



ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes
Construction Materials Engineering and Technology
Hydraulic Engineering

Master's Degree Programme
Hydraulic Engineering

Provided by
**The University of Danang – University of Science and
Technology**

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Table of Content

A About the Accreditation Process.....	3
B Characteristics of the Degree Programmes	5
C Expert Report for the ASIIN Seal	9
1. The Degree Programme: Concept, content & implementation	9
2. The degree programme: structures, methods and implementation.....	20
3. Exams: System, concept and organisation.....	27
4. Resources	29
5. Transparency and documentation.....	33
6. Quality management: quality assessment and development	37
D Additional Documents	39
E Comment of the Higher Education Institution (07.08.2023)	39
F Summary: Expert recommendations (15.08.2023)	50
G Comment of the Technical Committee 03 – Civil Engineering, Geodesy and Architecture (04.09.2023)	52
H Decision of the Accreditation Commission (22.09.2023)	54
Appendix: Programme Learning Outcomes and Curricula	57

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
Chương trình đào tạo Đại học ngành Công nghệ kỹ thuật Vật liệu xây dựng	Construction Materials Engineering and Technology (CMET)	ASIIN	None	03
Chương trình đào tạo Đại học ngành Kỹ thuật xây dựng công trình thủy	Hydraulic Engineering (HE)	ASIIN	None	03
Chương trình đào tạo thạc sĩ ngành Kỹ thuật xây dựng công trình thủy	Hydraulic Engineering (HE)	ASIIN	None	03
<p>Date of the contract: 17.02.2022</p> <p>Submission of the final version of the self-assessment report: 14.02.2023</p> <p>Date of the onsite visit: 18.-19.05.2023</p> <p>at: The University of Danang – University of Science and Technology, Campus Danang, Faculty of Water Resources Engineering and Faculty of Road and Bridge Engineering.</p>				
<p>Expert panel:</p> <p>Prof. Dr.-Ing. Johannes Weinig, Bielefeld University of Applied Sciences</p> <p>Prof. Dr.-Ing. Elfriede Ott, Ostfalia University of Applied Sciences</p> <p>Dr Dai Nhat Vo, Ho Chi Minh City University of Technology</p> <p>Dr Do Hong Vinh, Institute for Pump and Water Resources Machines, Vietnam Academy for Water Resources</p> <p>Van Thanh Nguyen, student at Hanoi University of Science and Technology</p>				
<p>Representative of the ASIIN headquarter: Christian Daniels</p>				

¹ ASIIN Seal for degree programmes.

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

Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of December 10, 2015 Subject-Specific Criteria of Technical Committee 03 – Civil Engineering, Geodesy and Architecture as of September 28, 2012	

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF ³	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Construction Materials Engineering and Technology (CMET)	Cử nhân Công nghệ kỹ thuật vật liệu xây dựng / Bachelor of Construction Materials Engineering and Technology	- Construction materials in civil Engineering - Production Technology of Construction materials	Level 6	Full time	-	4 years / 8 semesters	130 Credits	2007, annually in fall
Hydraulic Engineering (HE)	Cử nhân Kỹ thuật Xây dựng công trình thủy / Bachelor of Hydraulic Engineering	Hydraulic construction, water resources engineering,	Level 6	Full time	-	4 years / 8 semesters	130 Credits	1976, annually in fall
Hydraulic Engineering (HE)	Thạc sĩ Kỹ thuật Xây dựng công trình thủy / Master of Hydraulic Engineering	Hydraulic construction, water resources engineering,	Level 7	Full time	-	2 years / 4 semesters	60 Credits	1995, twice per year in spring / fall

For the Bachelor's degree programme **Construction Materials Engineering and Technology (CMET)**, the University's Faculty of Road and Bridge Engineering has presented the following profile in the programme handbook:

„ 1. General Objectives

The general objectives of the training program in construction Materials Engineering and Technology are to train learners with political, ethical, knowledge, health; the ability to lifelong learning; the ability to be creative; have professional practice skills, research capacity, ability to effectively apply professional knowledge and advances in science and technology in construction materials engineering technology; have professional responsibility and sense of service to the community, meet development requirements in the field of technology and construction materials,

³ EQF = The European Qualifications Framework for lifelong learning

serve the needs of socio-economic development, ensure national defense and security and international integration.

2. Program Objectives (POs)

Students who graduated with Bachelor's degree in Construction Materials Engineering and Technology major in University of Science and Technology - The University of Danang:

1. Have comprehensive professional knowledge; master the principles and rules of nature and society;
2. Have basic practical skills in construction materials engineering technology;
3. Have ability to work independently and creatively; capable of teamwork; capable of solving technical and technological problems in the field of construction materials engineering technology.“

For the Bachelor's degree programme **Hydraulic Engineering (HE)**, the University's Faculty of Water Resources Engineering has presented the following profile in the programme handbook:

„Program Objectives

Graduates of the Hydraulic Engineering Program will be competent students who:

- Have professional knowledge of hydraulic construction, water resource management, and exploitation; master the principles and rules of nature- society;
- Have basic practical skills in the fields of hydraulic construction, water resource management, and exploitation;
- Have the ability to work independently and creatively; be capable of teamwork; be capable of solving technical and technological problems in the fields of hydraulic construction, water resource management, and exploitation;

Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

- An ability to apply knowledge of Mathematics, basic science, technology, and engineering in analysis, design, construction, evaluation, and research on problems in the field of hydraulic construction, water resource management, and exploitation;
- An ability for critical thinking, creative thinking, entrepreneurial thinking; have ethics and professional responsibility;
- An ability to work in a team, effectively communicate, and use foreign languages in professional fields;
- A foreign language proficiency (TOEIC 450 or equivalent); have basic skills in using Information Technology (IT) as prescribed in Circular No. 03/2014/TT- BTTTT

- An ability to generate ideas and plan, and manage activities in the fields of hydraulic construction, water resource management, and exploitation that are appropriate to the context of business, society, and the environment.“

For the research-oriented profile of the consecutive Master’s degree programme **Hydraulic Engineering (HE)**, the Faculty has presented the following profile in the programme handbook:

„Program Objectives

The Master's program in Hydraulic Engineering with research-oriented profiles aims to train learners that will have:

1. Extensive professional knowledge in the field of hydraulic engineering;
2. Skills in scientific research in the field of hydraulic engineering;
3. An ability to conduct independent and creative research; an ability to critique, analyze, synthesize, and evaluate to come up with scientific solutions.

Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

1. An ability to synthesize advanced and in-depth knowledge to address complex issues in the field of hydraulic engineering and other related industries, such as management and exploitation of water resources and construction, to meet health, safety, environmental standards, and socio-economic development requirements;
2. Skills to research and develop innovative technologies; an ability to adapt, self-direct, and guide others in research activities
3. An ability to work in a team and transfer knowledge in a specialized research field;
4. Skills in organizing and carrying out research projects; an ability to effectively manage professional activities;
5. A language proficiency level of 4 according to the 6-level foreign language competency framework for Vietnam or equivalent. “

For the practice-oriented profile of the consecutive Master’s degree programme **Hydraulic Engineering (HE)**, the Faculty has presented the following profile in the programme handbook:

„Program Objectives

The Master's program in Hydraulic Engineering with practice-oriented profiles aims to train learners that will have :

1. Professional knowledge in the field of hydraulic Engineering;
2. Practical skills in professional activities;

3. An ability to create, critique, analyze, synthesize, and evaluate to come up with effective solutions.

Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

1. An ability to synthesize in-depth knowledge to address complex issues in the field of hydraulic engineering and other related industries, such as management and exploitation of water resources and construction, to meet health, safety, environmental standards, and socio-economic development requirements;
2. An ability to use technology creatively; be adaptable and self- directed in professional activities;
3. An ability to work in a team and transfer knowledge in a specialized field;
4. An ability to manage and organize professional activities effectively;
5. A language proficiency level of 4 according to the 6-level foreign language competency framework for Vietnam or equivalent.“

C Expert Report for the ASIIN Seal

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
- University Website ([here](#), [here](#), [here](#))
- Program Specification, Ba Construction Materials Engineering and Technology, DUT, 2020
- Program Specification, Ba Hydraulic Engineering, DUT, 2020
- Program Specification, Ma Hydraulic Engineering, DUT, 2022
- Student Handbook, Ba/Ma Hydraulic Engineering, DUT, 2022
- Student Handbook, Ba Construction Materials Engineering and Technology, DUT, 2022
- Objective Module Matrices, all programmes, DUT, 2022/2023
- *Decision No. 1948/QĐ-ĐHBK*, Ba Construction Materials Engineering and Technology, DUT, 07 September 2020
- *Decision No. 1947/QĐ-ĐHBK*, Ba Hydraulic Engineering, DUT, 07 September 2020
- *Decision No. 2161/QĐ-ĐHBK*, Ma Hydraulic Engineering, DUT, 16 June 2022,
- *Report On Results Collecting the Feedback from Employers and Alumni and Improvement Plan*, Academic Year 2018-2019, Ba Construction Materials Engineering And Technology, DUT
- *Decision On Approval for Vietnamese Qualifications Framework*, The Prime Minister, 18 October 2016
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Learning objectives (LO) are defined clearly for all study courses under review on both a programme (PLOs) and module (i.e. “course”, CLOs) level. They are found to be consistent across the abovementioned evidence.

On the programme level, the (P)LOs are delineated and made accessible publicly on the respective Faculties’ websites as well as through the provided *Program Specification* documents. On the course level, the (C)LO are defined clearly in the respective module handbooks, in which they are moreover linked to the PLOs. A clear overview of linkages between modules and PLOs is moreover established in the objective module matrices provided for all programmes under scrutiny. The programme coordinators moreover highlight the programmes’ adherence to the Vietnamese National Qualification Framework. In connection to this, lecturers explain during the audit that, in foundational courses, LOs are primarily determined through corresponding regulations, whereas advanced and specialised courses can be designed by the University itself.

Upon further inquiry by the experts, the programme coordinators explain that the original Faculty of Civil Engineering was divided into several specialised ones to cater to labour market demands. Consequently, fundamental engineering modules are often shared between Faculties, with students opting for more specialised courses specific to their own Faculty later in their studies.

Confronted by the experts with the question of how concerns of sustainability and low-carbon emissions find consideration in the study programmes under review, the programme representatives for the Ba/Ma HE from the Faculty of Water Resources Engineering highlight that, in view of Vietnam’s high vulnerability to the effects of climate change, such considerations play a significant role, as is mirrored in relevant courses within the curriculum. On their part, representatives for the Ba CMET from the Faculty of Road and Bridge Engineering emphasise the growing role of green and sustainable construction materials, including insulation and carbon-conscious substances, in their teaching.

During the audit, both the respective programme coordinators as well as students and the industry representatives present confirm that stakeholders are involved in the development of study programmes at the two involved Faculties via periodic feedback surveys. They corroborate that emerging recommendations for minor modifications are considered and implemented regularly to align programmes with labour market needs. Envisaged major changes, however, need to be submitted to the pertinent University office for approval.

Students from both the Bachelor’s programmes in Construction Materials Engineering and Technology (CMET) as well as in Hydraulic Engineering (HE) affirm their confidence to be

well qualified for the job market following their study completion, citing their programmes' relevance to Vietnam's economic development and resilience to natural disasters as reasons. On their part, students from the Master's in Hydraulic Engineering (HE) especially commend the existence of both research and practice-oriented streams within their Master's programme. Overall, students attest to the University's perceived good reputation and learning environment, as well as the accessibility of lecturers beyond the classroom.

On their part, industry representatives affirm long-standing cooperation with Da Nang University of Technology (DUT) and employment of its graduates, highlighting that DUT is the only university in central Vietnam offering a dedicated programme in Hydraulic Engineering, and expressing satisfaction with the graduates' overall quality. In the same vein, they highlight industry-university links through participation in Master's defence committees, provision of teaching resources, co-supervision of theses, the aforementioned feedback mechanisms, as well as the offering of scholarships to high-performing students.

As concerns, the industry representatives express that the annual number of graduates is not sufficient to cover demand, and that more proficient foreign language skills amongst graduates would be desirable.

Following the above and in view of the provided student and industry feedback, the experts have no doubts that the imparted qualifications profile allows the students to take up employment corresponding to their qualifications.

All in all, the expert judge that the outlined PLOs and CLOs are adequate for the respectively intended levels of academic qualification and satisfy the subject-specific criteria for (SSC) determined by ASIIN's Technical Committee 03 sufficiently. However, the experts agree that the University should strengthen efforts to enhance students' English language proficiency.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#))
- Program Specifications, all programmes, DUT
- *Regulations Classification of Statistics Of Training Disciplines Of University Education*, Circular 09/2022/TT-BGDĐT, Ministry Of Education And Training, 06 June 2022
- *Training Program Objectives and Learning Outcomes Of Construction Materials Engineering And Technology*, Decision No.: 1948/QĐ-ĐHĐN, DUT, 7 September 2020

- *Promulgating Level-Four Classification of Education At Bachelor's Degree Level*, Decision No.: 4005/QĐ-ĐHĐN, DUT, 29 November 2017
- *Promulgating the Classification of Higher Education training programs*, Decision No. 4277 /QĐ-ĐHBK, DUT, 08 November 2022

Preliminary assessment and analysis of the experts:

With regard to the names of the given study programmes, the expert group shares initial concerns that the title “Hydraulic Engineering” appears to be misleading, and that a titling as “Hydraulic *Construction* Engineering” would be more fitting.

Supported by the University’s provided self-documentation, the programme responsables however highlight that titles of educational programmes in Vietnam are tightly regulated by the government, and that the University is hence limited in its freedom to rename the programme. The suggested terminology would not be permitted by the Ministry for Education and Training.

During the experts’ exchanges with industry representatives, the latter also confirm that the programme titles are clear to them and correspond to existing job titles.

In view of the above, the auditors conclude that programme titles adequately reflect their intended aims and learning outcomes, and that the original Vietnamese names as well as their English translations are used consistently throughout the relevant documents.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#))
- Program Specifications, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Study Plans (Curricula), all programmes, DUT
- Objective Module Matrices, all programmes, DUT
- Student Survey Results, DUT
- *Regulations On Training at Undergraduate Level of University of Science And Technology*, Decision No.: 2244/QĐ-ĐHBK, DUT, 15 September 2021
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The curricula, structure and composition of the study programmes under review are presented in detail in the University's provided "Programme Specification", "Study Plan", as well as "Module Handbook" documents.

Ba Construction Materials Engineering and Technology / Ba Hydraulic Engineering

The overall structure of the Bachelor's programmes' curricula is presented by the University as follows:

Knowledge cluster	Total credits	Compulsive credits	Elective credits	Total ECTS
1. Maths and Natural Sciences	30	30	0	43.75
2. Core engineering fundamental knowledge	33.5	33.5	0	48.92
3. Disciplinary knowledge	23.5	21.5	2	33.68
4. Project, internship, and thesis	19	13	6	31.66
5. General knowledge	15	15	0	21.13
6. Supportive knowledge	9	9	0	12.75
Total	130	122	8	192

Curriculum Structure, Ba Hydraulic Engineering

Knowledge cluster	Total credits	Compulsive credits	Elective credits
1. Maths and Natural Sciences	30	30	0
2. Core engineering fundamental knowledge	30.5	30.5	0
3. Disciplinary knowledge	25	21	4
4. Project, internship, and thesis	18.5	12.5	6
5. General knowledge	15	15	0
6. Supportive knowledge	11	9	2
Total of credits	130	118	12

Curriculum Structure, Ba Construction Materials Engineering and Technology

Modules in the *Mathematics and Natural Sciences* section ensure essential competencies required for the Engineering-related subjects at hand, and are largely congruent between both programmes:

Examples: *Calculus 1+2, General Chemistry, Probability and Statistics, Physics 1+2, Linear Algebra, Applied Mathematics, Experimental Planning. Numerical Methods for Engineers.*

Modules in the *Core Engineering Fundamentals Knowledge* section comprise foundational engineering courses required, and are again largely congruent between both Bachelor's programmes:

Examples: *Engineering Drawing, Thermal Engineering, Engineering Mechanics, Structural Mechanics, Fluid Mechanics, Construction Machines, Soil Mechanics, Construction Materials, Reinforced Concrete Structures, Hydrology, Geodesy.*

The *Disciplinary Knowledge* section equips students with more specialised knowledge and skills required respectively for the B.Sc. CMET and B.Sc. HE programmes:

Examples (Ba CMET): *Applied Chemistry Engineering 1, Occupational Safety In Construction Materials Production, Thermal Equipments In The Production Of Construction Materials, Machinery For The Production Of Construction Materials, English For Construction, Materials Engineering, Technology Of Building Ceramic 1, Technology Of Concrete 1, Construction Materials, Testing & Inspections, Heat Insulating And Heat-Resistant Materials, Construction Economics.*

Examples (Ba HE): *Stabilization Of Hydraulic Structures Foundation, Application Of GIS In Civil Engineering, Water Resource Systems Modelling, Hydraulic Concrete, Water Quality Modeling, Flow Regulation For Reservoirs System, Urban Flooding Modelling, Water Resources Planning And Management, Sediment Transport, Groundwater Mechanics, Coastal Structures, Construction Economics, Advanced Finite Element Method In Flow, Integrated Watershed Management, Climate Change And Natural Disaster Management, BIM In Civil Engineering, AI In Water Resources Management,*

The *curriculum's Project, Internship, and Thesis* section consists of project- and practice-oriented components. Through these, the programmes seek to provide their students with practical experience and opportunities to apply their learning to real-world situations. The practice-oriented part includes field trips and internships, which aim to provide students with a hands-on understanding of construction processes on-site, as well as exposure to later possible company environments. Internship locations include on-campus workshops as well as off-campus sites such as companies, construction sites, and state management agencies. During these practical assignments, students are expected to learn how to operate equipment relevant to their fields under the guidance of an advisor.

Within the project-oriented part, students are required to complete a variety of project-based learning courses over the course of their studies. As their final study performance, students in the Ba CMET choose a *Graduation Project* from the fields of binders, ceramics, or concrete, while students in the Ba HE are required to furnish a *Graduate Thesis*.

Modules within the *General Knowledge* section aim to educate students about law, environment, history, politics, and philosophy; and are seen to serve the students' personal development:

Examples: *Marxism, Leninism's Philosophy, General Law, Political Economics of Marxism Leninism, History Of the Vietnamese Communist Party, General Environment, Scientific Socialism, Ho Chi Minh's Ideology.*

The *Supportive Knowledge* section, eventually, aims to provide opportunities to acquire additional engineering-related and foreign language skills:

Examples: *Introduction to Construction Materials Engineering and Technology, English A2.1, English A2.2, Technology business Start-up, Economics for Business.*

In line with the above, the *Disciplinary Knowledge, Project, Internship, and Thesis* as well as the *Supportive Knowledge* sections contain limited elective options. In addition to their curriculum, students are moreover required to complete courses in Physical Education, National Defense Security Education, English, as well as Basic Information Technology Skills before being able to graduate.

Ma Hydraulic Engineering

The overall structure of the Master's programme in its research- and practice-oriented streams is presented by the University as follows:

<i>1. Research-oriented training program</i>			
Knowledge cluster	Total credits	Compulsive credits	Elective credits
1. General and supportive knowledge	4	4	0
2. Disciplinary knowledge	29	4	25
3. Research projects/topics	12	12	0
4. Graduate thesis	15	15	0
Total	60		
<i>2. Practice-oriented training program</i>			
Khối kiến thức	Total credits	Compulsive credits	Elective credits
1. General and supportive knowledge	4	4	0
2. Disciplinary knowledge	41	25	16
3. Internship	6	6	0
4. Graduate project	9	9	0
Total	60		

Curriculum Structure, Ma Hydraulic Engineering

Within the Master's, the *General and Supportive Knowledge* section encompasses the subjects *Methodology of Scientific Research* and *Project Management*. This section is common to both the research- as well as practice-oriented stream.

The *Disciplinary Knowledge* section is comprised of modules that seek to endow students with advanced specialized knowledge appropriate on a Master's level:

Examples: *Stabilization Of Hydraulic Structures Foundation, Advanced Hydrology, Advanced Computational Hydraulics, Advanced Hydraulic Structure, Advanced River Training, Application Of GIS In Civil Engineering, Advanced Urban Water Supply And Drainage, Advanced Construction Technology Of Concrete And Rock Works, Application Of Hydrological Modeling, Application Of Hydraulic Modeling, Water Quality Modeling, Urban Flooding Modelling, Applied Probability And Statistics, AI In Water Resources Management.*

The composition of this section and the further curriculum varies significantly depending on the students' chosen research- or practice-oriented stream:

In the practice-oriented track, the *Disciplinary Knowledge* section takes up about two-thirds of students' curriculum; and is followed by an *Internship* and *Graduate Project*, accounting for about 25% of the credits to be obtained.

In contrast, students in the research-oriented track, courses in the *Disciplinary Knowledge* section only account for about 50% of the curriculum, however allowing for a greater degree of electives than in the practice-oriented track. In line with their chosen study orientation, students in the research stream then proceed to spend the remaining 45% of their curriculum on the *Research Projects/Topics* section as well as the *Graduate Thesis*.

Against the background of the above, the experts pursued various further topics during their exchanges with all stakeholders in the course of the audit:

Asked about the significant time for self-study allocated in the module handbook, the programme coordinators explain that lecturers are expected to monitor the students' time required to complete assignments and achievement of the intended course learning outcomes.

In the context of the mandatory internships integrated into the Bachelor's curricula, the programme responsables state that students are assisted in securing these through tapping into a network of employers and alumni. The consulted students confirm this, repeatedly highlighting that the integration of practical components within the curricula contributes to the programmes' attractiveness and should be expanded on, if possible.

All in all, the experts are content with the provided detailed documentation and further explanations provided during the audit, and judge that the presented curricula are well-illustrated and suitable to impart the intended learning outcomes of the given degrees.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#))
- Decision: *Regarding the Establishment Of The Admission Council And The Admissions Secretariat Of The University Of Science And Technology*, No.: 165 /QĐ-ĐHBK, DUT, 19 January 2022
- Circular: *Enrolment And Training For Master Degree*, No. 23/2021/TT-BGDĐT, Ministry Of Education And Training, 30 August 2021
- Circular: *Promulgating the Regulations On Universal Recruitment, College Recruitment In Early Education*, No: 08/2022/TT-BGDĐT, Ministry Of Education And Training, 6 June 2022
- Regulation: *On master's degree admission by consideration method*, issued together with Decision No 1609 /QĐ-ĐHBK, DUT, May 2022
- *Annex D: D. Requirement for Learners Or Enrollment Students 2022*, DUT
- Announcement: *Master's Degree Training Enrollment phase 1 in 2022 - Course 44*, No.: .../TB-ĐHBK, DUT, 30 August 2022
- Enrollment Project In 2022 (Master's Degree), DUT
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Danang University of Science and Technology (DUT) is a member university of the University of Danang (UD). Next to DUT, the UD consists of five other member universities, namely the (Danang) University of Economics, (Danang) University of Science and Education, (Danang) University of Foreign Language Studies, (Danang) University of Technology and Education, as well as the Vietnam-Korea University of Information and Communication Technology.

The UD annually handles the admission process and operates as the centre for all admissions across its member universities, institutions, or units. Each year, the UD assigns and delegates an admission quota to all its member institutions based on societal needs

and available resources, and subsequently reports to the Ministry of Education and Training. This admission quota for each member university is based on three primary factors: The student-lecturer ratio, the ratio of the gross floor area of all university buildings to the number of students, and lastly, the societal demand for human resources for each programme. The admissions council is set up annually with DUT's approval and disbands once the admission task has been fulfilled. This council is responsible for planning, managing, and overseeing the admissions process at DUT.

Admissions processes for undergraduate programmes are held annually before September. DUT publishes detailed information about the admissions process through its website, faculty and division pages, brochures, flyers, as well as through online admission counselling sessions for high-school students. During the latter, candidates are also informed about scholarships and post-graduation job opportunities.

High school graduates can apply to degree programmes offered by the two Faculties at the Da Nang University of Technology (DUT) under review through one of six available admission methods. The admission council determines and approves the admission conditions for each admission method. These methods include

- Direct admission in accordance with the regulations of the Ministry of Education and Training for candidates with notable e.g. civil, educational, or military achievements, with disabilities or who come from disadvantaged backgrounds;
- Admission based on the University's unique procedure for candidates with excellent high school performance and student competitions;
- Admission based on scores from the National high school graduation examination and additional criteria outlined annually by DUT;
- Admission based on scores from the National Ho Chi Minh City University competency assessment test,
- Admission based on scores from the Hanoi University of Science and Technology thinking assessment test, and
- Admission based on high school study results or transcript reviews.

To assist applicants from economically disadvantaged families, ethnic minorities, individuals with disabilities, and applicants from different regions, priority points are granted during the application process. Foreign applicants can secure direct admission into DUT's degree programmes if their competence in knowledge and Vietnamese language proficiency meets the criteria set by the Ministry of Education and Training.

The admission process for the Master's degree in Hydraulic Engineering takes place twice a year. On the Master's level, candidates must meet one of the following conditions: they must have a regular undergraduate degree in a discipline corresponding to the intended Master's, or they must have a full-time undergraduate degree in a field related to the intended Master's and have studied additional subjects as prescribed. The admission requirements for the research and practice paths of the Master's degree differ slightly, with research program applicants needing a university degree with a good grade or higher or having scientific publications related to their field of research.

Admission criteria for international students are implemented according to laws and regulations managing foreign students. These students are required to have a Vietnamese language certificate issued by a competent Vietnamese educational institution.

From the documentation made available, the experts observe that both Bachelor's programmes appear to have been unable to fulfil their target student quotas for most of the past five years. For the Ba HE, there was indeed no intake in 2019 at all. Upon the experts' inquiry concerning this during the audit, the programme responsables outline different reasons for this, citing an overall shortage of interested candidates, a temporary significant increase in tuition fees, as well as the prominence of other study subjects such as computer science as examples. As per the programme coordinators' explanations, a decrease in tuition fees was decided upon in the following, and marketing measures regarding the mentioned study programmes and future job opportunities for graduates were increased.

Aside from the above, however, students confirm the information campaigns outlined in the Faculties' self-assessment report and the clarity of admission procedures.

In summary, the experts gain the impression that the admission requirements and procedures are clear and binding. They are content with the information and explanations provided, and note that difficulties in student recruitment in engineering-related subjects are a known phenomenon also in the German context.

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

English language proficiency

The experts thank the University for their provided clarifications on the Faculties' efforts to foster English language skills amongst their students. The experts encourage the Faculties to continue these efforts going forward, but to aim beyond the outlined A2 level for at least a B1 level, if not B2. In a similar vein, the experts recommend the Faculties' to offer more

specialised subjects in English, and to consider increasing the current graduation threshold of 450 points on the TOEIC exam.

Promotion of Study Programmes

The experts welcome the Faculties' promotional efforts to attract more graduates to enter the Engineering profession, and encourage them to continue these going forward in view of the strong demand for engineers expressed from various sides during the audit.

Elective Offers and Internship

In view of corresponding comments by students during the audit, the experts moreover suggest to make space for more (subject-related) contents within the curriculum, to create additional (elective) offers for students to develop their soft skills, as well as to consider extending the integrated practical components (internships) by decreasing the number of General Knowledge section subjects.

Measurement of Learning Objectives

Upon final review and in view of the provided programme learning outcomes as well as module-objective matrices, the experts suggest the Faculties to explore how the fulfilment of the defined programme learning outcomes can be monitored in a way that will permit evaluation of the programmes' performance over time.

Considering the above and in light of their preliminary assessment, the experts nevertheless see this criterion as fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules
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Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#))
- Programme Specifications, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Study Plans (Curricula), all programmes, DUT
- Objective Module Matrices, all programmes, DUT

- *Decision On Approval For Vietnamese Qualifications Framework*, The Prime Minister, 18 October 2016
- *Regulations On Training At Undergraduate Level of University Of Science And Technology*, Decision No.: 2244/QĐ-DHBK, DUT, 15 September 2021
- *About the promulgation of "Regulations on graduation projects of university-level training programs"*, No.: 209/QĐ-DHBK, DUT, 06 March 2017
- *DECISION: Approving The Project Of The Head Lecturers, Academic Advisors And Support Consultants For Students Of University Of Science And Technology*, No.: 1216/QĐ-DHBK, DUT, 22 April 2022
- *Regulations On Recognizing The Academic Performance And Credit Transfer Of The University Of Science And Technology*, Decision No.: 3240 /QĐ-DHBK, DUT, 19 August 2022
- *Meeting Minutes: The Scientific And Educational Council (Expand) University Of Science And Technology Regarding to approving the content of amending and updating the Curriculum of the bachelor's degree program*, DUT, 14 April 2022
- *Decision: On The Establishment Of The Team To Review And Improve The Training Program*, No. 1391/QĐ-DHBK, DUT, 30 June 2020
- *Graduation internship Syllabus: Construction materials Engineering and Technology Major*, Faculty of Road and Bridge Engineering, DUT (26 June 2022)
- *Decision: Regarding The Implementation Of Cognitive Internship Of The Students*, No.: 1528/QĐ-DHBK, DUT, 10 June 2022
- *Decision: Regarding The Implementation Of Graduation Internship Of The Students*, No.: 2190/QĐ-DHBK, DUT, 17 June 2022
- Appendix: Report on graduate evaluation survey; Construction materials engineering and Technology program (2017), DUT
- Appendix: Report on graduate evaluation survey; Program: Construction materials Engineering and Technology (2018), DUT
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

As detailed in Chapter 1.3 and the aforementioned evidence, the programmes under review are structured transparently into sensible curricular sections and modules. They do so following the Vietnamese National Qualification Framework and DUT's "Curriculum Development Guidelines".

The undergraduate programmes in CMET and HE each span a standard study period of four years. An academic year is structured into two main semesters, with each semester encompassing fifteen weeks of study and four weeks allocated for assessments. The Master's in HE spans four semesters, equating to a two-year standard period of study.

The integrated elective options as well as practical elements allow students to customise their study journey and to increase their employability through gathering real-life experience whilst still in their studies.

In regard to student mobility, the expert group learns that mobility opportunities focus on intra-Vietnamese exchanges as well as short-term student mobility through exchange programmes with Japan and Korea. So far, only about 1% of the University's student body pursue temporary studies abroad each year. At the same time, student mobility within Vietnam is currently being strengthened through a Memorandum of Understanding (MoU) that will also govern the recognition of credits obtained at other Vietnamese universities during such exchanges. On their part, the students confirm their interest in such intra-Vietnamese mobility during their exchange with the experts, pointing to their interest in experiencing (study) cultures in other regions of the country.

All in all, the experts assess that the sequence and framing of the presented modules as well as their content service to ensure that the intended learning programme outcomes at the respective qualification levels can be reached. Moreover, the experts commend the integration of various compulsory internships as well as project-based learning within the curricula. At the same time, they attest that rules for recognising achievements and competencies acquired outside the higher education institution exist, as is exemplified through the MoU mentioned in 1.3 and confirmed during discussion with the students.

Criterion 2.2 Workload and credits

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#))
- Program Specifications, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Study Plans (Curricula), all programmes, DUT
- *Regulations On Training At Undergraduate Level of University Of Science And Technology*, Decision No.: 2244/QĐ-ĐHKB, DUT, 15 September 2021

- *Instruction: Converting credit equivalents of University of Science and Technology – the University of Danang to the European Credit Transfer and Accumulation System (ECTS)*, No.: 4017/HD-ĐHBK, DUT, 24 October 2022
- Student and graduate survey forms and results, DUT
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The Bachelor's programmes in Construction Material Engineering Technology (CMET) and Hydraulic Engineering (HE) each account for a total of 130 credits, the Master's programme in Hydraulic Engineering accounts for 60 credits.

As per the applicable regulations, one credit at DUT equates to 50 hours of workload; encompassing attendance in lectures, self-study, experiential learning, and assessments.

One semester typically encompasses 15 course weeks. A typical module consists of 2-3 Vietnamese Credits. Each classroom period lasts for 50 minutes; self-study is measured in hours of 60 minutes.

One credit of 50 hours of workload can be obtained through varying compositions of in-class attendance, self-study, practical or project work; depending on the course type. The workload calculation presented by the University is depicted in the following table:

Course type	In-class periods (one period =50 minutes)	Self-study hours (one hour = 60 minutes)	Total study hours (one hour = 60 minutes)
Theoretical lecture	15	30	42.5
Practice, experiment or discussion	30	30	55
Internship	-	-	50
Project, graduation project	-	-	50

Taking the European Credit Transfer System (ECTS) with one ECTS credit equalling 30 hours of work as comparison, one credit at Da Nang University of Technology (DUT) is equivalent to $(42.5/30 =)$ 1.42 ECTS credits for theoretical lectures, $(55/30 =)$ 1.83 ECTS credits for practical applications and experiments, and $(50/30 =)$ 1.67 ECTS credits for internships and projects.

DUT has rules regarding the maximum and minimum credits students can undertake each semester. This allows students to select and plan their study regime in order to complete

their degree programme in a timely manner. Students who fail to accrue sufficient credits within each semester will face expulsion.

In view of the above and the provided evidence, the experts recognise that a transparent credit point system is established that accounts for the workload required from students, encompassing both attendance-based learning and self-study. This includes all compulsory subject-related elements of the degree.

Criterion 2.3 Teaching methodology

Evidence:

- Self-Assessment Report
- Program Specifications, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Study Plans (Curricula), all programmes, DUT
- *Vision, Mission, Educational Philosophy And Core Values Of University Of Science & Technology - The University Of Danang 2020*, Decision No. 1803/QĐ-ĐHKB, DUT, 27 July 2020
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Teaching staff at DUT apply various teaching and learning methods (TLMs), which are outlined in the module handbooks and linked narrowly to the respective course learning outcomes:

No	TLM Code	Teaching and Learning Methods (TLM)	TLM group	CLO1	CLO2	CLO3	CLO4
1	TLM1	Explicit Teaching	1	X	x	x	x
2	TLM2	Lecture	1	X	x	x	x
3	TLM3	Guest lecture	1				
4	TLM4	Problem Solving	2	X			
5	TLM5	Brainstorming	2				
6	TLM6	Case Study	2	X	x	x	x

7	TLM7	Roleplay	2				
8	TLM8	Game	2				
9	TLM9	Field Trip	2				
10	TLM10	Debates	3				
11	TLM11	Discussion	3	X	x	x	x
12	TLM12	Teamwork Learning	3				
13	TLM13	Inquiry	4	X	x	x	x
14	TLM14	Research Project	4				
15	TLM15	TBA	5				
16	TLM16	Work Assignment	6	X	x	x	x
17	TLM17	Other	7				

Example of Teaching Learning Methods (TLM) / Course Learning Outcomes (CLO) matrix from Ba Hydraulic Engineering

In the course of the experts' exchanges with teaching staff from the study programmes under review, the lecturers particularly emphasised the role of experiential (internships) and project-based learning in the curriculum in the context of student-centred learning as well as the University's mission and philosophy. Moreover, they pointed to the usage of problem-oriented teaching and learning, stating that major real-life events, such as the 2020 Central Vietnam floods affecting Danang, are taken as case studies to impart understanding.

As the primary measure of learning success, the teaching staff see exam results and their distribution.

In summary, the expert group considers the wide range of teaching methods and instruments applied to be suitable to support the students in achieving the intended learning outcomes. In addition, they confirm that the study concept of all three programmes comprises a variety of teaching and learning forms as well as practical parts that are adapted to the respective subject culture. Finally, they attest that the imparting of academic research skills is sufficiently ensured.

Criterion 2.4 Support and assistance

Evidence:

- Self-Assessment Report

- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Da Nang University of Technology (DUT) offers a comprehensive range of student services from enrollment to graduation, involving its Department of Student Affairs, Faculty members, student unions, and academic supervisors.

Scholarships are awarded to high-performing students by DUT's Academic Affairs Office as an incentive and financial aid. The scholarship policy is widely communicated to students through various channels. Furthermore, financial assistance is available to students facing financial difficulties through tuition waivers and extensions on tuition payments.

Students have access to student accommodation, sports facilities and well as medical and psychological care. DUT moreover supports students' engagement in various activities through the establishment of clubs that cater to diverse interests, ranging from culture and art to sports, science, technology, and start-ups. Students are also encouraged to participate in social initiatives like green campaigns, blood donations, charity work in disadvantaged areas, and visits to underprivileged children.

The Center for Student Support and Business Relations (CSSBC) facilitates the link between students and businesses by providing career counselling and job opportunities.

During their exchange with the auditor group, students confirm the availability of financial assistance, including scholarships made available offered by the university based on students' grade point average (GPA) as well as such offered by industries based on specific criteria.

Overall, students confirmed that tuition fees for the present programmes are overall affordable, and can prospectively be paid back within three to five years upon graduation. About 25% of the students present during the discussion were first-generation students.

In closing, the experts conclude that sufficient resources are available to provide individual assistance, advice and support for all students. They judge that the support systems help students to achieve the intended learning outcomes and to complete their studies successfully and within the expected study duration.

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

Student Mobility

The experts commend the University's efforts to foster academic mobilities of its students, and encourage to continue these going forward on both a national and international level. In the absence of further comments or relevant additional evidences from the University, the experts confirm their above preliminary assessment. In conclusion, the experts see this criterion as fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation
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Evidence:

- Self-Assessment Report
- Module Handbooks, all programmes, DUT
- Program Specifications, all programmes, DUT
- *Notice: On the plan of final exam, the organization of preparing and managing the final exam questions and the review plan for the second semester of the academic year 2021-2022,*
- *Code Of Academic Integrity*, issued together with Decision No. 29/QĐ-ĐHKB, DUT, 03 January 2017
- *Regulations On Evaluation Of Academic Performance Of Undergraduate Students, Graduate Students (...)*, issued together with Decision No. 1980/QĐ-ĐHKB, DUT, 18 July 2019
- *Regulations On Training At Undergraduate Level of University Of Science And Technology*, Decision No.: 2244/QĐ-ĐHKB, DUT, 15 September 2021
- *Decision: Regarding The Implementation Of Cognitive Internship Of The Students*, No.: 1528/QĐ-ĐHKB, DUT, 10 June 2022
- *Decision: Regarding The Implementation Of Graduation Internship Of The Students*, No.: 2190/QĐ-ĐHKB, DUT, 17 June 2022
- *About the promulgation of "Regulations on graduation projects of university-level training programs"*, No.: 209/QĐ-DHKB, DUT, 06 March 2017
- Course Evaluation Form, DUT
- Alumni Survey On Program Evaluation, DUT
- Survey Form On Graduate Quality And Educational Program For Employer, DUT
- Programme Evaluation Form For Senior Students, DUT

- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Assessment methods at DUT include attendance, assignments, quizzes, midterm exams, and final exams; the latter consisting of multiple choice assessments, calculations, essays, question and answers, report writing, or a combination of these.

At the onset of the academic year, both lecturers and students are informed about the teaching schedule and exam dates of the study plan. In the first lesson, the teaching staff ensures that students receive a syllabus. Students who miss out on more than 20% of the course may be declined participation in the final exam. Internships are assessed through a committee of lecturers based on students' provided internship reports and a presentation and Q&A to be held by the students, as well as students' ability to work in groups.

Grades are initially given on a 10-point scale, then translated into a 4-point scale and a letter grade. Students failing a course must retake the course, students who have successfully passed a course may re-enrol to improve their grades. To ensure that students observe standards of academic writing, iThenticate plagiarism checking software is utilised at the Faculties.

As their final study performance, students have the option to structure their graduation thesis around either a design project, a scientific research project, or a combination of the two. Students undertake these graduation projects within the faculty under the supervision of lecturers. On the Master's level, students may either write their thesis within the faculty or in partnership with the industry. Supervision of theses is accordingly conducted through academic and industry supervisors.

The University's Department of Educational Testing and Quality Assurance conducts regular surveys on students', graduating students' and alumni's perceived satisfaction and learning achievement on a course and programme level. The Department relays the outcomes of these surveys back to the Faculties for further discussion.

During their inspection of various sample examinations and theses during the audit, the experts assess that the presented exams cover a range of skills. They commend the additional formative mid-term assessments and found the reviewed scientific projects and presented Master's theses to be of good quality.

In summary, the experts judge that the forms of examinations employed are suitable to measure students' achievement, and that regular feedback on learning attainment is ensured. The final study performances and the respective qualification levels are appropriate. Assessment methods are defined in writing for each module in the individual

module handbooks and communicated at the appropriate time. Rules governing re-sits, disability allowances, illness, and other considerations have been established. Following the above, the expert group sees this criterion as fulfilled.

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

In the absence of further comments or relevant additional evidences from the University, the experts confirm their above preliminary assessment.

In conclusion, the experts see this criterion as fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self-Assessment Reports
- Staff Handbooks, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Program Specifications, all programmes, DUT
- *Development Strategy Of University Of Science And Technology - The University Of Danang To 2025 With A Vision Toward 2035*, issued together with Decision No. 1838/QD-ĐHBK, DUT, 27 July 2021
- *Regulations On Recruitment, Employment And Management Of Public Employees Of The University Of Danang*, issued together with Decision No. 551/QD-ĐHDN, DUT, 28 January 2022
- *Regulations On working regime of lecturers of University of Science and Technology*, issued together with Decision No.: 3092/QD-ĐHBK, DUT, 8 August 2022
- *Regulations About And managing guest lectures of University of Science and Technology*, issued according to Decision No. 1562 /QD-ĐHBK, DUT, 6 February 2021
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Within the provided documentation, staff members at the Faculty of Water Resources Engineering and the Faculty of Road and Bridge Engineering are categorised into full professors, associate professors, PhDs, as well as Master's holders.

The undergraduate CMET programme is staffed by 11 dedicated full-time lecturers, while the HE programmes, encompassing both undergraduate and postgraduate studies, are staffed by 26 lecturers. Besides graduates from Vietnamese higher education institutions, numerous lecturers hold degrees obtained abroad in France, Japan, or Korea, amongst others.

Administrative unit and supporting staff contributing to the facilitation of the given study programmes include a comprehensive range of services ranging from infrastructural departments, the Department of Student Affairs; the Department of Science, Technology, and International Cooperation, library staff to laboratory technicians for Building Materials and hydraulic engineering.

Guest lecturers invited to teach in the aforementioned programmes must fulfil the requisite academic standards. A Master's degree is the minimum requirement for those teaching at the undergraduate level, whereas a doctorate is required for lecturing at the postgraduate levels, both Master's and doctoral. However, the University generally prefers visiting lecturers who hold a doctoral degree.

In summary, the auditors confirm that the composition and qualifications of the teaching staff presented are suitable and sufficient to facilitate the study programmes under review. Adequate staff resources are available to provide students with assistance and advice, as well as to perform administrative tasks.

Criterion 4.2 Staff development

Evidence:

- Self-Assessment Reports
- Staff Handbooks, all programmes, DUT
- *Promulgating The Project On Job Positions In 2022*, Decision No. 1415/QĐ-ĐHKB, DUT, 14 May 2021
- *Regulation: On Internal Expenditure of University of Science and Technology*, issued together with Decision No.: 3536/QĐ-ĐHKB, DUT 27 December 2021
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

DUT encourages its academic staff to enhance their professional qualifications through, amongst others, scholarships for postgraduate training in countries abroad. Accordingly, various staff members were supported to pursue further academic qualifications in the past years.

Moreover, DUT seeks to create opportunities for lecturers to partake in short-term training courses, teaching training, and quality assurance. New academic staff is required to complete compulsory teacher training.

During the audit, the experts discuss with members of the teaching staff about their obligations to do research and incentives to reach for higher levels of professorship. In response, the experts learn that teaching staff cannot solely be lecturers but are obliged to devote 30% of their time to research. In terms of their career progression, however, the present staff indicate that the financial benefits of aiming e.g. for full professorship are not in relation to the additional responsibility and workload.

All in all, the auditors confirm that DUT offers sufficient training opportunities for members of the teaching staff, but recommend further incentivisation of individual career progression in the future.

Criterion 4.3 Funds and equipment
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Evidence:

- Self-Assessment Reports
- University Website ([here](#), [here](#), [here](#))
- Visitation of participating institutes and laboratories during the audit
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

As of 2022, the Ministry of Education and Training designated DUT as being responsible for financing its regular expenditures. To ensure sufficient operational funds, DUT has developed a financial plan and has adjusted the tuition fees for the 2022-2023 academic year in compliance with the state's regulations for universities.

The primary funding sources of DUT consist of allocations from the state budget, income derived from non-commercial activities such as tuition fees, income generated from international training cooperation programmes, earnings from scientific research and

technology transfer, and revenue from the provision of services and the utilisation of facilities.

The collected revenue is primarily utilised for staff remuneration, investment in infrastructure, the facilitation of scientific research activities, and the provision of student scholarships.

During the audit, the experts find that both Faculties facilities and laboratories are adequate and contain everything necessary for the programme's objectives. Safety precautions appear to be suitable, including appropriate documentation of laboratory usage. As a possible, facultative improvement, the experts propose the acquisition of triaxial geotechnical testing equipment (three cells) and a falling cone plasticity testing device to enhance research efficiency and capacity.



With regard to library capacities, DUT is connected to the University of Danang's Academic Library Network, connecting ten libraries of UD's affiliated network. The general catalogue provides access to 200,000 titles, including books, serials, theses, scientific reports and more, in addition to digital and electronic databases. Additionally, the library website provides access to a range of online publishing databases, including Elsevier Science Direct and ProQuest. During the audit, students express satisfaction with the respective programmes' facilities as well as with the library capacities and available literature.

In view of the above, the experts judge funding for the facilitation of the programmes under review to be sufficiently secured, the physical facilities to be adequate, and library capacities to be sufficient. The criterion is hence judged to be fulfilled.

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

Incentivisation of Academic Career Progression

The experts welcome the additional regulations provided concerning the remuneration of academic staff, as well as the efforts DUT aims to undertake as an autonomous university to promote the professional advancement of its teaching staff going forward. In particular, the auditors encourage the Faculties to focus these efforts on higher levels of professorship, opportunities for academic staff to gain industry insights through short-term placements, as well as further measures to improve English language skills amongst staff.

Procurement of Additional Equipment

The experts thank the University for their additional elaborations concerning the procurement of further equipment to support research and teaching activities at the two Faculties and encourage them to invest in appropriate equipment in the future accordingly.

Considering the above and in light of their preliminary assessment, the experts see this criterion as fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#))
- Module Handbooks, all programmes, DUT

Preliminary assessment and analysis of the experts:

All in all, the module handbooks are found to be complete and to contain all relevant information. On a formal level, yet, the module handbooks should be reworked with regard to their formatting, occasionally missing or inconsistent course information, inconsistent labelling of equivalent courses, and information not translated into English. Moreover, it should be seen whether it is possible to provide them in a more condensed format.

With regard to the public accessibility of the module handbooks presented to the ASIIN experts, the experts find the following:

For the Ba and Ma HE, it seems that – despite the module handbooks having been uploaded to the Faculty of Water Resources Engineering’s website [here](#) and [here](#) – they seemingly cannot be found when browsing the respective programme’s pages.

As for the Ba CMET, the experts find that the module handbook is provided online here and thus publicly available. In line with the above, the experts conclude that the criterion is partially fulfilled.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Reports
- Sample Diploma for each degree programme
- Sample Diploma Supplement for each degree programme

Preliminary assessment and analysis of the experts:

The experts confirm that the students of all degree programmes under review are awarded suitable diploma certificates after graduation, and commend the issuance of provisional certificates until the final diploma are issued.

In regards to the Diploma Supplement, however, they find that the currently issued document effectively equates to a Transcript of Records. While “ASIIN Diploma Supplements” have been provided by the University in their self-documentation, the experts however perceive that these documents have been created for the purpose of the accreditation procedure, and are hence unclear as to whether these documents are factually issued to the graduates. The experts hence conclude that the University either needs to provide samples of actually issued Diploma Supplements, or needs to issue them going forward in alignment with the templates and standards within the European Higher Education Area ([here](#), [here](#), [here](#)).

Criterion 5.3 Relevant Rules

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#), [here](#))
- Program Specifications, all programmes, DUT
- Module Handbooks, all programmes, DUT
- Student Handbook, all programmes, DUT
- Study Plans (Curricula), all programmes, DUT
- *Regulations On Recognizing The Academic Performance And Credit Transfer Of The University Of Science And Technology*, Decision No.: 3240 /QD-ĐHBK, DUT, 19 August 2022

- *Graduation internship Syllabus: Construction materials Engineering and Technology Major*, Faculty of Road and Bridge Engineering, DUT (26 June 2022)
- *Decision: Regarding The Implementation Of Cognitive Internship Of The Students*, No.: 1528/QĐ-ĐHBK, DUT, 10 June 2022
- *Decision: Regarding The Implementation Of Graduation Internship Of The Students*, No.: 2190/QĐ-ĐHBK, DUT, 17 June 2022

Preliminary assessment and analysis of the experts:

The auditors confirm that the rights and duties of both DUT and the students are clearly defined and binding. All rules and regulations are published on the university's Vietnamese website ([here](#)) and hence available to all stakeholders.

However, the experts notice that the English websites of the programmes should be revised and expanded upon to align with the expectations of an international accreditation:

On pages of the [Ba/Ma HE](#), the experts observe that

- The module handbooks for the Bachelor's and Master's programmes in Hydrological Engineering do not appear to be available publicly through the Faculty of Water Resources Engineering's English or Vietnamese website. This needs to be remedied to ensure accessibility of the detailed module descriptions to all interested parties.
- The page dedicated to the Bachelor's syllabus/module handbook redirects to the Bachelor's study plan.
- The links provided for the Master's study plan and syllabus mistakenly lead to the Bachelor's programme.
- The Programme Specifications for both the Ba and Ma HE need to be uploaded and linked to on the programmes' pages, and thus be made accessible to any interested individuals.

For both the pages of the [Ba/Ma HE](#) and the [Ba CMET](#), the experts further note that relevant regulations, such as those concerning the recognition of academic credits obtained outside and those pertaining to the conduct of internships, should be linked to or uploaded on the respective programmes' pages, if possible in Vietnamese and English language.

In line with the above, the experts conclude that the criterion is partially fulfilled.

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

Module Descriptions

The experts thank the Faculties' explanations concerning the detected formal inconsistencies in the provided module handbooks, and encourage them to pursue a revision of the English versions of these with their international accessibility and future reaccreditations in mind.

Accessibility of programme-related documents

The experts thank the Faculties' efforts to make all essential information concerning their programmes under review publicly accessible through their respective webpages.

For the Ba/Ma Hydraulic Engineering, the experts find that the Programme Learning Outcomes, Study Plans, Syllabi (Module Handbooks), Course Description, and Program Specification documents have been made available in full as downloadable files in English on the programme website. Likewise, the experts acknowledge that the programme learning outcomes as well as course descriptions are available in Vietnamese on the University's website [here](#) and [here](#).

However, the experts were unable to find the corresponding full module handbook in Vietnamese language on the Faculty's Vietnamese programme pages. This needs to be remedied, as the document information needs to be made accessible publicly to interested stakeholders.

For the Ba Construction Materials Engineering and Technology, the experts likewise find that the relevant documents have been made available in full as downloadable files in English on the programme website.

As it is the case above, however – while programme learning outcomes as well as course descriptions are again available in Vietnamese on the University pages – the full module handbook likewise does not appear to be accessible in full in Vietnamese on the programme's website. This likewise needs to be remedied to make detailed programme information accessible publicly to all interested stakeholders.

As a general observation, moreover, the assessors encourage the respective Faculties to make all relevant study and examination regulations, student handbooks, as well as programme learning outcomes and course description documents in Vietnamese language more easily accessible on the respective Faculties' or programmes websites directly.

Diploma Supplements

The experts acknowledge the feedback provided by the University regarding the graduation documents issued at DUT. Since the Diploma Supplement is however a crucial document within the context of the European Standards and Guidelines for quality assurance in higher education, and, subsequently, the ASIIN criteria, the assessors maintain that such a document has to be issued to all graduates of the programmes under review; especially as the document is intended to provide clear and comprehensive information on the qualification of graduates beyond the transcript of records for relevant stakeholders (e.g. employers, future further studies).

The Diploma Supplement at least needs to include the information outlined in the ASIIN criteria (student's qualifications profile, individual performance, classification of the degree programme with regard to its applicable education system, individual modules and the grading procedure on which the final mark is based).

Considering the above and in light of their preliminary assessment, the experts hence see this criterion as partially fulfilled only.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#))
- *Development Strategy Of University Of Science And Technology - The University Of Danang To 2025 With A Vision Toward 2035*, issued together with Decision No. 1838/QĐ-ĐHBK, DUT, 27 July 2021
- Student and graduate survey forms and results, DUT
- Survey Form On Graduate Quality And Educational Program For Employer, DUT
- Discussions with programme coordinators, lecturers, students and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The quality assurance process at DUT is overseen by the Educational Quality Assurance Council and the Scientific and Educational Council. These bodies report their findings to the

Board of Rectors, i.e. the Rector and Vice-Rector responsible for quality assurance. The work of the Educational Quality Assurance Council is informed by evaluations conducted by the Department of Educational Testing & Quality Assurance. At the Faculty level, the faculty-specific Scientific and Educational Quality Assurance Councils carry out surveys, assess quality, and consult with the Faculty Board of Directors.

In terms of internal quality assurance mechanisms, DUT primarily relies on a range of surveys conducted with all stakeholders. In line with this and as noted above, the auditors discern during their exchanges with students, alumni and industry representatives that regular feedback surveys are conducted both on course and programme levels. Both groups present during the audit confirmed their satisfaction with the conducted surveys, and that they felt their voices are heard for the purpose of programme development.

In terms of external quality management, the University adopts several sets of quality management standards, which include domestic quality accreditation standards for degree program assessment from the Ministry of Education and Training (MOET), and international quality accreditation standards from the likes of CTI (France), AUN-QA, and ASIIN. To evaluate the effectiveness of its internal quality assurance system, the University has invited both domestic (MOET) and international (HCERES) institutions for reviews in the past years. Furthermore, the University has resorted to international accreditation bodies, such as CTI, AUN-QA, and ASIIN, to review its degree programs.

All in all, the experts are content with the University's quality management system, which they find to be multi-layered and effective. As a recommendation for further improvement of the University's course evaluation routines, the experts however recommend shifting the timing of the student surveys in a way that will allow reflection of their results in the last session of a given module between the lecturer and the students, hence allowing for a more impactful feedback cycle.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 6:

The experts appreciate the Faculties' additional outline of how students are able to provide feedback on their courses and study experience. As a means to anchor student participation in the programme' development on a more structural level, the assessors recommend to integrate students in the design and modification processes of the training programmes beyond surveys and oral feedback, e. g. through participation in the appropriate boards and councils.

All in all, however, the experts see this criterion as fulfilled.

D Additional Documents

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

- D 1. Samples of actually issued Diploma Supplements for the three study programmes.

E Comment of the Higher Education Institution (07.08.2023)

The institution provided the following additional documents

- Revised course descriptions for the study programmes under review
- Diploma Supplements for the study programmes under review
- *Regulations on Codes, Standards for Professional Titles, Appointment and Salary Arrangement for Teaching Staff in public Higher Education Institutions*, No. 40/2020/TT-BGDĐT, Ministry Of Education And Training, 26 October 2020
- *Regulations issued together with the Decision No. 389/QĐ-DHKB, DUT*; 10 October 2016
- *Regulations On Training At Undergraduate Level of University Of Science And Technology*, Decision No.: 2244/QĐ-DHKB, DUT, 15 September 2021
- *English TOEIC International Exam Plan, Academic year 2022-2023*, No 3138/KH-DHKB, DUT, 12 August 2022
- *Notice: Registration for English enhancement classes at level 3 and level 4 according to the 6-level foreign language proficiency framework used for Vietnam*, No 1028-TB-DHKB, DUT, 10 March 2023

as well as the following detailed statement (quoted as relevant):

**“FEEDBACK TO DRAFT ACCREDITATION REPORT OF ASIIN
DUT - CLUSTER C**

Degree Programs:

- 1. Bachelor of Science in Construction Materials Engineering and Technology (CMET)**
- 2. Bachelor of Science in Hydraulic Engineering (HE)**
- 3. Master of Science in Hydraulic Engineering (HE)**

Standards	Preliminary assessment and analysis of the experts	Feedback
<p>1. The Degree Programme: Concept, content & implementation</p>	<p>Criterion 1.1 (...)</p>	<p>We absolutely agree that improving English skill for students is necessary.</p> <p><i>Regarding to the DUT:</i></p> <p>To graduate, undergraduate students at DUT are required to obtain a score of 450 on the TOEIC exam. To meet the English output standard, DUT consistently strives to provide students with an improved English learning environment.</p> <p>As described in the SA report, at the beginning of the course, students must take the English language proficiency test organized by the University in collaboration with the University of Foreign Language Studies - the University of Danang. Depending on that, students can take the class as A2.1, then A2.2 (according to the curriculum) or have to study preparatory English (A1) first, before studying A2.1. <u>[2.1.C0.7]</u>.</p> <p>DUT has an English language proficiency test after each academic year. This is required for all students</p>

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>to determine the number of credits to be enrolled in the following year [2.1.CO.7].</p> <p>In addition, the University has a partnership with the University of Foreign Languages to offer intensive English courses (see additional evidence APPENDIX A) and partnering with the educational organization IIG Vietnam to conduct international TOEIC exams at the DUT Campus (see APPENDIX B). These efforts are aimed at creating optimal conditions for DUT students to meet the required English proficiency standards.</p> <p><i>Regarding to the three programs:</i></p> <p>In addition to fundamental English courses such as English A2.1 and English A2.2, other courses, particularly specialist subjects, will provide additional resources in English for students to improve their English skills. As a result, students will have more possibilities to participate in activities such as discussions of international papers or giving more oral presentations in English.</p> <p>For the Master's degree, in addition to more English instructional resources, the test exam for some courses, such as Advanced Hydraulic Structure, is also created in English (students are informed of this at the start of the course). For research topics, students are assigned many foreign documents, from which they can read, analyze, and review research results.</p> <p>Besides, we organized annual workshops for students between my faculty (DUT) and Japanese Universities</p>

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>(Yokohama, Utsunomiya, Chiba Universities) (link), (link). In these workshops, our students have the chance to participate in some 1-week designed projects among students. Students have many chances to communicate with foreign students, helping them improve their English skills and their confidence.</p> <p>We will continue to improve students' English proficiency in the future through activities such as raising students' awareness of foreign languages and expanding opportunities for students to communicate in English, such as clubs and seminars, organizing business meetings, and facilitating students' participation in supporting international events held locally. Develop the program with bilingual subjects and enhance the percentage of references in English for subjects. We will encourage students to complete their course projects, graduation projects, and participate in the defense in English.</p>
	<p>Criterion 1.3 (...)</p>	<p>Thank you very much for the auditor's comments. However, we believe that the low probability of 1% of students going to study abroad is primarily due to economic constraints (the high cost of living in the countries where students wish to study, compared to the income levels in Vietnam). Nevertheless, we have provided support for students to access scholarships in advanced learning environments through Memorandums of Understanding (MOUs) with</p>

Standards	Preliminary assessment and analysis of the experts	Feedback
		institutions, universities like Yokohama, Utsunomiya, Nagaoka University of Technology, Saitama University, etc. Additionally, we are actively working on organizing international exchange programs to offer students more opportunities to explore various learning possibilities abroad.
	Criterion 1.4: (...)	Thank you very much for understanding the enrollment challenges in the broader context of Vietnam. We are dedicated to increasing the interest of learners by implementing promotional communication strategies, aiming to create a more positive perception of the profession's significance in society. Moreover, we consistently strive to improve the degree program to provide the best possible learning environment for our students and ensure it aligns with the demands of the labor market.
Standard 4. Resources	Criterion 4.2 (...)	Thank you for the attention of the accreditation board regarding this matter. We would like to provide further clarification: According to the general regulations of the government and specifically at DUT, the teaching staff in different positions (Professor, Associate Professor, 1 st classifying Lecturer , 2 nd classifying Lecturer, 3 rd classifying Lecturer, etc.) will have corresponding responsibilities and benefits (supplemented by evidence of regulations on salary advancement in different positions- <i>Circular No. 40/2020/TT-BGDĐT, dated October 26, 2020- APPENDIX C</i>). Furthermore, since 2023, DUT has become an autonomous university, and we are

Standards	Preliminary assessment and analysis of the experts	Feedback
		actively considering policies to ensure the rights and promote the professional advancement of the teaching staff for continuous improvement. The school has different regulations on payment of teaching fees for different titles.
	Criterion 4.3 (...)	Thank you very much for the board of auditors' recommendation. We fully agree with the necessity of the mentioned equipment for research activities. However, equipment procurement is contingent on DUT's annual budget and procurement plan. As for the degree programs, the lecturer staff are making efforts to find out research funding from domestic and foreign sources to actively invest in equipment based on each phase and the actual research requirements.
Standard 5. Transparency and Documentation	Criterion 5.1 (...)	Thank you for the recommendations from the auditors; we fully acknowledge and take into account these opinions. Regarding the feedback on the format and the lack of consistency in the English version of the Module handbook: Firstly, we would like to confirm that there is consistency in the Vietnamese version of the Module handbook, which is primarily used by the students. However, in the English version, there are certain discrepancies in the use of terminology during translation. This is due to each lecturer being responsible for the translation of different sections and resulting in certain variations in terminology among different instructors. The program

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>management team has made efforts to review and avoid these errors, but due to the considerable volume of pages, some inconsistencies still remain. We will pay closer attention to these issues in the upcoming versions.</p> <p>With regard to the public accessibility of the module handbooks of HE programs, we checked and fixed their format and the links. (see, Bachelor: link; and Master: link). The CLOs and summarized descriptions of each course are also published on the Faculty's website (see Bachelor: link; and Master: link).</p> <p>Additionally, we would like to supplement the information that apart from providing a detailed syllabus in the module handbook, students can also access a summarized description of the course content in the Vietnamese version on the training office's website at the following link: [link]. This will allow students to follow the information more easily. The English content of this summarized course description is provided as supplementary evidence in D-5.1-1, D-5.1-2, D-5.1-3.</p>
	<p>Criterion 5.2 (...)</p>	<p>We appreciate the comments from the auditors. Regarding the Diploma Supplement, we would like to confirm that the standard Diploma Supplement format is uniformly applied throughout the entire university at DUT. This format is based on the regulations for Diploma Supplement provided by the Ministry of Education and Training (find evidence).</p>

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>The actual issued Diploma supplement has been provided as evidence in the term "original" in [5.2.C1.3, 5.2.C2.3, 5.2.C3.3] in the initial SAR report.</p> <p>On the other hand, we also want to confirm that the ASIIN format Diploma Supplement is not used in practice at DUT. During the ASIIN accreditation process, after the draft submission, ASIIN staff requested the provision of Diploma Supplement following the reference template provided by ASIIN. Therefore, in addition to the original version of Diploma Supplement of DUT, the program also provided the Diploma Supplement following the ASIIN format in the evidence folder.</p> <p>We also have observed that there is a certain correlation between the actual Diploma Supplement used at DUT and the Diploma Supplement format following the ASIIN format. Both Diploma Supplement contain the following information:</p> <ul style="list-style-type: none"> - Personal information of student - Name of qualification - Main field of program - Name and status of the institution - Level of the qualification - Language of instruction/examination - Mode of study - Duration of the program - Program details, individual credits gained, and grades/marks obtained.

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>For the master's program, we also provide additional information about the thesis title, the instructor, the assessment committee members, grading system in Notes (letter grading scale, 4- and 10 -point grading scale).</p> <p>Additionally, some information present in the ASIIN Diploma Supplement format is not included in the current format used at DUT but can be found in other documents, as follows:</p> <ul style="list-style-type: none"> - Program learning outcomes: Included in the program website [B.Sc CMET: Link][B.Sc HE: Link][M.Sc HE: Link] - Grading system and, if available, grade distribution table: This information is published in "Circular: Promulgating regulation on undergraduate education" of Ministry of Education and Training [5.1.CO.3].
	<p>Criterion 5.3 (...)</p>	<p>Thank you for the recommendations from the auditors; we fully acknowledge and take into account these opinions. We verified and fixed the links in the HE programs, ensuring that all relevant information is presented accurately and thoroughly. For syllabus/module handbook (see Bachelor: link, and Master: link). The Programme Specifications are also published on the website (Bachelor: link, and Master: link).</p> <p>We also appreciate the valuable advice from the evaluators. Regarding the suggestion "relevant</p>

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>regulations, such as those concerning the recognition of academic credits obtained outside and those pertaining to the conduct of internships, should be linked to or uploaded on the respective programs' pages, if possible, in Vietnamese and English language," we will strive to improve the information uploaded on the training program's website to make it easier for students to follow.</p> <p>However, we would also like to re-confirm that the regulations related to the learning process, evaluation methods, and credit recognition for each course (including internships, etc.) are clearly stipulated in the module handbook (course syllabus) and made public for the students [B.Sc. CMET link, B.Sc. HE link, M.Sc. HE link]. Moreover, students receive a student handbook containing regulations and relevant information throughout their learning journey, which is provided to all students at the university [link]. The handbooks for students in each program are also available for download online at any time on the websites of their respective faculties [link (B.Sc. CMET)] [link (B.Sc. and M.Sc. HE)].</p>
Standard 6. Quality Management: Quality Assessment and Development	Criterion 6 (...)	Thank you for the practical suggestions from the auditors. The current survey principle involves gathering feedback from students after they complete each course, including end-of-term evaluations. This allows students to have a comprehensive overview of the courses. Based on these evaluations, the program members will meet

Standards	Preliminary assessment and analysis of the experts	Feedback
		<p>and discuss to make improvements for the next semester.</p> <p>We also agree with the auditor's feedback on the necessity of surveys during students' learning process and make appropriate adjustments during that semester. In this regard, we confirm that the relationship between faculty members and students at DUT is quite close, enabling students to provide direct feedback to their instructors at any time during the course. Faculty members are responsible for addressing students' inquiries and making improvements to meet students' legitimate desires. In the event that a student's concerns are not adequately addressed by the faculty member, the student can raise the issue during dialogue sessions with the university or through the feedback box.</p> <p>In conclusion, we highly value the contributions of the auditors and will consider appropriate improvements based on the auditor's suggestions in line with the practical conditions.</p>

Date: Danang, 4th August 2023

FACULTY OF ROAD AND BRIDGE ENGINEERING

Dean (Signature)

Dr. CAO VAN LAM“

F Summary: Expert recommendations (15.08.2023)

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

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Construction Materials Engineering and Technology (CMET)	With requirements for one year	30.09.2029	–	–
Ba Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–
Ma Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–

Requirements

For all degree programmes

- A 1. (ASIIN 5.2) DUT must provide its graduates with a Diploma Supplement containing detailed information on the intended learning outcomes of the degree programme and the student's individual achievements.
- A 2. (ASIIN 5.3) The respective module handbooks in Vietnamese language need to be linked to on the individual Vietnamese programmes page to be made publicly accessible in full to all interested stakeholders.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.1) It is recommended to improve the measurement of learning outcomes in a more structured, thorough manner to allow for programme performance monitoring over time.
- E 2. (ASIIN 1.3) It is recommended to make space for other (subject-related) contents within the curriculum, to create additional (elective) offerings for students to develop their soft skills, as well as to consider extending the integrated practical

- components (internships) by decreasing the number of General Knowledge section subjects.
- E 3. (ASIIN 1.3) It is recommended to create additional offers for students to improve their English language skills to at least a B1 level, if not B2; to offer more specialised subjects in English; and to consider raising the current graduation threshold of 450 points on the TOEIC exam.
- E 4. (ASIIN 1.4) It is recommended to strengthen the promotion of engineering subjects to proactively tackle the expected shortage of engineers.
- E 5. (ASIIN 2.1) It is recommended to look into establishing more student mobility opportunities, both nationally and abroad agreements, and to make mobility more attractive.
- E 6. (ASIIN 4.2) It is recommended to strengthen staff development opportunities, including stronger incentives for academic staff to strive for higher levels of professorship (associate, full professorships), more opportunities for academic staff to gain industry insights through short-term placements, as well as further measures to improve English language skills amongst staff.
- E 7. (ASIIN 4.3) It is recommended that the Faculties invest in additional triaxial geotechnical and plasticity testing equipment to enhance research efficiency and capacity.
- E 8. (ASIIN 5.1) It is recommended to rework the module handbooks with regard to their formatting, occasionally missing or inconsistent course information, inconsistent labelling of equivalent courses, information not translated to English; and see whether it is possible to provide them in a more condensed format.
- E 9. (ASIIN 5.3) It is recommended to make the relevant study and examination regulations more easily accessible through the respective Faculties' or programmes websites.
- E 10. (ASIIN 6) It is recommended to integrate students in the design and modification processes of the training programmes beyond surveys, e. g. through participation in the appropriate boards and councils.

G Comment of the Technical Committee 03 – Civil Engineering, Geodesy and Architecture (04.09.2023)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the accrediting procedure and changes the wording of A 1. The TC suggests to use the standard wording that has been established and agreed on by the AC. Apart from this, the TC follows the assessment of the peers without any changes.

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

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Construction Materials Engineering and Technology (CMET)	With requirements for one year	30.09.2029	–	–
Ba Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–
Ma Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–

Requirements

For all degree programmes

- A 1. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the intended learning outcomes as well as about the individual performance of the student.
- A 2. (ASIIN 5.3) The respective module handbooks in Vietnamese language need to be linked to on the individual Vietnamese programmes page to be made publicly accessible in full to all interested stakeholders.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.1) It is recommended to improve the measurement of learning outcomes in a more structured, thorough manner to allow for programme performance monitoring over time.
- E 2. (ASIIN 1.3) It is recommended to make space for other (subject-related) contents within the curriculum, to create additional (elective) offerings for students to develop their soft skills, as well as to consider extending the integrated practical components (internships) by decreasing the number of General Knowledge section subjects.
- E 3. (ASIIN 1.3) It is recommended to create additional offers for students to improve their English language skills to at least a B1 level, if not B2; to offer more specialised subjects in English; and to consider raising the current graduation threshold of 450 points on the TOEIC exam.
- E 4. (ASIIN 1.4) It is recommended to strengthen the promotion of engineering subjects to proactively tackle the expected shortage of engineers.
- E 5. (ASIIN 2.1) It is recommended to look into establishing more student mobility opportunities, both nationally and abroad agreements, and to make mobility more attractive.
- E 6. (ASIIN 4.2) It is recommended to strengthen staff development opportunities, including stronger incentives for academic staff to strive for higher levels of professorship (associate, full professorships), more opportunities for academic staff to gain industry insights through short-term placements, as well as further measures to improve English language skills amongst staff.
- E 7. (ASIIN 4.3) It is recommended that the Faculties invest in additional triaxial geotechnical and plasticity testing equipment to enhance research efficiency and capacity.
- E 8. (ASIIN 5.1) It is recommended to rework the module handbooks with regard to their formatting, occasionally missing or inconsistent course information, inconsistent labelling of equivalent courses, information not translated to English; and see whether it is possible to provide them in a more condensed format.

- E 9. (ASIIN 5.3) It is recommended to make the relevant study and examination regulations more easily accessible through the respective Faculties' or programmes websites.
- E 10. (ASIIN 6) It is recommended to integrate students in the design and modification processes of the training programmes beyond surveys, e. g. through participation in the appropriate boards and councils.

H Decision of the Accreditation Commission (22.09.2023)

Assessment and analysis for the award of the ASIIN seal:

The AC discusses the procedure and agrees to amend the phrasing of requirement A1 as suggested by the Technical Committee 03 (Civil Engineering, Geodesy and Architecture) to match standard wording regarding the issuance of Diploma Supplements. Apart from this, the AC accepts the proposed requirements and recommendations without further changes.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Construction Materials Engineering and Technology (CMET)	With requirements for one year	30.09.2029	–	–
Ba Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–
Ma Hydraulic Engineering (HE)	With requirements for one year	30.09.2029	–	–

Requirements and recommendations for the applied labels

Requirements

For all degree programmes

- A 1. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the in-tended learning outcomes as well as about the individual performance of the student.
- A 2. (ASIIN 5.3) The respective module handbooks in Vietnamese language need to be linked to on the individual Vietnamese programmes page to be made publicly accessible in full to all interested stakeholders.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.1) It is recommended to improve the measurement of learning outcomes in a more structured, thorough manner to allow for programme performance monitoring over time.
- E 2. (ASIIN 1.3) It is recommended to make space for other (subject-related) contents within the curriculum, to create additional (elective) offerings for students to develop their soft skills, as well as to consider extending the integrated practical components (internships) by decreasing the number of General Knowledge section subjects.
- E 3. (ASIIN 1.3) It is recommended to create additional offers for students to improve their English language skills to at least a B1 level, if not B2; to offer more specialised subjects in English; and to consider raising the current graduation threshold of 450 points on the TOEIC exam.
- E 4. (ASIIN 1.4) It is recommended to strengthen the promotion of engineering subjects to proactively tackle the expected shortage of engineers.
- E 5. (ASIIN 2.1) It is recommended to look into establishing more student mobility opportunities, both nationally and abroad agreements, and to make mobility more attractive.
- E 6. (ASIIN 4.2) It is recommended to strengthen staff development opportunities, including stronger incentives for academic staff to strive for higher levels of professorship (associate, full professorships), more opportunities for academic staff to gain industry insights through short-term placements, as well as further measures to improve English language skills amongst staff.

- E 7. (ASIIN 4.3) It is recommended that the Faculties invest in additional triaxial geotechnical and plasticity testing equipment to enhance research efficiency and capacity.
- E 8. (ASIIN 5.1) It is recommended to rework the module handbooks with regard to their formatting, occasionally missing or inconsistent course information, inconsistent labelling of equivalent courses, information not translated to English; and see whether it is possible to provide them in a more condensed format.
- E 9. (ASIIN 5.3) It is recommended to make the relevant study and examination regulations more easily accessible through the respective Faculties' or programmes websites.
- E 10. (ASIIN 6) It is recommended to integrate students in the design and modification processes of the training programmes beyond surveys, e. g. through participation in the appropriate boards and councils.

Appendix: Programme Learning Outcomes and Curricula

According to the respective *Programme Specification* documents from 2020 (Ba CMET/Ba HE) and 2022 (Ma HE), the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved:

Ba Construction Materials Engineering and Technology (CMET)

„ 1. General Objectives

The general objectives of the training program in construction Materials Engineering and Technology are to train learners with political, ethical, knowledge, health; the ability to lifelong learning; the ability to be creative; have professional practice skills, research capacity, ability to effectively apply professional knowledge and advances in science and technology in construction materials engineering technology; have professional responsibility and sense of service to the community, meet development requirements in the field of technology and construction materials, serve the needs of socio-economic development, ensure national defense and security and international integration.

2. Program Objectives (POs)

Students who graduated with Bachelor’s degree in Construction Materials Engineering and Technology major in University of Science and Technology - The University of Danang:

4. Have comprehensive professional knowledge; master the principles and rules of nature and society;
5. Have basic practical skills in construction materials engineering technology;
6. Have ability to work independently and creatively; capable of teamwork; capable of solving technical and technological problems in the field of construction materials engineering technology.“

Ba Hydraulic Engineering (HE)

„Program Objectives

Graduates of the Hydraulic Engineering Program will be competent students who:

- Have professional knowledge of hydraulic construction, water resource management, and exploitation; master the principles and rules of nature- society;

- Have basic practical skills in the fields of hydraulic construction, water resource management, and exploitation;
- Have the ability to work independently and creatively; be capable of teamwork; be capable of solving technical and technological problems in the fields of hydraulic construction, water resource management, and exploitation;

Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

- An ability to apply knowledge of Mathematics, basic science, technology, and engineering in analysis, design, construction, evaluation, and research on problems in the field of hydraulic construction, water resource management, and exploitation;
- An ability for critical thinking, creative thinking, entrepreneurial thinking; have ethics and professional responsibility;
- An ability to work in a team, effectively communicate, and use foreign languages in professional fields;
- A foreign language proficiency (TOEIC 450 or equivalent); have basic skills in using Information Technology (IT) as prescribed in Circular No. 03/2014/TT- BTTTT
- An ability to generate ideas and plan, and manage activities in the fields of hydraulic construction, water resource management, and exploitation that are appropriate to the context of business, society, and the environment.“

Ma Hydraulic Engineering (HE) - research-oriented profile

„Program Objectives

The Master's program in Hydraulic Engineering with research-oriented profiles aims to train learners that will have:

4. Extensive professional knowledge in the field of hydraulic engineering;
5. Skills in scientific research in the field of hydraulic engineering;
6. An ability to conduct independent and creative research; an ability to critique, analyze, synthesize, and evaluate to come up with scientific solutions.

Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

6. An ability to synthesize advanced and in-depth knowledge to address complex issues in the field of hydraulic engineering and other related industries, such as

- management and exploitation of water resources and construction, to meet health, safety, environmental standards, and socio-economic development requirements;
7. Skills to research and develop innovative technologies; an ability to adapt, self-direct, and guide others in research activities
 8. An ability to work in a team and transfer knowledge in a specialized research field;
 9. Skills in organizing and carrying out research projects; an ability to effectively manage professional activities;
 10. A language proficiency level of 4 according to the 6-level foreign language competency framework for Vietnam or equivalent. “

Ma Hydraulic Engineering (HE) - practice-oriented profile

„Program Objectives

The Master's program in Hydraulic Engineering with practice-oriented profiles aims to train learners that will have :

4. Professional knowledge in the field of hydraulic Engineering;
5. Practical skills in professional activities;
6. An ability to create, critique, analyze, synthesize, and evaluate to come up with effective solutions.

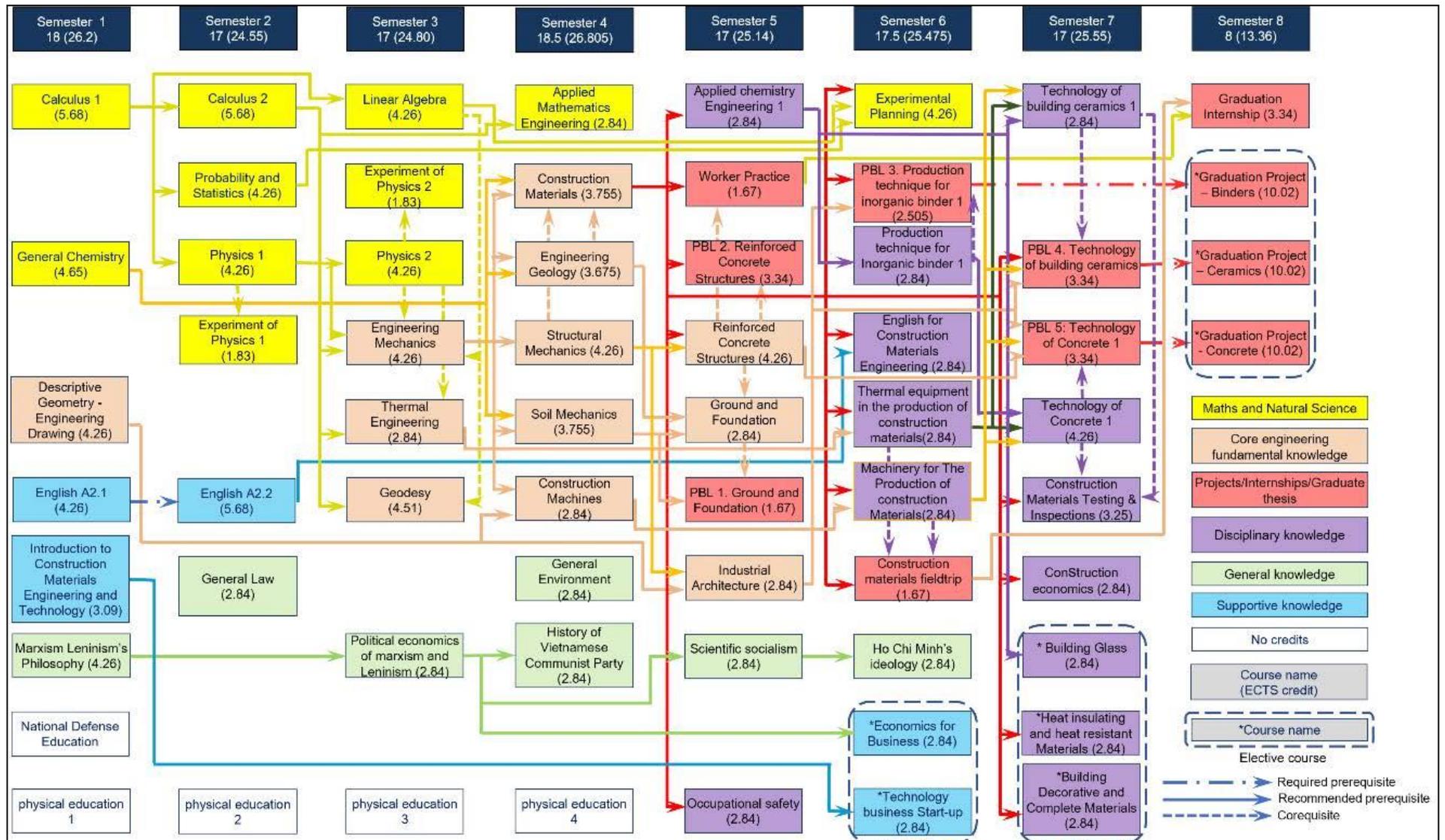
Program Learning outcomes

Students who qualify for graduation from the Hydraulic Engineering program will have:

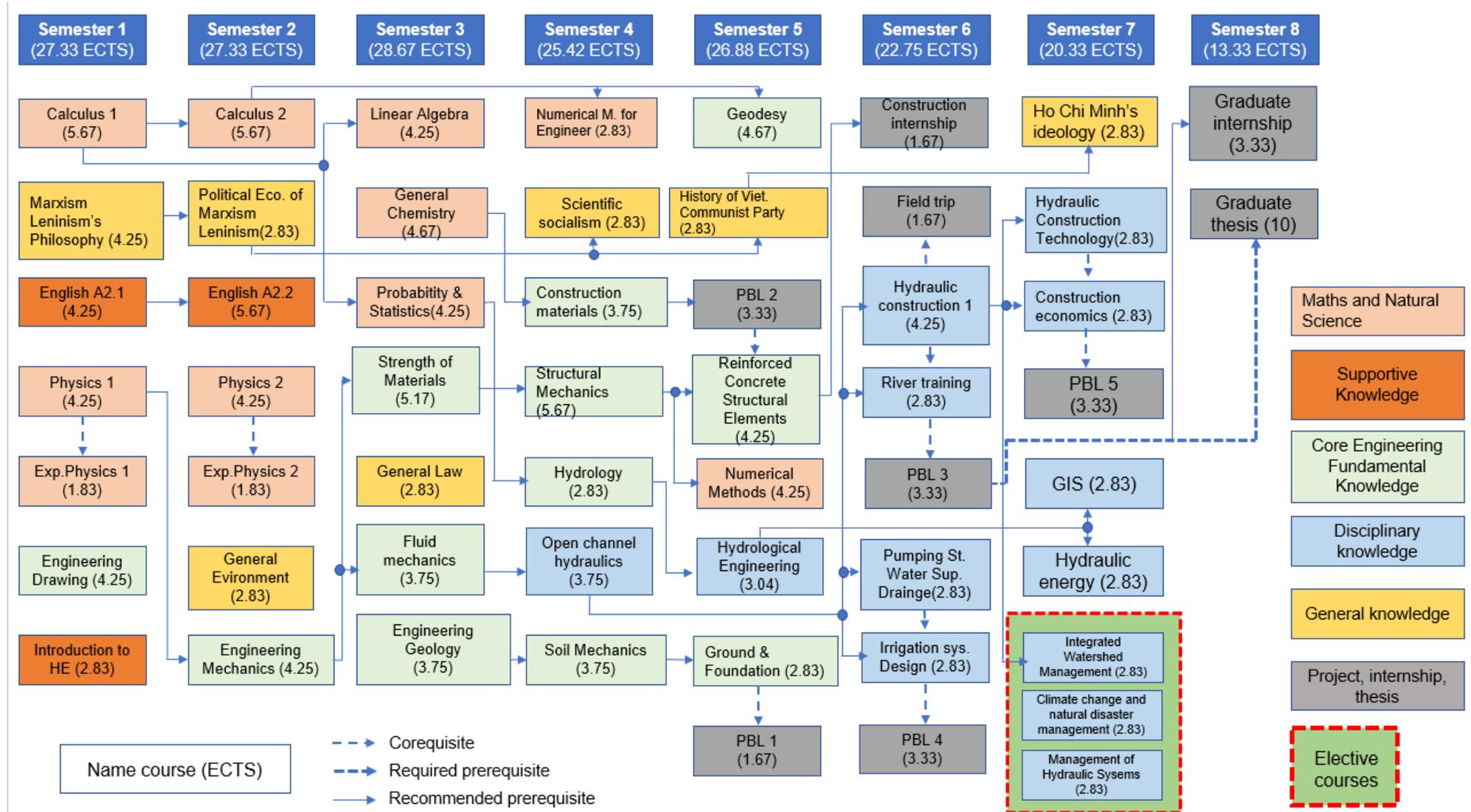
6. An ability to synthesize in-depth knowledge to address complex issues in the field of hydraulic engineering and other related industries, such as management and exploitation of water resources and construction, to meet health, safety, environmental standards, and socio-economic development requirements;
7. An ability to use technology creatively; be adaptable and self-directed in professional activities;
8. An ability to work in a team and transfer knowledge in a specialized field;
9. An ability to manage and organize professional activities effectively;
10. A language proficiency level of 4 according to the 6-level foreign language competency framework for Vietnam or equivalent.“

The following **curricula** are presented:

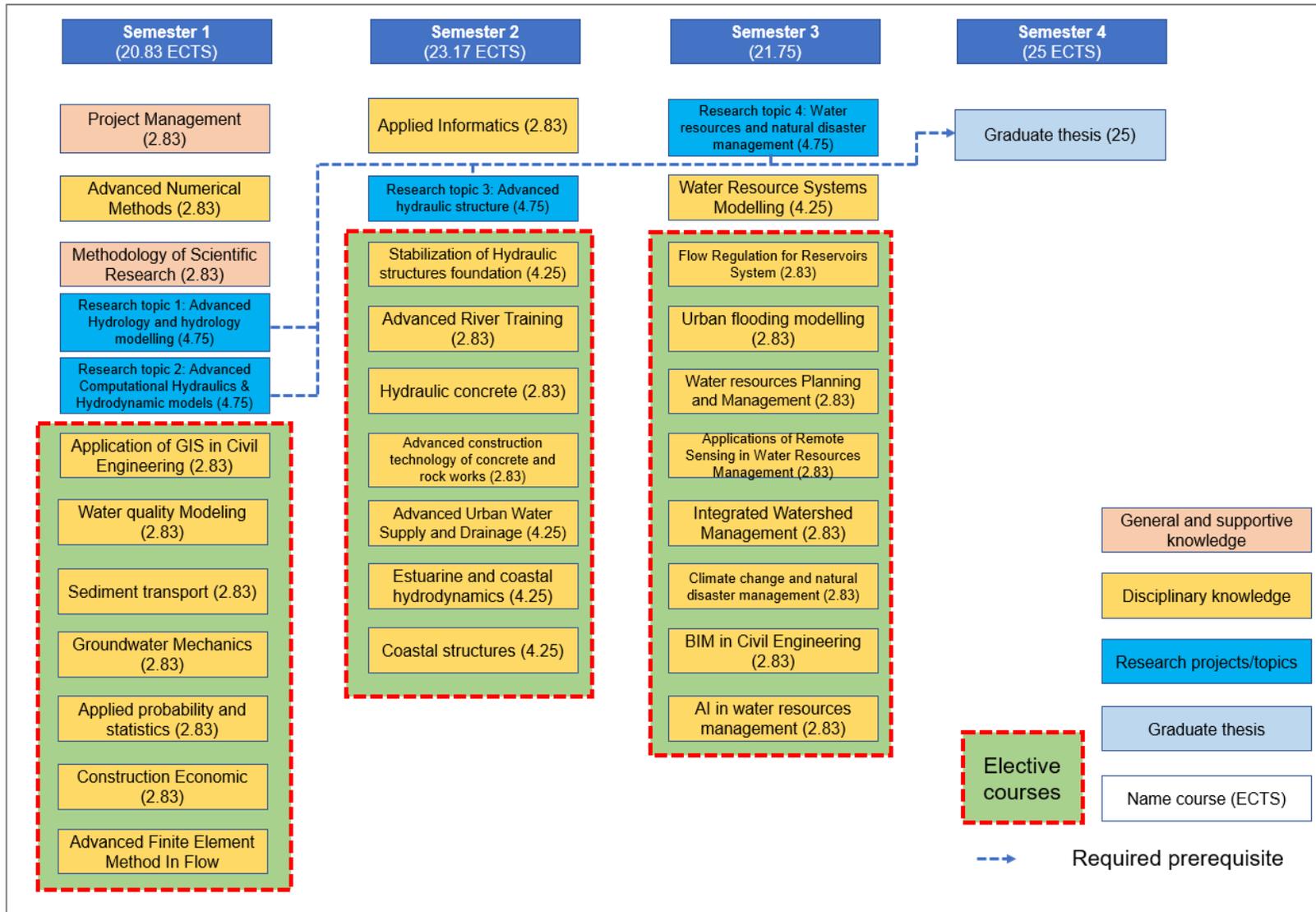
Ba Construction Materials Engineering and Technology (CMET)



Ba Hydraulic Engineering (HE)



Ma Hydraulic Engineering (HE) - research-oriented profile



Ma Hydraulic Engineering (HE) - practice-oriented profile

