates the experts' recommendation to align the terminology of the Malaysian Qualification Statement (MQS) with internationally recognised practice. The University retains the official title **"Malaysian Qualification Statement (MQS)"**, which is the terminology used within the Malaysian national quality assurance framework. At the same time, in response to the experts' recommendation and to facilitate international transparency and recognition, the revised MQS has been explicitly labelled as a **"Diploma Supplement Equivalent."** Accordingly, the revised document is now presented as: **MALAYSIAN QUALIFICATION STATEMENT (MQS) Diploma Supplement Equivalent** This approach maintains consistency with the established Malaysian terminology while clearly communicating to international stakeholders that the MQS serves a function equivalent to a Diploma Supplement. UTM considers that this enhancement appropriately addresses the experts' recommendation on international terminology and transparency.
Evidence / Documents Attached	**E4.4 Revised Malaysian Qualification Statement (MQS) – Diploma Supplement Equivalent**

CRITERION 5: QUALITY MANAGEMENT: QUALITY ASSESSMENT AND DEVELOPMENT

Item 12: Quality Management: Closing Feedback Loops for Students

ASIIN Finding / Issue	While students regularly complete anonymous course evaluations (e-PPP via MyAIMS), they are not systematically informed of the results or the subsequent Continuous Quality Improvement (CQI) measures implemented by FKA.
Report Reference	Criterion 5: Quality Management
HEI Response & Justification	At present, feedback received through the anonymous course evaluation system, e-PPP via MyAIMS, is reviewed and considered by the relevant course lecturers, programme coordinators, and Faculty management as part of the CQI process. The resulting improvements and CQI actions are currently communicated to students mainly through **informal verbal communication**, such as during lectures, meetings with students, academic advisory

	sessions, and other student engagement activities. While this approach allows students to receive information on certain improvements, the faculty acknowledges that it is not yet a systematic and sufficiently documented mechanism for ensuring that all students are consistently informed about the actions taken in response to their feedback. To address this matter, FKA is currently developing a more structured and transparent communication mechanism for disseminating information on key improvements and CQI measures arising from student feedback. The faculty is in the process of enhancing the announcement and dissemination channels through its **official website and social media platforms**, including **Telegram and Facebook**. These platforms will be used, where appropriate, to communicate relevant information to students regarding the key issues identified through course evaluations, actions taken by the faculty, and improvements implemented as part of the CQI process. At the same time, the faculty ensures that the anonymity and confidentiality of individual student responses are fully maintained, with only aggregated findings and relevant improvement actions being communicated.
Evidence / Documents Attached	**E5.1 Minutes of meeting within JKP and MPP**

Item 13: Closing the Quality Loop with the Industry Advisory Panel (IAP)

ASIIN Finding / Issue	While FKA consults the IAP annually, panel members indicated that they would appreciate formal, structured reports in subsequent years showing how their previous recommendations were acted upon in curriculum revisions.
Report Reference	Criterion 5: Quality Management
HEI Response & Justification	The Faculty of Civil Engineering (FKA) would like to clarify that a **structured closing report** is prepared to document the actions and follow-up undertaken in response to recommendations and feedback received from the previous IAP meeting. The report outlines the key recommendations raised by the IAP, the Faculty's consideration and deliberation of these recommendations, the actions taken or proposed, and where applicable, their incorporation into curriculum revisions and other programme improvement initiatives.

	Prior to the commencement of each new IAP meeting, the structured closing report from the previous IAP cycle is **explained and formally presented to the IAP members**. This provides the panel members with a clear account of how their previous recommendations have been addressed and enables them to review the outcomes of the actions taken before providing further feedback and recommendations for the subsequent cycle. The preparation and finalisation of the closing report are also **extensively discussed among the Faculty of Civil Engineering management members and relevant academic personnel**. These discussions ensure that the recommendations received from the IAP are carefully considered from the perspectives of academic quality, curriculum relevance, resource implications, and compliance with University and accreditation requirements. The agreed actions are subsequently incorporated into the faculty's continuous improvement processes, including curriculum review and revision where appropriate. Nevertheless, the Faculty acknowledges the ASIIN panel's suggestion and will further strengthen the format and documentation of the structured closing report. In subsequent years, the report will more explicitly demonstrate the complete feedback loop by systematically linking **IAP recommendations, Faculty deliberations, actions taken, evidence of implementation, and the resulting impact on curriculum and programme improvement**.
Evidence / Documents Attached	**E5.2 Sample of IAP Closing Report**

G Summary: Expert Recommendations (07.09.2026)

Taking into account the additional information and the comments given by the university, 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 Honours	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

Requirements

A 1. (ASIIN 1.4) The admission procedures must ensure equal access and must not contain any discriminatory criteria.
A 2. (ASIIN 4.1) Ensure that module descriptions are made publicly available and accessible to all stakeholders.
A 3. (ASIIN 5) Ensure that students are informed about the evaluation results.

Recommendations

E 1. (ASIIN 1.3) It is recommended to include more aspects of sustainability in the compulsory modules of the curriculum.
E 2. (ASIIN 1.3) It is recommended to include aspects of building construction in the curriculum.
E 3. (ASIIN 1.3) It is recommended to cooperate with the Faculty of Built Environment and Surveying in architectural aspects.
E 4. (ASIIN 1.3) It is recommended to strengthen student mobility.
E 5. (ASIIN 1.5) It is recommended to take the full workload of the industrial training into account and to award credits accordingly, making use of the scope provided by the national regulations.
E 6. (ASIIN 3.3) It is recommended to improve the equipment in the research laboratories.

H Comment of the Technical Committee 03 – Civil Engineering, Geodesy and Architecture (08.09.2026)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and follows the experts' assessment without amendments.

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

The Technical Committee deems that the intended learning outcomes of the degree programme 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 Honours	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

I Decision of the Accreditation Commission (25.09.2026)

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

The Accreditation Commission discusses the procedure and follows the experts' and the TC's assessment. The Commission makes a minor editorial amendment to Requirement A 2, removing the word "made".

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

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

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 Honours	With requirements for one year	With requirements for one year	30.09.2032	EUR-ACE®	Subject to the approval of the ENAEE Administrative Council

Requirements

A 1. (ASIIN 1.4) The admission procedures must ensure equal access and must not contain any discriminatory criteria.

A 2. (ASIIN 4.1) Ensure that module descriptions are publicly available and accessible to all stakeholders.

A 3. (ASIIN 5) Ensure that students are informed about the evaluation results.

Recommendations

E 1. (ASIIN 1.3) It is recommended to include more aspects of sustainability in the compulsory modules of the curriculum.

E 2. (ASIIN 1.3) It is recommended to include aspects of building construction in the curriculum.
E 3. (ASIIN 1.3) It is recommended to cooperate with the Faculty of Built Environment and Surveying in architectural aspects.
E 4. (ASIIN 1.3) It is recommended to strengthen student mobility.
E 5. (ASIIN 1.5) It is recommended to take the full workload of the industrial training into account and to award credits accordingly, making use of the scope provided by the national regulations.
E 6. (ASIIN 3.3) It is recommended to improve the equipment in the research laboratories.

Appendix: Programme Learning Outcomes and Curricula

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

PEO	PROGRAMME EDUCATIONAL OBJECTIVES DESCRIPTION
PEO 1	Competent, innovative and entrepreneurial in acquiring and applying knowledge towards solving Civil Engineering problems.
PEO 2	Process leadership qualities, able to work, manage in diverse team and serve the society in multi-disciplinary environment.
PEO 3	Demonstrate professionalism and uphold ethical values with emphasis on sustainable environment.
PEO 4	Communicate effectively, possess strong self-confidence and recognize the need for life- long learning.

PLO	Intended Educational Objectives
PLO 1	Apply knowledge or mathematics, natural science, engineering fundamental and an engineering specialization as specified in WK1 to WK4 respectively to the solution of complex engineering problems.
PLO 2	Identify, formulate, conduct research literature and analyze complex engineering problems reaching substantiated conclusion using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4).
PLO 3	Design solutions for complex engineering problems and design systems, components or processes that meet specified need with appropriate consideration for public health and safety, cultural, societal and environmental considerations (WK5)
PLO 4	Conduct investigation of complex engineering problems using research – based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.

PLO 5	Create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling to complex engineering problems with an understanding of the limitations (WK6).
PLO 6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7).
PLO 7	Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental context (WK7).
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7).
PLO 9	Function effectively as an individual, as and member of leader in diverse teams and in multi – disciplinary setting.
PLO 10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation , make effective presentations, and give and receive clear instructions.
PLO 11	Demonstrate knowledge and understanding of engineering management principles and economic decision making and apply these to one's own work, as a member and leader in team, to manage project in multidisciplinary environments.
PLO 12	Recognize the need, and have the preparation and ability to engage independent and life – long learning in broadest context of technological change.

The following **curriculum** is presented:

YEAR 1					
SEMESTER 1			SEMESTER 2		
CODE	COURSES	CR.	CODE	COURSES	CR.
SEAA 1011	Introduction to Civil Engineering	1	SEAA 1023	Engineering Surveying	3
SEAA 1213	Engineering Mechanics	3	SEAA 1422	Engineering Drawing	2
SEAA 1513	Fluid Mechanics	3	SEAA 1713	Soil Mechanics	3
SSCE 1693	Engineering Mathematics I	3	SSCE 1793	Differential Equations	3
ULRS 1182 (local only) UHLM 1012 (international)	Appreciation Of Ethics & Civilizations Malay Language for Communication 2	2	SSCE 1993	Engineering Mathematics II	3
SEAA 2112	Civil Engineering Materials	2	ULRS 1012	Value and Identity	2
TOTAL CREDIT		14	TOTAL CREDIT		16

SHORT SEMESTER		
CODE	COURSES	CR.
SEAA 1031	Surveying Camp	1

YEAR 2					
SEMESTER 1			SEMESTER 2		
CODE	COURSES	CR.	CODE	COURSES	CR.
SEAA 2012	Civil Engineering Laboratory 1	2	SEAA 2223	Mechanics of Materials and Structures	3
SEAA 2032	Mechanical and Electrical Systems	2	SEAA 2413	Computer Programming	3
SEAA 2513	Hydraulics	3	SEAA 2712	Engineering Geology and Rock Mechanics	2
SEAA 2722	Geotechnics 1	2	SEAA 2922	Wastewater Engineering	2
SEAA 2832	Highway Engineering	2	SSCE 2193	Engineering Statistics	3
SEAA 2912	Water Treatment	2	ULRF 2**2	Service Learning & Engagement Courses	2
SSCE 2393	Numerical Methods	3	ULRS 1022	Philosophy & Current Issues (Local Students)	2
UHLB 2122	Academic Communication Skill	2			
TOTAL CREDIT		18	TOTAL CREDIT		17

YEAR 3					
SEMESTER 1			SEMESTER 2		
CODE	COURSES	CR.	CODE	COURSES	CR.
SEAA 3123	Construction Technology, Contract & Estimating	3	SEAA 3012	Civil Engineering Laboratory 2	2
SEAA 3243	Theory of Structures	3	SEAA 3022	Integrated Design Project 1	2
SEAA 3313	Reinforced Concrete Design 1	3	SEAA 3323	Structural Steel & Timber Design	3
SEAA 3412	Building Information Modelling and Data Management	2	SEAA 3613	Hydrology and Water Resources	3
SEAA 3712	Geotechnics 2	2	SEAA 3842	Traffic Engineering	2
UHLX 1**2	Foreign Language for Communication	2	SEAA 3913	Environmental Management	2
ULRS 3032	Entrepreneurship Innovation	2	UHLB 3132	English for Professional Purpose	2
TOTAL CREDIT		17	TOTAL CREDIT		16

SHORT SEMESTER		
CODE	COURSES	CR.
SEAA 3045	Industrial Training	5

YEAR 4					
SEMESTER 1			SEMESTER 2		
CODE	COURSES	CR.	CODE	COURSES	CR.
SEAA 4021	Civil Engineering Seminar	1	SEAA 4032	Integrated Design Project 2	2
SEAA 4022	Research Methodology and Pre-Project	2	SEAA 4034	Final Year Project	4
SEAA 4223	Structural Analysis	3	SEAA 4113	Constructions & Project Management	3
SEAA ###3	Elective 1	3	SEAA 4333	Reinforced Concrete Design 2	3
SEAA ###3	Elective 2	3	SEAA 4##3	Elective 3	3
***3	Free Elective	3			
TOTAL CREDIT		15	TOTAL CREDIT		15