# ASIIN Seal

# Accreditation Report

**Bachelor's Degree Programs**
***Industrial Economics***
***Industrial Management***
***Business Administration***

Provided by
**Hanoi University of Science and Technology**

Version: 24 March 2023

# Table of Content

# 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] |
|---|---|---|---|---|
| Kinh tế công nghiệp | Industrial Economics | ASIIN | / | TC 06 |
| Quản lý công nghiệp | Industrial Management | ASIIN | / | TC 06 |
| Quản trị kinh doanh | Business Administration | ASIIN | / | TC 06 |
| **Date of the contract:** 22.03.2022<br>**Submission of the final version of the self-assessment report:** 02.05.2022<br>**Date of the onsite visit:** 08.-10.11.2022<br>**at:** HUST (Hanoi) | | | | |
| **Peer panel:**<br>Quynh Do, Student at International University – Vietnam National University HCMC<br>Prof. Dr.-Ing. Juliane Schneeweiß, Brandenburg University of Applied Sciences<br>Prof. Dr. Frank Schultmann, Karlsruhe Institute of Technology<br>Prof. Dr. Matthias Werner, University of Applied Sciences Konstanz<br>Linh Hoang Thuy, PhD., Pasteur Institute Ho Chi Minh City | | | | |
| **Representative of the ASIIN headquarter:** Andrea Kern | | | | |
| **Responsible decision-making committee:** Accreditation Commission | | | | |
| **Criteria used:**<br>European Standards and Guidelines as of May 15, 2015 | | | | |

[1] ASIIN Seal for degree programs
[2] TC: Technical Committee for the following subject areas: TC 06 - Engineering and Management, Economics

| | |
|---|---|
| ASIIN General Criteria, as of December 10, 2015<br><br>Subject-Specific Criteria of Technical Committee 06 – Engineering and Management, Economics as of September 20, 2019 | |

# 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 |
|---|---|---|---|---|---|---|---|---|
| Industrial Economics | Cử nhân/B.Sc | Energy Economics and Policy; Renewable Energy and Energy Usage Efficiency | 6 | Full time | / | 8 semesters | 132 Vietnames CP | Once a year; 2009 |
| Industrial Management | Cử nhân/B.Sc | Operations Management; Logistics and Supply Chain Management | 6 | Full time | / | 8 semesters | 132 Vietnames CP | Once a year; 2002 |
| Business Administration | Cử nhân/B.Sc | Business Start-Up; Marketing; Information and Business Intelligence | 6 | Full time | / | 8 semesters | 132 Vietnames CP | Once a year; 1992 |

Established in 1956, the Hanoi University of Science and Technology (HUST) is a federal university committed to human development, high-quality workforce training, scientific research, technological innovation, and knowledge transfer that serves the country and the global society. HUST describes itself as research-oriented, multi-disciplinary and serving the practical development of the country. This higher education institution (HEI) has a large network of domestic and international cooperation partners in both education and industry. HUST offers 67 undergraduate programs, including 34 standard programs, 27 honors programs (advanced programs), six international joint programs as well as 35 master programs and 32 doctoral programs. The programs at HUST are divided into standard and advanced programs, where advanced programs are fully taught in English, with the exception of one program in Thai. None of the programs under review are characterized as advanced program.

The three bachelor programs under review are situated at the school of Economics and Management (SEM). This school was established in 1965 and represents the only non-technology school at HUST. SEM works interdisciplinary between management and eco-

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

nomics providing its students additionally basics in engineering. The total number of students was 759 in 2022 including next to bachelor students also master and PhD students.

For the Bachelor's degree program Industrial Economics (BIE), the institution has presented the following profile on their website:

"The Bachelor's degree programme B.Sc. Industrial Economics with a duration of four years specializes in economics and energy politics, renewable energy and energy efficiency, which help train future managers in the industrial and energy sector.

The programme equips students with basic scientific knowledge, necessary technical, economic and managerial knowledge to effectively manage activities in energy-industries combined with critical thinking and professional working skills in multidisciplinary and national environments.

Career opportunities for graduates are as follows:

- Specialists in analysis, planning operations in organizations and industrial enterprises and energy
- Specialists in energy monitoring and control for enterprise.
- Energy policy-makers and specialists in state management agencies.
- Project managers and coordinators.
- Experts and consultants in industry - energy consulting units.
- Working at reputable enterprise: Vietnam Electricity (EVN), Vietnam Oil and Gas Group (PVN), etc."

For the Bachelor's degree program Industrial Management (BIM), the institution has presented the following profile on their website:

"The Bachelor's degree programme B.Sc. Industrial Management with a duration of four years specialises in production management, logistics and supply chain management, which provides students with knowledge of the design and management of human-materials-equipment integrated systems.

Industrial Management students are trained to understand and participate in the operations of industrial organizations and enterprises such as production planning, warehouse management, product quality management and process optimization of production or service processes.

Career opportunities for graduates are as follows:

- Production planning and control specialists.
- Materials purchasing and stock managing specialists.
- Product quality control and management specialists.
- Supply chain and logistics system manager.
- Consultants in design and improving production and service processes.
- Working at reputable enterprises: Toyota Vietnam, Samsung Vina, Tien Phong Plastic, Hoa Phat Group, etc."

For the Bachelor's degree program Business Administration (BBA), the institution has presented the following profile on their website:

"The Bachelor's degree programme B.Sc. Business Administration with a duration of four years focuses on corporate governance, marketing and human resource management to provide knowledge about business functions as well as processes and understanding of organizations and businesses in the global economy today.

The programme also equips students with effective communication skills to work in a professional environment, to understand cultural differences, to evaluate critical issues and to apply important business competencies in entrepreneurship.

Career opportunities for graduates are as follows:

- Specialists work in many different departments such as administrative department, sales department, accounting and finance department, etc. at companies relating to manufacturing and service sectors.
- Specialist in charge of preparing and implementing economic contracts.
- Specialists in marketing planning and strategy establishing; sales; marketing communications, research and market forecast.
- Specialist in recruitment, training, human resource management in enterprises.
- Business start-ups and entrepreneurships.
- Researchers and consultants on brand design and management, control models, and internal evaluation of organizations and enterprises.
- Working at reputable enterprises: VinGroup, Vietnam Airlines, Samsung Vina, etc."

# C Peer 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:**

- Programme Learning Outcomes
- Module handbooks of all study programs
- Objective-Module-Matrices
- HUST webpage https://en.hust.edu.vn/home
- SEM webpage https://sem.hust.edu.vn/en/home
- Self-Assessment Report
- Discussion at the audit

**Preliminary assessment and analysis of the peers:**

In the self-assessment report (SAR), HUST presents the bachelor programs *Industrial Economics* (BIE), *Industrial Management* (BIM) and *Business Administration* (BBA). The concept of all programs was created follows the regulations of the Vietnamese government as well as international universities around including Europe and the USA. Further development included both cooperation with international partner universities as well as national and international partners from the industry with the focus to uphold international high standard and educate graduates for the demand of the Vietnamese market. Major updates on the content of each of the three programs under review is conducted every two years in cooperation with national and international partners and the results of various surveys (see criterion 6).

The bachelor program BIE has the following program objectives (POs):

**Table 1. 2: POs of the BIE program**

| PO | Descriptions |
|---|---|
| PO1. | Able to demonstrate knowledge of and proficiency in the terminology, theories, concepts, practices and skills specific to the field of industrial ecnomics and management. |
| PO2. | Able to demonstrate knowledge and proficiency for professional work and/or further learning |
| PO3. | Able to exhibit competency in applying social skills to work effectively in a multidisciplinary managerial group and in an international environment |
| PO4. | Able to exhibit competency in applying the knowledge and reasoning skills to produce creative economic and business solutions in the situation of globalization, knowledge economy, and increasingly competitive environment |
| PO5. | Able to perform autonomy, well-developed judgement of knowledge and responsibility, qualified in health to adapt national requirements. |

Following the POs, the HEI stated project learning outcomes (PLOs) to demonstrate the skills which should be achieved by every student. These include on one side expertise in the field of industrial economics and on the other side personal and social skills. The students learn the basics in the fields of mathematics and technical sciences, which apply in this program specifically to the complex of energy management. Graduates of this program shall be able to develop business ideas and be able to find solutions on a global market. Soft skills imparted in the program include organization and problem solving skills in addition to social skills necessary to work in a multi-disciplinary and international working environment.

The bachelor program BIM has the following POs:

**Table 1. 6: POs of the BIM program**

| PO | Descriptions |
|---|---|
| PO1. | Master of the knowledge of the professional basis for different jobs in the field of production and service operation management. |
| PO2. | Master and apply the professional and personal skills necessary to carry out the work |
| PO3. | Have social skills neccessary to work effectively in a multidisciplinary managerial group and in an international environment |
| PO4. | Have the capacity to develop effective production managagement solutions in the context of globalization, knowledge economy, and increasingly competitive environment |
| PO5. | Have political qualities, consciously serving the people, having health to meet the requirements of national construction and protection. |

Students in the program BIM shall reach qualifications in the technical background of their subject as well as social and professional skills. The program focuses on the analysis of economic processes, the evaluation of business and business simulations, particularly in production, logistics and service operations. Problem-solving skills, quantitative analysis of data and qualitative analysis of information is central in the learning outcomes of BIM. Graduates are educated on working in international and highly competitive environments. Their skills include communication skills as well as awareness between economic measures and business solutions.

The bachelor program BBA has the following POs:

**Table 1. 10: POs of the BBA program**

| PO | Descriptions |
|---|---|
| PO1. | Able to demonstrate knowledge of and proficiency in the terminology, theories, concepts, practices and skills specific to the field of economics and business administration. |
| PO2. | Able to demonstrate knowledge and proficiency for professional work and/or further learning |
| PO3. | Able to exhibit competency in applying social skills to work effectively in a multidisciplinary managerial group and in an international environment |
| PO4. | Able to exhibit competency in applying the knowledge and reasoning skills to produce creative economic and business solutions in the situation of globalization, knowledge economy, and increasingly competitive environment |
| PO5. | Able to perform autonomy, well-developed judgement of knowledge and responsibility, qualified in health to adapt national requirements. |

In the program BBA, the learning outcomes are based on a general and specialized knowledge to analyze, evaluate, compute and simulate economic and business processes. Achieved working skills educate the students to work independently, recognize priority problems and collect sufficient data and information so solve the problems. This requires an understanding of the business environment in a global context and the capabilities to develop business ideas and solutions. Soft skills include communication, presentation and negotiation.

These descriptions of the three bachelor programs under review are accompanied by learning module matrices for each programme, matching learning objectives, modules and the ASIIN Subject-Specific Criteria (SSC) of the ASIIN technical committee 06 (Engineering Management, Economics). The expert panel notes, that a short description of the presented learning outcomes is currently missing in the included diploma supplements, which is further discussed in criterion 5.2.

During the discussion of the on-site visit, the representatives of the rector's office explain the experts, that from the curriculum to the lectures, the purpose of HUST is teaching knowledge as well as providing and improving skills and competency. To ensure that students meet the requirements of the job market, the communication with the stakeholders is essential. The university works closely with their stakeholders and alumni and collects feedback from recruiting offices, fresh graduates, graduates with one year of experience and companies employing gradates. On this basis and additional surveys (see criterion 6), the curriculum is improved every semester, but larger changes are implemented every two years (see criterion 1.3). During this process, companies are actively invited to

improve the curriculum. SEM hereby names as one example the power energy company EVN (one of the main energy national providers), which supported the last update of the program BIE. The stakeholder confirm the peers, they see a strong mutual benefit in co-operating with HUST since the company can benefit from the modern input from the industry and the company has the advantage of the theoretical knowledge from the staff. Further, the representatives from the industry mention they value the students during internships due to their various technical skills, their flexibility and their fast learning capabilities. According to them, graduates from the programs under review at HUST are better educated to meet the job requirements, therefore they need less training within the company to perform their jobs within the new working environment.

In the discussion with the program coordinators, the expert panel questions if there is a certain overlap of the programs concerning their defined similar program objectives. The program coordinators insist that this refers simply to the statement and that the action taken to reach the objectives are different in each program. They explain that especially the bachelor programs BIM and BIE were created based on the high demand of the labor market. BIM was created as an interdisciplinary program while BIE was created in context of the national energy management market.

On the qualification goals of the programs, the teaching staff assures the peers, that the future of all programs are carefully considered. They explain the peers to rename the program of Industrial Economics to increase in accordance to the content of the program (see criterion 1.2). In the program BIM, the focus will remain on logistics, manufacturing and productivity (improvement), which is in agreement with the name and specializations of the program BIM. The teaching staff further mentions to the peers that one difference of their program BIM to other national programs is their combination of Industrial Engineering and Industrial Management.

The peers can follow the explanations of all parties involved in the discussion and appreciate the close cooperation between SEM and its stakeholders. They conclude that the objectives and intended learning outcomes of all degree programmes under accreditation are consistent with the level 6 of the European Qualification Framework (EQF) aimed at and adhere to the relevant ASIIN SSC. In their opinion, the objectives and learning outcomes of the degree programme (i.e. the intended qualifications profile) are described in a brief and concise way. They are well-anchored, binding and easily accessible to the public, i.e. to students, teaching staff and anyone else interested. The expert panel considers, the aims and learning outcomes are viable and valid and confirm they are analyzed on a regular basis with the intention to improve the programs and further develop their content. Overall, the experts agree, the intended qualifications profile allows the students to

take up an occupation, which corresponds to their qualification (professional classification).

## Criterion 1.2 Name of the degree programme

**Evidence:**

- Programme Learning Outcomes
- Diploma and Diploma Supplements
- Self-assessment Report
- Discussions during the audit

**Preliminary assessment and analysis of the peers:**

HUST explains in the SAR, the names of all bachelor programs under review were chosen to best represent the content of the study program and follow the guidelines of the Ministry of Education and Training. In the discussion during the on-site visit, the experts are especially interested in the similar names between the program BIE and BIM. The program representatives explain, that there is no clear understanding of the terms management and economics in Vietnam, which is one reason they intend to change the bachelor program name of *Industrial Economics*. When the program was established, it was named "Energy Economics" representing the focus of the program on energy management and the cooperation with partners of energy market in Vietnam. Afterwards, the Ministry of Education and Training changed their regulation withdrawing the availability of this particular program name. At that time, *Industrial Economics* was the most suitable list available; however, the program coordinators admit, this name was not well received by the stakeholders creating a challenge for alumni of this program. Today, due to further change in government regulation, additional names for bachelor programs are available and thus HUST has applied to adapt a name to "Sustainable Energy Management" to reflect the main focus on energy of the program. The program representatives expect the new name might also be more attractive for students.

In the discussion with the students, they report to the peers to see no confusion in the names of the programs, including BIE. While choosing their studies, the followed information in brochures, online and during events and therefore choose their study program with a strong knowledge on the content of the programs. Their decision was predominately influenced by the job opportunities offered by the program not the name itself.

Nevertheless, the peers strongly support the decision to adapt a more suitable able. In the opinion of the expert panel, it is essential that the program objectives and curriculum

are in alignment with the title of the study program. For the bachelor programs of BIM and BBA, the expert panel consider, that the degree programme name already reflects the intended aims and learning outcomes as well as the main course language.

**Criterion 1.3 Curriculum**

**Evidence:**

- Self-assessment report
- Objective-Module-Matrices
- Module handbooks of all programs
- HUST webpage https://en.hust.edu.vn/
- Curriculum design manual
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

All bachelor degree programs under review have a standard duration of four years or eight semesters. The curriculum of each program consists of modules with a total amount of 123 Vietnamese credits. The curricula are all designed to meet the learning outcomes and to provide the training necessary to gain the skills necessary in the industry. The curriculum is built up by basic units (mathematics and basic science, English; Complementary Electives; Law and political Education & Physical and military education) and professional education (Foundation and core courses; Elective courses; Internship and thesis).

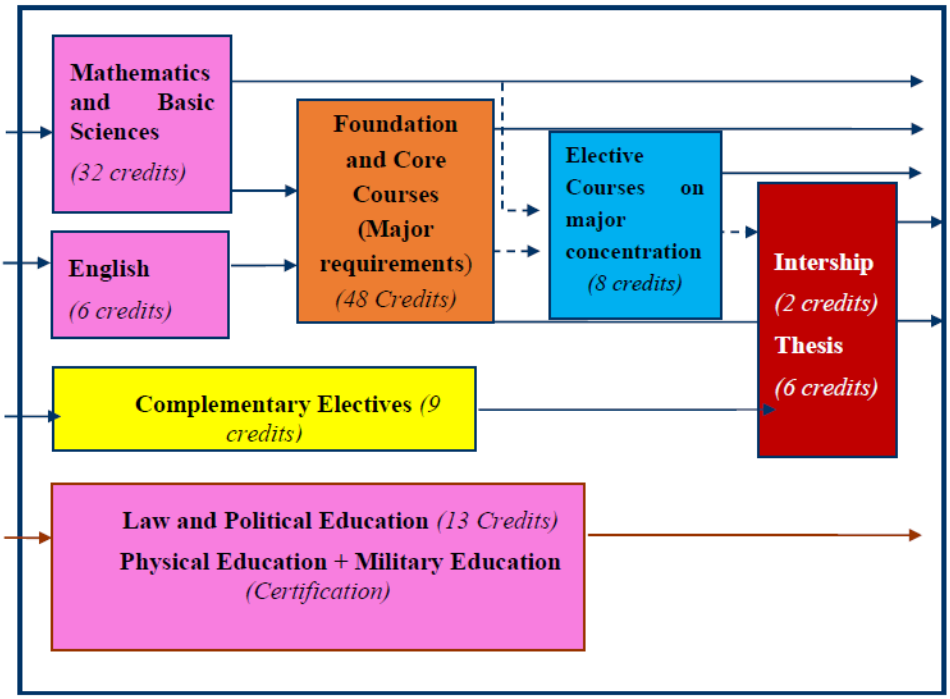


**Figure 1. 1: SEM Bachelor's Curriculum Structure**

In the HEI's terminology, a "module" consists of several courses within one thematic group, while each bachelor program is divided into five modules. Module 1 comprises courses in general education such including political and military training, physical exercise as well as courses on English, Mathematics and Science. Module 2 covers the basics in economics, management and related professional subjects to create the foundation for all. Module 3 includes complementary and elective courses from various fields in social science and humanities-based subjects such as training in communication, teamwork and research. Module 4 entirely contains elective courses to allow the students to specialize in their field of interest as well as a mandatory internship at an enterprise. The bachelor program of BIE offers specifications in the fields of "Energy economics and policy" and "Renewable energy and energy usage efficiency." In the program of BIM, in-depth courses focus on topic of "production management" and "Logistics and supply chain management." The program BBA offers a specialization in the fields of "Business start-up", "Marketing" and "Information and business intelligence." The final Module 5 combines the internship and the final thesis in which the students are applying their theoretical knowledge into practice to demonstrate their ability to analyze, evaluate and solve problems in their specific area of interest.

The HEI states, that the curriculum is structured to ensure every student can complete the bachelor degree without exceeding the regular course duration.

**Table 2. 1: Bachelor's Degree programs Development of SEM**

| Module | Fields | Industrial Economics | | | | Industrial Management | | | | Business Administration | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Credits | | | % | Credits | | | % | Credits | | | % |
| | | Compulsory | Elective | Total | | Compulsory | Elective | Total | | Compulsory | Elective | Total | |
| 1 | Mathematics and Science Foundation | 32 | 0 | 32 | 24.2 | 32 | 0 | 32 | 24.2 | 32 | 0 | 32 | 24.2 |
| | Law and Political Education | 13 | 0 | 13 | 9.8 | 13 | 0 | 13 | 9.8 | 13 | 0 | 13 | 9.8 |
| | English | 6 | 0 | 6 | 4.5 | 6 | 0 | 6 | 4.5 | 6 | 0 | 6 | 4.5 |
| | National Defense and Physical Education | | | | | | | | | | | | |
| 2 | Foundation and Core of the Major | 48 | 0 | 48 | 36.7 | 48 | 0 | 48 | 36.7 | 48 | 0 | 48 | 36.7 |
| 3 | Complementary Skills | 3 | 6 | 9 | 6.8 | 3 | 6 | 9 | 6.8 | 3 | 6 | 9 | 6.8 |
| 4 | Concentrations | 0 | 16 | 16 | 12.1 | 0 | 16 | 16 | 12.1 | 0 | 16 | 16 | 12.1 |
| 5 | Internship | 2 | 0 | 2 | 1.5 | 2 | 0 | 2 | 1.5 | 2 | 0 | 2 | 1.5 |
| | Bachelor Thesis | 6 | 0 | 6 | 4.5 | 6 | 0 | 6 | 4.5 | 6 | 0 | 6 | 4.5 |
| | **Totals** | **110** | **22** | **132** | | **110** | **22** | **132** | | **110** | **22** | **132** | |

The elective courses in all three bachelor programs provide the basis for the students to specialize within their fields. The program BIE offers elective courses in "energy economics and policy" and in "renewable energy and energy usage efficiency" whereas the program BIM has a focus on either "production management" or "logistics and supply chain management". The option in the program BBA are "business start-up", "marketing" and "information and business intelligence."

During the discussion with the program coordinators, they assure the expert panel that students have to choose their specification with support of their mentor. They are advised depending on their job aspiration and interest to choose specific elective courses.

*Internship*

The students are required to enroll in an internship during the third or fourth year of their studies. The duration of the internship is at least eight weeks according to the SAR. The

students confirm to the peers, they the majority of them voluntarily extend their internship to four to six months. The students can either actively search for a company to perform their internship or accept the support by the SEM to mediate a connection via their network of alumni and industrial partners. Officially, the students have to send an invitation letter to the enterprise to apply for the internship, followed by an exchange of letters of agreement and a CV. The universities and the enterprise work together to evaluate the student's internship.

The internship provides the students additionally with the possibility to perform independent research. During the internship, the student has to regularly send in progress reports to their supervisor at the university while a second person at the company acts as a direct supervisor on a daily basis. A final review is evaluated by the supervisor and a second reviewer from the university. The students confirm to the expert panel, that they generally receive a scholarship during their internship.

One person from the faculty and one person from the company supervise the internship. The program coordinators explain that SEM offers the students a great network of cooperating companies and alumni but students can also search for an internship partner themselves. The students value the internship in order to gain experience for their future career. The students confirm the experts, that the requirements of the internship are clear to them as it is posted on theirs student platform and social media. The report, it is easy for them to find a company to perform their internship due to the network of the university. They further add, the university holds a job fair twice a year, where companies offering internships are connected with the students searching for open positions.

The peers consider the high motivation of students, lecturers and stakeholders on the internship as positive. They strongly support the engagement of the students in practical work outside the university and agree with the current regulations of the internship.

*Mobility*

The program coordinators and the teaching staff confirm to the expert panel, that they have many cooperation with international universities to promote student exchange. They offer scholarships to support outgoing students for their living and tuition fees. The duration depends on the funding scheme, although most offer an exchange for one semester or one year. The best feasible time for the students to go abroad depends on their own plan according to the teaching staff, yet they recommend students to go abroad after the third of fourth semester. This allows the student to complete their English exam, which are required before going abroad to ensure the students' English proficiency. Addi-

tional short-term exchange programs for two to three weeks are also available to students.

Currently at SEM, they have six incoming students from Europe, mainly from France and Germany. These students mainly stay for a duration of up to six months. The abundance of international students, however, originate from Laos and Cambodia, who often spend their entire study time at HUST and therefore have to learn Vietnamese to participate in their programs. In addition, the program coordinators mention various summer schools with a duration of three to four weeks organized with cooperating universities.

The expert panel approves the possibilities to promote student exchange as HUST and support the establishment of co-operations and summer school with additional higher education institutes to promote their school.

The presented curricula of all three programs leave the expert panel with the impression that these curricula offer a comprehensive overview and sound basis of in the topics of economics and management. With the integration of the mandatory internship, each programs provides the students with practical experience in an industry environment. The peers think, graduates of these programs are competent in research, development and management related to industrial economics (renewable energies, effective energy save and use policy), industrial management (production management, logistics and supply chains management) and business administration (business start-up, marketing, information and business intelligence) and have good perspectives on the job market. The curricula appear reasonable and meaningfully designed, thereby ensuring that students will achieve the above-mentioned learning outcomes. In particular, the auditors come to see that the students gain the skills and competences defined by the SSC of the Technical Committee 06.

In the discussion with the peers, the teaching staff assert, that they are involved on a regular basis to improve the curriculum to integrate the developments in the subject of the course. Major updates, however, are conducted every two years. In this process, the results of all surveys with the students, lecturers, and alumni are combined with the suggestions received by industry partners and international collaborations. The last major update of all three study programs under review were done in 2019 integrating new courses on innovation next to redesigning major subjects. All lecturers confirm their involvement in the update of the curricula. The teaching staff explain to the peer, that the curriculum has integrated many elements from different programs around the globe and considers the Vietnamese market interests due to their good connections to the industry.

In the discussion with the program coordinators, the peers inquire why the curricula of all three programs contain a high number of courses in mathematics. The program coordinators explained that all degrees receive are interdisciplinary combining courses from management and engineering. In the end, all graduates receive a bachelor of engineering; therefore a solid knowledge of engineering is required. This also includes courses in mathematics. The students report to the peers, they do not have any problem with the amount of mathematics and physics in their curriculum. The students further mention, the teachers always connect theory and applications to demonstrate them the benefit of each method, which enables them to learn challenging contents as well. Students from the program BIE further add, they consider mathematics and the basics in engineering very important in their field due to the focus on energy. The peers appreciate their explanation and consider HUST position as valid.

Another issues in the discussion of the peer group and the program coordinators was concerning the amount of soft skills in their curriculum, especially critical thinking. The program coordinators note, they promote critical thinking particularly in combination with teaching logical thinking. Although there is no single subject on this topic in the curriculum of the programs under review, the students are encouraged to critical thinking during their entire study process. According to the lecturers, they often assign group or individual projects, which have to be analyzed and presented in front of the class. Similarly, students have to read literature before classes to be able to actively participate in a group discussion during the lectures. Nevertheless, the stakeholders mention that there is room for improvement concerning the soft skills of the students and graduates. This concerns especially skills like giving presentations and communication skills with national and international partners. Upon discussions with the students, they also confirm the expert panel that they wish to improve their skills and competencies in communication, presentation and critical thinking.

During the meeting with the program coordinators, the experts also ask on the amount of courses taught in English and the differences between the standard and advanced programs. The program coordinators specify that all programs under review are standard programs, which are taught fully in Vietnamese. Yet, since all programs aim to train the students for a job in an international environment, the lecturers integrate new material in English. They often require the students to translate literature from English to Vietnamese and vice-versa to observe and help to improve their students' level of comprehension. In addition, a strong focus also lies on the understanding of the international terminology, which are mentioned during the lectures and integrated in the teaching material. To advance the students understanding in English, SEM invites international lecturers, who also introduce new English material to the students. The program coordinators fur-

ther mention, that the curricula of the three study programs contain one course in academic writing, which is fully taught in English. Still, the lecturers in the program aim to increase the amount of English in the study programs in order to recruit a higher number of international students. To attract international students, SEM has started summer schools (4-5 weeks). However, the number of international students is still low. In this context, the experts added how the curricula prepare the students for working in an international environment. The program coordinators describe, that the skills for working in an international company require the knowledge of languages as well as an understanding of the international business environment. Therefore, all bachelor programs under review have connections to international co-operations in Vietnam in order to give them feedback in this regard. The students confirm the peers, none of the subjects are fully taught in English, but teachers integrate a high amount of English to their lectures. In the opinion of the students, the teachers are very skilled in English and show a good understanding for integrating English to their classes.

In the discussion with the students, the peers raised also the issue of the internship. The students highly value the internship to gain practical experience. According to them, they are able to choose their own topic of interest within the frame of the company. Two supervisors, one at the company and one at the university, assure that the topic is adequate for the student's level and the time frame of the internship.

The stakeholders mention in the open discussion with the expert panel, that they would appreciate if the curriculum would include more topics on sustainable management and new green developments such as electrical vehicles.

In the opinion of the expert panel, the curricula is well suited to meet the learning outcomes and to teach the students all necessary skills in their technical fields. They consider, the overall objectives and intended learning outcomes for all three degree programs are systematically substantiated and updated in its individual modules. The module handbooks clear state, which knowledge, skills and competences students will acquire in each module.

Nevertheless, the peers agree with the stakeholders and students on the importance of presentation, communication and negotiations skills in their native language and in English. They further consider, the curricula should be expanded in relevant topics for the future including electrical vehicles, renewable energy, greenhouse gas emissions, zero emissions and circular economy. Additionally, the expert panels considers, it is advisable to integrate practice and theory at earlier semesters and suggest guest lecturers from companies or excursions to companies as one method to accomplish this.

## Criterion 1.4 Admission requirements

**Evidence:**

- Admission Policies
- Statistics of Admission
- SEM admission handbook
- leaflets and brochures on the study program
- HUST webpage https://en.hust.edu.vn/
- Self-Assessment Report
- Discussions during the audit

**Preliminary assessment and analysis of the peers:**

In the SAR, HUST describes the admission for domestic and international students following the requirements and guidelines of the Ministry of Education and Training. The admission is coordinated by the admission office of HUST with consultation of members of the SEM. Representatives of both offices meet during January and February each year to determine the admission scheme with detailed content such as the recruitment policy, admission priority policy, candidates and recruitment methods, scope, programs, admission schedule, and methods of registration. The information is announced on mass media, leaflets, on information channels and the official website of HUST. Information is distributed in Hanoi and other provinces with cooperation with large newspapers and Provincial People's Committees. The admission regulations are transparently presented on the webpage.

Domestic admission at HUST is possible in three different methods

- Admission for talented students
- Admission from High School Graduation Exam
- Admission from private entrance examinations

The average size of applicants from each applicant groups differs between the years but generally ranges between 10–20% for talented students, 50–60% for high school graduation exams and 30–40% from the pool of private entrance examinations. Each method follows their specific tests and interview to ensure the adequate qualifications of the students.

**Table 1. 21 Statistics of Admission of BIE, BIM, BBA program from 2019-2021**

| Year | BIE | | | BIM | | | BBA | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number of applicants | Qualified Candidates | Enrolled students | Number of applicants | Qualified Candidates | Enrolled students | Number of applicants | Qualified Candidates | Enrolled students |
| 2019 | 40 | 46 | 44 | 100 | 106 | 100 | 80 | 91 | 81 |
| 2020 | 40 | 37 | 35 | 100 | 101 | 99 | 80 | 82 | 73 |
| 2021 | 40 | 40 | 35 | 80 | 77 | 76 | 100 | 112 | 103 |

There are 3 admission methods for domestic students (1) Admission for talented students; (2) Admission based on the results of the High School Graduation Exam; (3) Admission based on the results of the private entrance examination. For international students, only one method is applied.

International admissions are required to provide official high school/secondary school transcripts and additionally financial support statement. The process is organized via an online application followed by an online interview. The admission of guest students depends on the agreements between the two countries or between the two universities. Additionally, a formal application is required.

The auditors find the terms of admission to be binding and transparent as they are available on HUST's website in Vietnamese and English. They confirm that the admission requirements support the students in achieving the intended learning outcomes.

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

In the statement of HUST, several aspects of criterion 1 are discussed. The university states, that within their policy, improving English and soft skills of the student is of great importance. To achieve higher English proficiency of the HUST students, they offer additional courses at campus as well as several club activities. Other activities, such as a joint summer school with the University of Vienna, will continue in the summer of 2023 after an interruption period of several years due to the COVID-19 pandemic. The experts acknowledge this effort of HUST to increase the level of soft and English skills of their students. Still, no substantial improvement can be document at the moment; therefore E1 remains in place.

Concerning the curriculum in the study program Industrial Economics, HUST states that they have integrated modern and up-to-date knowledge on relevant topics for the future such as renewable energy. A new course on circular economy will be offered after the

next curricular update in 2024. The expert panel considers this development positive; however, they suggest improving the representation of green and sustainable economics in further subjects. Thus, the recommendation E4 will not be changed.

HUST further welcomes the experts' suggestion on integrating practice and theory at earlier semesters. HUST documents that visits at companies were already performed and guest lecturers were invited to teach class. Nevertheless, the experts insists on regularly conducting such exchanges with the local industries to give all students an early impression on their future job opportunities. Therefore, the experts continue to issue the recommendation E2.

In addition, HUST did not comment on the requirement A1 to adapt the name of the degree program. Therefore, the requirement remains in place.

# 2. The degree programme: structures, methods and implementation

**Criterion 2.1 Structure and modules**

**Evidence:**

- Self-assessment report
- Module handbooks of all study programs (appendix D.1.3.02)
- Appendix D.1.1.06 PLO + Course Matrix
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**
HUST states, that the Bachelor programs of BIE, BIM, and BBA are practical oriented and provide both knowledge and practices to students. All three programs consist of 132 Vietnamese credit points distributed to eight semesters. According to the SAR, the number of complementary elective courses was increased during the last years to enlarge the experience of practical training having now an amount of nine credits. In their SAR as well as the module handbook, the university explains in detail the individual competences and skills that are associated with each of these module groups and the individual courses and which individual modules contribute to which learning outcomes. The peers thus gain a distinct overview of the curricular content of all degree programs as well as the structure of the modules.

Overall, the expert panel finds the structure of the modules to be adequate and manageable. They confirm that the all three bachelor study programs are divided into modules,

which are the sum of teaching a specifically defined content. With its choice of modules, the structure ensures that the learning outcomes can be reached. The three programs under review include a certain variety of elective courses among which the students can choose in order to develop individual specializations and course of study (student mobility, work experience etc.). The structure of the curriculum allow students to complete the degree without exceeding the regular course duration. The expert panel further assert that the modules have been adapted to the requirements of the degree programme. They ensure that each module objectives helps to reach both the qualification level and the overall intended learning outcomes.

While looking at the provided study plans, the peers notice that there are some compulsory classes, for which no credits are awarded. This concerns the physical education courses “Sports theory” and “swimming” as well as the military education courses “Vietnam communist party’s direction on the National Defense”, “Introduction to the National Defense” and “General Military Education”. While the study plan does not indicate credits for the physical education courses, credits are indicated in the module handbook for the same courses. No credits are indicated for the military education courses in either the study plan or the module handbook. The peers see that this is a national regulation and all Vietnamese students have to take these courses (international students are exempted from the Military Training) and by government regulation, no Vietnamese credits can be awarded form them. However, since all mandatory parts of the degree programs need to be awarded with ECTS points, the peers expect HUST to determine the students’ workload for these courses and award ECTS points accordingly.

Nevertheless, the peers agree that the structure and modules of the programs contribute to the achievement of the intended learning outcomes, a successful study process and the job opportunities of the students after graduation. All working practice intervals including the internships are well-integrated into the curriculum, and the higher education institution vouches for their quality in terms of relevance, content and structure. Further, the experts assures, that HUST has established rules for recognizing achievements and competences acquired outside the higher education institution.

**Criterion 2.2 Work load and credits**

**Evidence:**

- Module handbooks of all study programs
- Course syllabus
- Diploma supplement

- Credit system documentation by the Undergraduate Training Office
- Self-assessment report
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**
As HUST describes in their SAR, the academic year is divided into two main semesters and one summer semester. The two main semesters lasts for 20 weeks and combines 16 weeks of learning and teaching, one week of mid-term exams and two to three weeks of final exams. Mid-terms exams are held during the ninth week of the semester. The summer semester is shorter and consists of only five weeks of study and one week of exams.

During each semester, the students can take between a minimum of 12 credits and a maximum of 24 credits. The effective number of credits the students can take depends on their achievements in the previous semester. In the three bachelor‘s degree program, students need to take at least 12 credits and maximum up to 24 credits in one semester. The workload of the last two semesters is reduced to give the students enough time for their theses as well as to already start looking for a job.

According to the documents provided by the HUST undergraduate training office, one credit is defined by 15 periods of theoretical lecture, 30-45 periods of practice, experiments or discussion, 45-90 periods of enterprise visits or internship and/or 45-60 periods of essay, capstone projects or graduation thesis project. Consequently, workload per credits depends on the course and activity. The document states the following examples:

- One credit is equivalent to 45 periods including lectures and self-study. Normally, one credit consist of 15 periods of lecture or 30 periods of exercise, discussion, practice or experiment.
- To achieve one theoretical credit, a student needs to spend 15 periods in class and 30 in self-study hours. Thus, one theoretical credit equal 15 period: 15 periods x 50 minutes + 30 hours = 42.5 hours.
- To achieve one credit of exercise, practice, discussion or experiment, one student needs to spend 30 hours on exercise, practice, discussion and experiment and additionally 30 hours on self-study. Thus, one credit: 30 periods * 50 minutes + 30 hours = 55 hours.
- To achieve one internship credit, a student needs to spend from 65 to 80 hours in their internship
- To achieve one credit of capstone projects, subject projects or graduation thesis, a student needs to spend between 45 and 60 hours.

HUST offers the following conversion table between the Vietnamese credits to ECTS points (considering one ECTS point equals 30 hours of time spend in classroom, learning activities, practice, experiment and/or self-study.

**c. Table of equivalent credit duration conversion at HUST and universities in Germany**

| HUST credit | HUST study hour | Converting credits according to ECTS of universities in Germany | Equivalent credit |
|---|---|---|---|
| 01 credit of theoretical lecture | 42,5 study hours | 1 ECTS = 30 study hours | 1 credit = 1,42 ECTS |
| 01 credit with both theory and exercises/experiments | 55 study hours | 1 ECTS = 30 study hours | 1 credit = 1,83 ECTS |
| 01 credit for internship | 65-80 study hours | 1 ECTS = 30 study hours | 1 credit = (2,2-2,67) ECTS |
| 01 credit for project, graduation thesis | 45-60 study hours | 1 ECTS = 30 study hours | 1 credit = (1,5-2,0) ECTS |

In the module handbook, each course description contains a clear specification of the amount of time spend reading the literature prior to the course, the time spend in practice/class and the amount of self-study.

In the discussion with the program coordinators, they explained to the peers, that the credit system was added to their curricula in hindsight in 2009 following the outlines of the university credit system from the USA. Despite the variation of the amount of hours per credit, the program coordinators highlight that all module handbooks list the amount of credits, as well as the total amount of workload including the duration of contact hours (theory and exercise) and self-study. The expert panel was further presented a transfer table showing the amount of credits and ECTS points for each course. Next to the module handbook, this information is available in the syllabus, the student handbook and on the webpage (in Vietnamese). In the opinion of the program coordinators, this information distribution makes it clear to the students, how much amount of work is required for each module and the awarded credits of each course. The students agree with this statement by saying they are aware of the workload for each module and that the workload listed in the module descriptions reflects the workload they spend on completing the module. The students explain to the peer panel, that the amount of credits in each semester depends on the amount of courses. During the early semesters, students are often busy between

Monday and Friday while in higher semesters, they have to be present on campus only for a few days a week.

The peer panel further inquires why the semester is divided into three semesters. There, the program representatives reply that in amount of weeks per semesters varies between the three semesters. The purpose of the summer semester is for students to advance faster because they are able to complete more courses per academic year. In addition, the summer semester allows them to repeat courses without any delay in their studies.

Besides, the expert panel is interested in the workload of the internship. The program representatives specify that they seek to give the students an early view on their future work and therefore integrate early contact between the industry and the students. The internship in a company is mandatory and had a duration of at least eight weeks. Since most students take the internship close to graduation, they combine it with data collation for their final project. The duration of most internships are three to six months, which is longer than the duration required (eight weeks), however the students voluntarily extend their internship since they consider it useful for their jobs. In the discussion with the stakeholders, they additionally mention to also offer voluntary internship to students after the fourth semester.

The expert panel can follow the explanations outlaid by HUST on the calculation of the workload for the students of the three study programs under review. They consider the estimated time budgets are realistic enough to enable students to complete the degree without exceeding the regular course duration. The curriculum is designed to avoid structure-related peaks in the workload. The calculations presented during the on-site visit show, the calculated workload clearly considers the time in the classroom as well as self-study time. Further, the experts verify, that all compulsory courses are awarded with credits. However, in the opinion of the peers, the calculation of ECTS points due to the individually defined self-study hours is complex. In addition, the experts miss evidence to show, how to actual workload of the modules is estimated and monitored. This is required in the ECTS framework; therefore, the peers suggest asking the students directly about their experiences. This could be achieved for example by including respective questions in the course questionnaires. Of greatest interest is the students' total workload, which summarizes the amount of hours the students need to complete all learning activities in one module (such as lectures, seminars, projects, practical work, self-study and examinations). Since workload is an estimation of the average time spent by students to achieve the expected learning outcomes, the actual time spent by an individual student may differ from this estimate. Therefore, the workload estimation should be based on the time an "average student" spends on self-study and preparation for classes and exams.

In conclusion, the peers therefore consider it important to establish a process to document and monitor the workload of all modules including theoretical and practical hours to document the actual workload of each module in accordance with the ECTS system.

## Criterion 2.3 Teaching methodology

**Evidence:**

- Module handbooks of all study programs
- Examples for active-based learning, project-based learning, research-based learning and practice-based learning in the appendix
- Self-assessment report
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

In the SAR, HUST states it focuses on learner-based approaches to innovate and improve the learning of its students. To achieve its mission, they apply a wide variety of teaching and learning methods, including active learning, research-based learning, practice-based learning and project-based learning. Project-based learning is mainly applied in the internships, where it promotes the students to connect their theoretical knowledge from the classroom to the practical work at an enterprise. Practice-based learning is integrated into several lectures using software practice such as “Inventory and warehouse management” (bachelor program BIM) or “Business simulation” (bachelor program BBA). Research-based learning takes mainly place at HUST outside the classroom by motivation of the students to participate in various competitions. The HEI hosts several student research competition, where students are develop a strategy to solve a problem by collecting and interpreting data to find a solution. The best person or group can advance to national competitions.

The teaching staff explain to the peers that project-based learning is mainly integrated in the final project, but further mention creative ways to integrate it into other courses. One example in the course “Business process management”, the students should learn how to prioritize factors in formulating a business model. In order to be able to perform a real analysis, students are send to small enterprises to identify problems and help to optimize their business. Types of small enterprises include for example local restaurants where the analysis often showed room for improvement in logistics. Similarly, students are encour-

aged to join research competitions to solve real-world problem in bigger companies to join national competitions.

The peers also inquire how active learning is integrated in the teaching methods. The teaching staff mention, they often create an environment for discussions in their lectures in order to foster the soft skills of the students. Therefore, students often have to prepare a project (often group work) to study (online) resources to debate during class. In the opinion of the lecturers, this shall not only benefit the soft skills of the students, but also promote their critical thinking skills. Lecturers from the bachelor program BIE further report to integrate flipped classroom teaching. As one example, they mention dividing the class into smaller groups, who receive a report of different companies. This material has to be studied and analyzed to identify opportunities to increase the productivity. The results have to be presented in class at the end of the semester. In addition, the program representative confirm during the audit, that they aim to encourage students to actively contribute in class. In their opinion, this way of active learning also fosters soft skills, which are needed on the job market.

In the opinion of the experts, the module handbooks give a clear overview of the type of teaching methods applied in the course. The degree programs are designed to be well-balanced between attendance-based learning and self-study. In addition, the teaching methods and instruments used support the students in achieving the learning out-comes.

**Criterion 2.4 Support and assistance**

**Evidence:**

- HUST web portal (ctt.hust.edu.vn)
- Self-assessment report
- Discussing during the audit

**Preliminary assessment and analysis of the peers:**

HUST describes various resources to advice students in the different stages of their student life. This include consultation prior to starting their studies at HUST to support them finding their most suitable study program as well as support in finding scholarships and financial assistance.

New students at SEM take part in a Welcoming Orientation on the first day of the registration to give an overview about the study programs and general information on administrative procedures and tutorship. Additionally, students meet with the SEM board of deans at the beginning of the semester to receive information on learning and training

during their studies. During the third year, the students have a meeting with the board of deans, the heads of the department and representatives of local businesses to discuss their specialization in their study programs and career path after graduation. Further meetings are organized between the school leaders and alumni, who actively advise the students in terms of internships and job opportunities. Annually, SEM also holds a collaboration event with national and foreign companies to offer the students a practical view on the job market and connect the students to companies offering internships. To motivate the students to participate in scientific research, SEM holds weekly meetings of the Student Scientific Research Week, which gives the students a perspective on the scientific research activities of the entire school.

During their entire study at the SEM, lecturers are generally available to discuss career plans and give insight into their scientific research. Students can therefore receive consultation during all stages of their studies. The Student Affairs Office and the Research Management Office can additionally be contracted for advice. The Student Affairs Office builds the bride between students, staff, lecturers and businesses to support the students. They provide information on scholarships, factory visits, internships and employment opportunities. The office also connects the students with the alumni network. Next to personal consultation, every class receives an academic advisor, who has the responsibility of monitoring the progress of each student. They counsel them on topics such as course selection or personal study plans for each semester. The academic advisor meets with its students at least on two occasions during each semester. The teaching staff confirms to the expert panel, that they advise and support their students on a regular basis. International students receive a higher degree of attention, where the staff members aims to connect them with Vietnamese students to improve the exchange (currently, SEM has 6 international students).

Financial support is also available at HUST. Scholarships are divided into four categories (1) Talent scholarship, (2) Study support scholarship, (3) Research scholarship and (4) Sponsored scholarship. Scholarships focus on economically disadvantageous families as well as students with excellence performance in the previous semester. Students at SEM have the opportunity to apply for financial support from the HUST learning incentive fund. Each year, between 20 and 50 students received this scholarship during the last years. An additional scholarship is available due to a sponsorship with the Vietnamese company HB Group, which was initiated and is organized by an SEM alumni. Additional scholarship were organized during the Covid-19-pandemic by HUST and the alumni of SEM.

During the Covid-19-pandemic, SEM has further supported student access to computer in their home environment to ensure online access to classes taking place on Microsoft Teams.

Students at HUST have further access to regular healthcare exams at their Medical Center. This includes many opportunities to support students with serious illnesses to encourage them to continue with their studies.

HUST also offers a web portal (ctt.hust.edu.vn), where regulations, admission and student handbooks are available for download. General news and services about the HEI are additionally available in this website.

In conclusion, the peers are convinced that the support and assistance measures in place at HUST contribute to the successful completion of the study programs under review. The experts consider, a satisfying amount of resources is available to provide individual assistance, advice and support for all students. The allocated advice and guidance (both technical and general) on offer assist the students in achieving the learning outcomes and in completing the course within the scheduled time.

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

HUST explains to the experts that the courses on physical education and military education were awarded with credits before a curricular revision in the year 2017. The peers appreciate those explanations, but point out the fact that it is not relevant to the current issue. It is crucial that credits are awarded to all mandatory modules in the current curricula. Therefore, the peers decide that this requirement A2 remains in place.

In addition, the university explains, that the workload of each module was estimated based on the contact hours and estimated time on assignments and preparations before classes. They admit, that an individual student workload of each module was not under observation at SEM. HUST appreciates this suggestions and will start to monitor the workload of the students with questionnaires. Until new questionnaires and the first results are being presented by the university, the requirement A3 is still supported by the experts.

# 3. Exams: System, concept and organization

**Criterion 3 Exams: System, concept and organization**

**Evidence:**

- Module handbook of each study program
- Course syllabus
- Self-assessment report
- Discussion during the audit
- Exam examples view during the on-site visit

**Preliminary assessment and analysis of the peers:**

At HUST, the exams are module-related and structured to cover all expected learning outcomes. The assessment methods are describes in the syllabus of the courses and the module handbooks. A professional committee needs to approve the assessment of each course to verify that the assessment methods match the content of the module. To create fairness for the students, the questions of each exam are cross-checked additionally by a second employee of the same department.

HUST includes a variety of specific assessment methods in the different courses of the three bachelor programs under review. The final grade usually summarized (1) attendance/participation check & class Q&A; (2) quizzes; (3) writing test; (4) multi-choice test; (5) individual project assignment; (6) group project assignment; (7) computer-based exam; (8) instructor's assessment and reviewer's (for graduation internship and graduation thesis); and (9) thesis defense (for graduation thesis). The main assessment methods, however, are examination, report and presentation.

The grading system at HUST applies a 10-point grading scale. The final grade of one course is the weighted average of two components, the course process and the grade of the final exam. The weight of this average is clearly stated in the module handbook and the syllabus of each course. Common ratio of the final grade is 70% for the final exam and 30% for activity during the courses, but the actual ratio varies among courses. Recently HUST favor a final grade ratio of 50% final examination and 50% course activity, which has not yet been implemented in all lectures. Course activity also contain the mid-term examinations, which are held in the ninth week. Final exams take place in the 17$^{th}$ and 18$^{th}$ week of the semester, which is determined in advance for the entire school year by the Academic Affairs Office. After the exams are published, the students have the chance to appeal their grades. In such cases, a review board is established to conduct a re-evaluation of the exam before the results are announced to the student. The final examination normally contains a mixture of tasks, including open questions and multiple-choice questions in a written test.

**Table 3. 4. Grading scales**

| Scores in the 10-point grading scale | 0,0÷ 3,9 | 4,0÷ 4,9 | 5,0÷ 5,4 | 5,5÷ 6,4 | 6,5÷ 6,9 | 7,0÷ 7,9 | 8,0÷ 8,4 | 8,5÷ 9,4 | 9,5÷ 10 |
|---|---|---|---|---|---|---|---|---|---|
| Grading letters | F | D | D+ | C | C+ | B | B+ | A | A+ |
| Score in the 4-point grading scale | 0 | 1 | 1,5 | 2,0 | 2,5 | 3,0 | 3,5 | 4,0 | 4,0 |

**Table 3. 5. Academic Ranking**

| GPA/CPA | < 1.0 | .0-1.49 | 1.5-1.99 | 2.0-2.49 | 2.5-3.19 | 3.2-3.59 | 3.6-4.0 |
|---|---|---|---|---|---|---|---|
| Rank | Poor | Weak | Medium-Weak | Medium | Fair | Good | Excellence |

The final scores are divided into the 10-point grading system. Students pass the course with a grade of D or higher (higher than 4 out of 10). After the exams are published, the students have the chance to appeal their grades. In such cases, a review board is established to conduct a re-evaluation of the exam before the results are announced to the student.

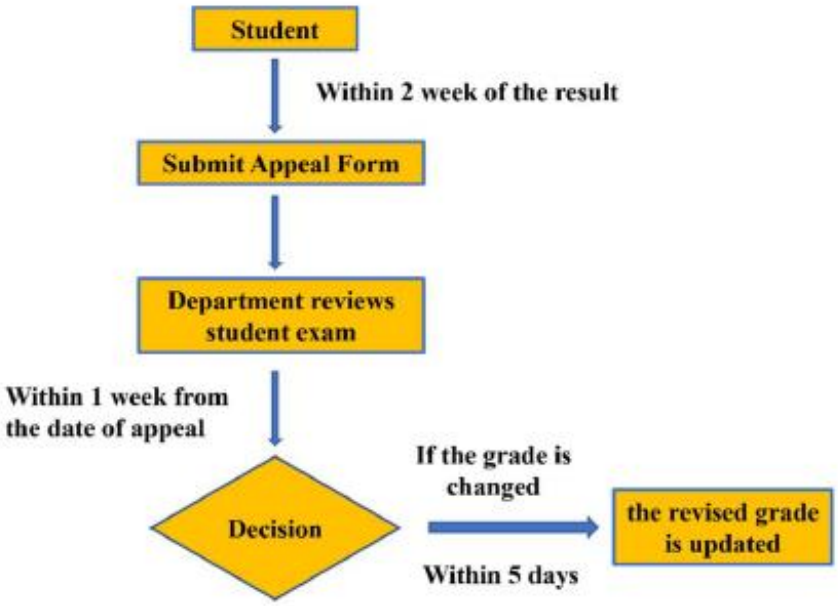


**Figure 3. 1: Grade appeal process**

Students, who fail one exam or who want to improve their grade, can attend the course again in the next year. If the mid-term exams cannot be taken due to illness or other reasons, an alternative exam can be arranged. If students cannot take the final exam for legitimate reasons, the exam can be postponed and take during the next two semesters.

The final assessment for the graduation internship is an oral exam. The graduation thesis has to be defended in from of an examination board of at least three lecturers. The grade of the graduation thesis is the weighted average of the supervisor, the reviewer and the project grading board.

The expert panel is especially interested in the review process of the exam questions. According to the program coordinators, the list of questions and tasks of one exam is reviewed by a second lecturer from the same department. They review the exam and verify if the content of the course and the level of the questions is adequate for the students. In addition, they verify if the exam questions are consistent with the learning outcomes of the course stated in the syllabus and the module handbook. The head of the department further verifies if questions from different lecturers in one course are comparable with each other and match the grade of the students. The expert panels approve this review system and consider it as a good method to ensure a high quality and adequate level of the exams.

The expert panel further ask the students for their opinion on the different examinations during the semester. The students consider the content and level of the examinations are in agreement with the lectures. The teachers upload all documents regarding the course to their student platform, which facilitates their learning. They further confirm that currently in the courses, the final exam counts for 60% of the final grade. In the opinion of the students, they agree with the current regulations to represent their performance in this course. During the first two semesters, the amount of exams during the final exam periods ranges around seven to eight, but decreases in higher semesters.

During the on-site visit, the peers were provided with a selection of exams and final projects to check. They confirm that these represent an adequate level of knowledge as required by the EQF level 6 for the three Bachelor's programs. The forms of exams are oriented towards the envisaged learning outcomes of the respective courses, and the workload is distributed in an acceptable way. In summary, the expert panel agrees, that the exams are well designed to individually measure to which extent students have reached the learning outcomes defined. Exams are structured to cover all of the intended learning outcomes (knowledge, skills and competences) and offer students continuous feedback on their progress in developing competences. The expert panel considers the module handbooks to clearly reflect the examination methods of each model and the form of assessment. The number and distribution of the exams ensure that both the exam load and preparation times are adequate and that all regulations are transparently presented. In the opinion of the experts, HUST has established mechanisms, which ensure that all students learn the details of what is required in order to pass the module (pre-examination elements, assignments etc.) no later than at the start. All exams are marked

using transparent criteria. There are mechanisms in place, which ensure that exams marked by different examiners are comparable. The higher education institution vouches for the quality in terms of relevance, content and structure of all student assignments completed outside the institution. In addition, the degree programme comprises a final project to ensure that students work on a set task independently and at the level aimed for. Regulation for illness and re-sits are defined and are accessible online.

However, the peers consider that the rules and regulation on disability compensation measures for students with disabilities, illness and other mitigating circumstances. As a result, students solely depend on the initiative of the respective lecturers. To guarantee that students with disabilities can study on an equal footing, HUST should establish formal compensation measures that specify under which conditions and how exams are modified to accommodate students' special needs.

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

With regard to the requirement to establish formal compensation measures that specify under which conditions and how exams can be modified to accommodate students' special needs, HUST explains, that despite facing many financial difficulties, they made efforts in implementing policies for students with disabilities. For example, HUST implemented classes (both theoretical and practical) considering students with disabilities in lecture halls in recently constructed buildings (equipped with elevators).Students with disabilities are exempted from physical education modules. In addition, HUST has issued a guidance and policy about the support for students with disabilities and a policy for postponing exams for students who are unable to take the exam due to unexpected illness.

These policies clearly demonstrate the initiative efforts in creating a positive learning environment for students with disabilities at HUST. The peers appreciate those explanations, but note that the compensation measures included in the regulations for student affairs are very general and do not specifically address the possible compensation measures for students with disabilities. In addition, the extent to which exams can be modified in order to accommodate students' special needs is not addressed either. Therefore, the peers decide that this requirement A4 remains in place.

# 4. Resources

## Criterion 4.1 Staff

**Evidence:**

- Self-assessment report
- Staff handbook
- Staff development plan
- HUST staff regulations
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

Currently, SEM has nine associate professors, 32 doctorates and 23 post-graduation teachers. Forty percent of the teaching stuff has received a PhD degree (26 lecturers) and were trained mainly at universities outside of Vietnam.

The Table below gives an overview of the qualifications of the teachers involved in the three bachelor programs under review:

**Table 4. 1 Teaching staff of 3 programs**

| **Programme of Industrial Economics** | | | | |
|---|---|---|---|---|
| From | Full professors | Associate professors | Doctoral holders | Master holders |
| SEM | | 8 | 25 | 19 |
| Other faculties | | 1 | 20 | 6 |
| Total | | 9 | 41 | 25 |
| **Programme of Industrial Management** | | | | |
| From | Full professors | Associate professors | Doctoral holders | Master holders |
| SEM | | 8 | 28 | 22 |
| Other faculties | | 0 | 17 | 7 |
| Total | | 8 | 45 | 29 |
| **Programme of Business Administration** | | | | |
| From | Full professors | Associate professors | Doctoral holders | Master holders |
| SEM | | 9 | 29 | 22 |
| Other faculties | | 0 | 17 | 7 |
| Total | | 9 | 46 | 29 |

Additionally, SEM employees five people in their administrative staff and one technical staff member.

The entire teaching staff of SEM teaches more than 200 courses at their school and additionally gives lectures at other departments. The ratio between lecturers to students in 1:22 in the program Industrial Economics, 1:24 in the program Industrial Management and 1:25 in the program Business administration.

By regulations, the staff at SEM has to work 40 hours per week, which is divided into teaching, research and other duties. The academic staff is required to spend at least 12 hours conducting research. Additional responsibilities vary due to the position of the staff member and their qualification. During the discussion, the program coordinators and the teaching staff mentions to the expert panel, they divide their weekly schedule into 18 hours of research, 18 hours of teaching (including class preparation and exam grading) and four hours of student service.

The staff at SEM receives money for research from the university research fund, co-operations with stakeholders as well as external research funding agencies. Research is required for all teaching staff at HUST.

**Table 4. 4 Research projects and budget for staff of SEM-HUST**

| Academic year | Number of projects | Total budget (USD) |
|---|---|---|
| 2017-2018 | 10 | 22,000 |
| 2018-2019 | 8 | 35,000 |
| 2019-2020 | 9 | 24,500 |
| 2020-2021 | 11 | 28,400 |
| 2021-2022 | 12 | 32,300 |

**Table 4. 5 Numbers of publications of SEM-HUST**

| Academic year | International journal | Local journal | International Conference proceeding | Local Conference proceeding |
|---|---|---|---|---|
| 2017-2018 | 2 | 14 | 17 | 1 |
| 2018-2019 | 6 | 39 | 20 | 13 |
| 2019-2020 | 16 | 62 | 29 | 6 |
| 2020-2021 | 25 | 73 | 44 | 10 |

HUST invites academic staff from different Vietnamese universities and from abroad as well as from national and international companies.

The program coordinators report to the expert panel that lecturer are required to apply for an internal research fund at HUST after finishing their PhD to prove their individual research capabilities. This application needs to be submitted in the first year after graduation. In addition, the program coordinators verify to the experts that all new teaching

staff is required to publish a research paper in an international journal and to attend the international conference at HUST, which is held annually in the first week of November. This joint meeting was initiated in 2012 and is currently organized by institutes from Vietnam, Indonesia and the UK. Scientific funding is available from grants within HUST as well as from the Ministry of Education and Training. The teaching staff explains to the experts, they are cooperating with companies and with national and international research projects with partners from Europe, the USA and Japan. Teaching staff from the program BIE mentioned their strong connection to the national energy companies such as EVN while the program BIM highlight their long collaboration with Toyota VN, who sponsors their program and their teaching staff development.

In the discussion with the peer panel, the teaching staff confirms their satisfaction with their workload. In their opinion, there is a good balance between teaching and research. Everyone aims to follow the structure of 18 hours teaching, 18 hours research and 4 hours service. The lecturers admit to the experts, that the teaching balance in each semester is not equal and teaching can reach up to 20 hours per week. However, the annual average is consistent with the outlined balance. The teaching staff also state, that the time for lecture already contains the preparation and that no-one of the staff present teaches more than 3 courses of 2-3 hours in one semester.

The peer panel also asked for the proportions between male to female in the department. The teaching staff mention, that their ratio is around 50:50 while the students often have a higher ratio of females of up to 70%.

Overall, the peers agree that the composition, scientific orientation and qualification of the teaching staff team are suitable for sustaining the degree. The expert panel considers the staff ass sufficient resources to provide assistance and advice to students and fulfill their administrative tasks. The expert panel welcomes the focus of HUST on research and development activities carried out by the teaching staff are in line with and support the level of academic qualification aimed at.

**Criterion 4.2 Staff development**

**Evidence:**

- Self-assessment report
- Staff handbook
- Staff development plan
- HUST staff regulations

- Discussion during the audit

**Preliminary assessment and analysis of the peers:**
SEM motivates their staff to continue their personal education throughout their career. The staff has the possibility to participate at workshops and courses to earn certificates or other credentials. HUST in cooperation with the Ministry of Education and Training support their academic stuff with scholarships to earn a PhD degree. The HEI further motivates its staff to attend regional and international meetings, conferences and workshops to present their research and exchange with colleagues from various fields. If possible, participation in committees, boards and as officers in national and international organizations in encourages by the university. Members of the teaching staff can apply for exchange programs at international partners with a duration of one week to six months. In the last years, the majority of exchange programs were funded by international partner organizations enabling the staff members to stay abroad in Italia, Portugal, Romania and South Korea.

To foster exchange at SEM, it organizes an annual international conference at HUST. The entire staff is involved in this meeting and strongly encouraged to give an oral or poster presentation of their current research.

The program coordinators verify in the discussion with the expert panel, that around 50% of the current staff have a PhD whereas the rest holds a master degree. The department recommends and supports its members in earning a higher degree. New staff members are required to study pedagogical methods and English proficiencies (minimum level D1).

The teaching staff also affirm the annual conference at HUST as an excellent event for scientific exchange with domestic and foreign experts. Additional exchange between domestic researchers and the industry takes place at national event and in cooperation projects. The teaching staff mention further, that they are frequently applying for exchange grants to financially support them to stay abroad. For short-term projects of one to three months, funding is relatively easy accessible in their opinion and they are allowed several international stays per year. However, there is no sabbatical comparable to the USA even though longer exchange programs are possible according to the regulations at HUST (up to one year abroad). The lecturers present in the discussion mention to the peer panel, they were granted Erasmus projects to Italy and Poland, while others report of short stays in Singapore. Additionally, a strong cooperation with universities in France is stated, with whom they organize an annual summer school.

HUST also offers courses on staff development including teaching pedagogy. One staff members notes to the experts, that they are currently participating in a course on presen-

tation techniques to improve the teaching materials. This course is given by the government and therefore free for any lecturer to join.

In summary, the experts confirm that SEM offers sufficient support mechanisms and opportunities for members of the teaching staff, who wish to develop their professional and didactical skills further.

**Criterion 4.3 Funds and equipment**

**Evidence:**

- Self-assessment report
- Information in laboratories submitted in the appendix
- HUST library webpage http://Dlib.hust.edu.vn.
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

HUST is a public university and is therefore funded by the national government of Vietnam. The central administration of HUST organizes and delegates a budget for each school and facility, including salaries, and major investments in the infrastructure including among others classrooms and IT equipment and the central library. In each school, a standard committee has to approve the budget annually. In addition, the each school is allowed to keep a share of their income from educational co-operations and special technical service agreements. HUST states, it offers modern IT equipment in all classrooms and uses an online student platform named SIS (Student Information System) to manage the e-curriculum, exam grading, class registration, class schedule, exam schedule and other activities. Constant updates of the IT facilities are conducted based on collected feedback of students and stakeholders.

HUST is located at a large campus in a total area of 256,100 m² and offers their students lecture halls, offices, laboratories, libraries, computer laboratories, dormitories, a medical center, a cultural hall and a stadium. Each classroom is equipped with modern teaching equipment and Wi-Fi is available on the entire campus for the students, including the dormitories and libraries. The current main library was opened in 2005 in a five-floor building offering reading rooms, borrowing rooms, multimedia rooms as well as spaces for studying and using the public computers. The entire library literature can be access online. Next to the access to books and journal in the library, an online database provides access domestic documents and new international study material for self-study and research. The library is continuously expanded and also receives donation from various

sources. These including books and journal donations as well as additional financial funds, in particular from alumni, entrepreneurs and academics. The library offers leaflets on how to use to library and conducts training courses on effective library use skills for students. On a regular basis, HUST conducts survey on the level of satisfaction of the library. Issues identified by the last survey included problem to locate documents, but the overall satisfaction was above 90%.

In addition, HUST manages its own Medical Center. Students and lecturers can go to the Medical Center for examination and treatment in case of accident and illness.

The laboratories at SEM offers the students the possibilities to train their skills, particularly in their computer skills. The school recently received an externally sponsored laboratory for business simulations and economics data mining. In cooperation with the school of mechanical engineering, SEM also manages a smart factory laboratory.

In the discussion on the on-site visit, the representatives of the rector's office explain, that five new e-sources were added to the library to support the lecturers and students during the COVID-19 pandemic. Both groups verify their access to the library from outside the campus. In addition, the teaching staff states, the have access to a sufficient amount of international journals to follow the current development in their fields of expertise. Furthermore, the teaching staff discusses the different laboratories with the experts. They inform the peers on the new laboratory on business simulations running a SAP and EAP software to perform various types of simulations. The SAP lab is also available to students. An additional laboratory was sponsored by Hitachi, which is used for smart factory applications. The teaching staff further teaches courses on basic software such as MS sources, R or SPSS in two additional lecture rooms equipped with computers for all students. The expert panel visited these laboratories during the on-site visit, who consider the equipment in these laboratories as sufficient to teach the content of the programs under review.

In the discussion with the experts, the students are very satisfied with the equipment at HUST including the laboratories. Generally, there are always two advisors for technical support. Overall, they students also appreciate the library as a learning environment for self-study and group activities and access to domestic and international literature. The opening hours between Monday and Friday are until 9 pm while the library is open until 4 pm on Saturdays and Sundays. The students remark, that especially the shorter opening hours are not in agreement with their learning activity during the weekends.

The expert panel confirms that SEM holds enough work spaces and laboratories and that all laboratories are equipped with modern and sophisticated instruments to accommodate the needs of the students as well as the teaching staff in conducting practical train-

ing and research. In addition, the current funding allows maintaining the current standard and purchasing further instruments if necessary. In addition, the expert panel suggest that SEM should communicate with their students to know the needs and requirements concerning the library for their best learning outcome.

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

HUST states that they encourage their students to self-studying in public spaces on campus, including the library. The HEI states, that a new building will give the students in the future more space for their studies and better conditions to conduct group works. However, since the implementation of any changes since the on-site visit remains unclear, the experts continue to support the recommendation E5.

# 5. Transparency and documentation

**Criterion 5.1 Module descriptions**

**Evidence:**

- Module handbook of each study program
- HUST webpage https://en.hust.edu.vn/web/en/home
- SEM webpage http://sem.hust.edu.vn/en/home
- Self-assessment report
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

The official website of SEM gives an overview of the bachelor study programs BIE, BIM and BBA. The webpage includes general information about the study program and the career opportunities. Additional information about the curriculum is available as well as the objectives and course content of every module of each study program under review. All this information on the SEM webpage is available in both Vietnamese and English. Additionally, the Vietnamese webpage contains information on the workload, grading system, study and learning methods and the name of the lecturer.

Enrolled students of each study program have further access to the internal webpage of their program, which contains more details such as the syllabus, the final thesis, and timetables. Two intranet systems at HUST give the students access to virtual classrooms,

which are run on MS Teams and an adaption of Moodle Couse Management System (LMS). The two are incorporated into educational tools to support the student process and earning.

News and other events are further distributed by the school via social media including Facebook and Zalo.

The expert panel approve the content presented on the webpage of each study program. They further consider the module descriptions in the module handbook contain information on the module identification code, the person(s) responsible for each module, the teaching method(s) and workload, the credit points awarded in this module, the intended learning outcomes and module content, the planned use/applicability, the admission and examination requirements, the form(s) of assessment and details explaining how the module mark is calculated, and the recommended literature. The

However, the peers note that the module descriptions do not consistently include information on each subject. In addition, the module handbooks do not include a calculation of the students' total workload into ECTS points transparent. Moreover, HUST has to define how many hours of students' workload is required for one ECTS point. This issue is discussed in more detail under criterion 2.2. Furthermore, the expert panel recommends to publishing the entire module handbooks online for everyone interested in the programs. To what extent the module handbooks for all three programmes must be accessible to the students as well as to all stakeholders will be described under criterion 5.3.

**Criterion 5.2 Diploma and Diploma Supplement**

**Evidence:**

- Self-assessment report
- example diploma of each study program
- example diploma supplement and transcript of records of each study program
- Discussions during the audit

**Preliminary assessment and analysis of the peers:**

According to the academic system at HUST, there are generally six graduation periods in each year. The requirement to graduate at HUST are presented on the webpage.

Currently, the diploma is issued with a diploma supplement. This contain next to the personal information of the student, the name of the completed program, degree, and their cumulative point average. Further information in the transcript of records states the instruction language and records the course code and title as well as grades.

HUST confirms to the expert panel, that they issue a degree certification with a diploma supplement in Vietnamese and English shortly after graduation. The expert panel confirms, these documents contain information in English including a list of all completed modules during the studies. However, the experts note, the provided documents miss essential information in both their diploma supplement as well as the transcript of records.

According to the ASIIN regulations, the Diploma Supplement needs to contain detailed information about the intended learning outcomes, objectives, the official duration, and the grading system of the degree programme. Therefore, the expert panel demands to include this information in the Diploma Supplement. Furthermore, the peers note that neither the Transcript of Records nor the Diploma Supplement contains the conversion of Vietnamese credits into ECTS credit points. HUST needs to explain in these documents, how many ECTS credits are awarded for every individual degree programme. Therefore, the peers point out that the Transcript of Records needs to list the acquired ECTS points of each course and how many ECTS points are awarded for the whole degree programme. Moreover, the Diploma Supplement needs to follow the European template and needs to include statistical data about the distribution of final grade according to the ECTS Users' Guide. This allows the reader to categorize the individual result. In conclusion, the, the expert panel recommends adapting the diploma supplement and the transcript of records to comply with the ASIIN criteria.

**Criterion 5.3 Relevant rules**

**Evidence:**

- Self-assessment report
- Staff handbook of all three study programs
- HUST staff regulations
- HUST admission handbooks
- Student handbook
- HUST official webpage https://en.hust.edu.vn/
- HUST student portal https://ctt.hust.edu.vn/
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

All relevant information are summarized as the Academic regulations, which are published on the HUST website. These regulations include information about general rules

and education rules of all programs at HUST including enrollment, evaluation and qualification and certification. All regulations are made accessible for everyone who is interested in studying at this university as well as stakeholders. The webpage also contains information on orientation meetings, the student handbooks and information on each study program.

The program coordinators confirm that all qualification goals of the three programs are available on the webpage (in Vietnamese) next to all regulations. Additionally, everyone interested in studying at SEM can find information on the differences between the programs on their webpages. They state, all regulations are further available in the student handbook, which is provided by the Student Office. Every student received this handbook at the beginning of their studies, which contains all basic rules and regulations. The program coordinators add that the students also receive all details on their study program whereas people who are interested in the program receive only an overview and the most important information. Most importantly, they warn that each student is required to collect a minimum amount of credits during every semester to avoid receiving an Academic Warning. After receiving three consecutive warnings, the student may be suspended. This information is presented to the students at the beginning of their studies and a in the student handbook.

In conclusion, the expert panel considers that the rights and duties of both the higher education institution and students are clearly defined and binding. All relevant course-related information is available in the language of the degree programme. Nevertheless, the experts consider, the information presented on the webpage should be expanded and should include among others the study plans, full module handbooks, and the intended learning outcomes in Vietnamese and English to ensure this information is available to all stakeholders.

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

In their statement, HUST acknowledges problems in the conversion of Vietnamese credits to ECTS credit points. The submitted an updated version of the module handbooks of all three study programs under review with newly calculated ECTS credits. The experts appreciate the new calculations of the workload in the module handbooks, yet they still miss a clear description of the teaching methods applied in each module. Therefore, the requirement A5 remains in place.

Concerning the information available on the webpage of HUST and SEM; the expert cannot identify a significant improvement since the on-site visit in November 2022. At this

moment, the experts cannot ensure that all up-to-date information on each module is available to all stakeholders and students. Therefore, the requirement A6 and A9 is still supported by the expert panel.

Furthermore, no new drafts for a diploma supplement or a transcript of records were submitted with the statement. Therefore, the experts continue to issue the requirements A7 and A8.

# 6. Quality management: quality assessment and development

**Criterion 6 Quality management: quality assessment and development**

**Evidence:**

- Self-assessment report
- Results of evaluation surveys (students, stakeholders, staff)
- Results of the teacher evaluation
- Graduate statistics
- Student handbook
- Discussion during the audit

**Preliminary assessment and analysis of the peers:**

HUST describes, the Quality Management Office organizes their quality management, which plans and coordinates all quality assurance processes. Each degree program has its own specific academic committee (Academic Affairs Office), which is authorized by the school board of SEM to design, monitor, assess and supply evidences for all quality assurance processes. The academic committee meets bimonthly to discuss all arising issues. Once during the year, the academic committee of each study program holds a joint meeting with the School Board to discuss the results of the regular evaluations to ensure continuous improvement of each program.

At the end of each semester, the Academic Affairs Office will organize a questionnaire for each course to understand the satisfaction of the students of the teaching process and the performance of the lecturers. This process is conducted mainly online via the student platform. The results of the survey are transmitted to the dean of the school, who later forwards the results to the lecturer of the course. All lecturers receive evaluations from

students at the end of each course. Based on these results, the lecturer shall create plans to improve their lecture, which is developed in discussion with other teachers and students. Additional student surveys reflect on their satisfaction with social activities and the study environment. In the discussion between the expert panel and the students, the students affirm to participate each semesters in evaluations of their lectures and teachers on their student platform.

Annual evaluation include surveys among alumni to analyze the feedback from employed graduates. In addition, the university hold annual alumni symposia to establish a continuous exchange and communication platform. Further surveys are distributed among stakeholders, which vary between interviews, focus groups and questionnaires to ensure the satisfaction of employers with the qualifications of the graduations. In addition, HUST conducts a survey on the library to ensure it meets the demands by its users. The stakeholders assert the expert panel, that these surveys are conducted and they have the impression, that their feedback to heard and implemented.

Based on the suggestions of graduates and employers in recent surveys, HUST has enhanced including English, computer skills, social skills problem-solving skills and teamwork in the curriculum of the study programs under review.

The program coordinators verify the expert panel that there is a survey on staff satisfaction conducted every year. The head of the department is required to collect feedback from the entire staff and communicate the results with the quality assurance team, which is also confirmed by the teaching staff to the auditors.

In the discussion, the expert panel remarks, the dropout rate is low in all programs under review, however, the numbers presented in the SAR does not add up to 100%. The explanation by the program coordinators clarifies the statistics by mentioning the missing group of students are the ones who finish their studies late (15% in BIM, 11% in BIE and 17% in BBA for the students enrolled in 2015). The program coordinators note, that the students have 2.5 years in addition to the standard student duration to finish their studies.

In all of the degree programs to be accredited, the experts gain the impression that the quality assurance system is well balanced. The evaluation involves all relevant stakeholder as well as students and teaching staff and in conducted on a regular basis with the intend to ensure the quality of each program. In the opinion of the experts, all responsibilities and mechanisms defined for the purposes of continued development are binding whereas the methods employed and data analyzed are suitable for the purpose and used to continue improving the degree programme, especially with a view to identifying and resolving weaknesses. The surveys presented include essentials questions on intended

learning outcomes, the academic feasibility of the degree program, and how the qualifications profile is accepted on the labor market. Yet, the results of the evaluations should be communicated with the students to close the feedback loop between the lecturers and students.

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

With regard to the requirement to implement and formalize a closed feedback loop, HUST states in its response statement that they have reviewed and evaluated the changes regarding the training programmes, student services, as well as infrastructures after each stakeholder survey. However, this task still needs to be formalized and is usually submitted only in the form of a data report. HUST is planning to make adjustments to improve the quality of training as well as the quality loop. Moreover, since 2022, the Quality Management Office (QMO) started to improve the survey tools of Internal QA System in order to improve the self-assessment of HUST's programmes, especially focusing on the feedbacks from the stakeholders. The peers appreciate the explanations, but point out that the requirement asked HUST to explain how teaching evaluation and subsequent feedback to students takes place and how these results are used for further programme development. Furthermore, this regulation needs to be formalised accordingly. Therefore, the experts decide that the requirement A10 remains in place.

# D Additional Documents

No additional documents needed.

# E Comment of the Higher Education Institution (28.02.2023)

HUST provided a statement and submitted the following documents:

**Criterion 1.1**

We highly appreciated the suggestion of the peers about the missing a short description of the presented learning outcomes in the Diploma Supplement.

Regarding to your advices, we will continue to improve the Diploma Supplement to clarify the information about the intended learning outcomes, the official duration, the access requirements, and the grading system of the degree programme in order to meet the European HEI Standard's requirement.

**Criterion 1.2**

The university has noticed the need to improve English and Soft Skills for the students. In fact, one of the main contents on the list of main tasks and solutions to implement the Strategy 2017 – 2025 of HUST concerns to the English skill of student (pls. refer to item 9e, Appendix A).

HUST will be renovating English teaching and learning methods to approach international standards in order to improve graduates' ability to use foreign languages. We are improving a Center of Language and Academics (https://cla.hust.edu.vn/) to organize variety of English Course and English proficiency (IELTS, TOEIC, APTIS, VSTEP) for student in their spare time in our campus. For graduation, undergraduate students have to have a score of 500 TOEIC (B1 English certificate in equivalent).

We highly appreciated the suggestion of the peers about the importance of presentation, communication and negotiations skills in their native language and in English. In fact, the School of Economics and Management has organized the following activities:

- Support club activities (https://www.hust.edu.vn/en/campus-life/facilities/recreation-and-student-s-clubs-554056.html) that are including English Club, Young Economist Club, Young Manager, Environmental Protection Club, Reading Club, Logistics Club. Through these club activities, students can improve their knowledge as well as soft skills such as Planning, Analyzing, Partner searching, Teamwork, Negotiation and Public presentation. In the self-assessment report (SAR), Cluster-D discussed this issue in section 2.4.

- Encouraging the students to participate in research activities, seminars and annual international ICECH. Through this participation, students can improve their research abilities, team work and be directly connected to domestic and foreign researchers. Therefore, students can develop scientific report writing, researching and public presentation skills. At the same time, students can also experience in English speaking environment. The organization of research abilities with the participation of foreign partners was presented in the section 4.1.2 of the Cluster-D SAR.

- Besides, before COVID-19, we organized annual summer course for the students from the University of Vienne (Austria). In this summer course, our students have the chance to participate in and communicate with foreign students. The communication was not limited during lecture time, but also happened outside the class in the outdoor activities. This course is planned to restart in the summer 2023.

As your comment in the report, we will continue to help students gradually improve their English, soft skills, and confidence in communicating with foreign partners.

In the curricular of the Bachelor of Industrial Economics, we integrated modern and up-to-date knowledge on relevant topics for the future on some courses such as English for Energy Economics (EM4611) or Academic Writing and Presentation (EM2622). The students can select any topic which is related to industrial energy such as renewable energy, applying the AI in Energy efficiency, etc. (pls. refer to the Appendix B).

• At the School of Economics and Management, the Programme Curriculum will be updated and adjusted every 2 years. We are on the process of updating the curricula of SEM programs. The Circular Economy course was developed and will be added to the Bachelor of Industrial Economics from 2024 school year. (pls. refer to the Appendix C).

We highly appreciated the peers' advice on integrating the practice and theory at the earlier semesters. In the SEM Cluster D's programme curriculum, there is an introduction to the BIE, BIM and BBA course which was designed to provide students the basic knowledge of study program, job future careers and practices. In this course, the students will go to visit companies to understand more about the real works and the future jobs. The guest lecturers also are invited to come to the class to share with students about the

reality in doing the business and other operational activities. (pls. refer to the Appendix D).

**Criterion 2.1**

When developing the training programme in 2017, the physical education and military education courses were appointed credits in the Programme Curriculum. However, to avoid students' confusion about the fact that these courses earn credits like professional courses, in recent versions of the Programme Curriculum, we have clarified that no credits will be awarded for these courses. As for the requirements of the peers, we used the given credits of the physical education and military education courses in the 2017 Curriculum versions to converse to ECTS (pls. refer to Appendix E).

**Criterion 2.2**

Currently, the workload of the modules of SEM programmes are followed the regulations of the Ministry of Education and Training and HUST. Untill now, the workload of each course has been estimated in dealing with the contact hours and the estimated time consuming for assignments and preparations before the classes. Actually, an individual student's actual workload of the modules has not been checked yet by the University or the School.

We highly appreciated the peers' suggestion, HUST will add a respective question regarding to actual number of hours the students need to complete all learning activities in one module in the course questionnaires. The results will definitely help HUST improve the student's workload controlling system.

**Criterion 3**

Despite facing many financial difficulties, HUST has made great efforts in implementing policies for disabled students. For example, we have classes (both theoretical and practical) with disabled students in lecture halls in newly built buildings (equipped with elevators). Disabled students are exempted from Physical Education modules. We have issued a guidance and policy on support for disabled students (pls. refer to Appendix F) and a policy of postponing exams for students who are unable to take the exam due to unexpected illness. These policies are still being improved and clearly demonstrate the initiative efforts in creating a positive learning environment for disabled students at HUST.

**Criterion 4.3**

To encourage students' self-study, SEM has made efforts to arrange self-study spaces at the Ta Quang Buu Library and allow students to study in the lecture hall outside regular class time. In the future, when the new buildings are put to use, we will be able to offer

more self-study spaces for students and provide better conditions for students' group works.

Regarding the learning materials, lecturer introduces and recommends textbooks (including required and reference books), materials and related one to the students at the beginning of the courses. Lecturer recommends students to search and borrow the books from HUST's library or access the open resources links such as proquest.com, emeralinsight.com, sciencedirect.com, etc.

In fact, at the end of previous scholar year, the Library will send email to schools and teacher directly to ask for buying the necessary materials, books, documents for the academic programmes. (pls. refer to the Appendix G)

We highly appreciated the peers' recommendation on that SEM should communicate with their students to know the needs and requirements concerning the library for their best learning outcomes. HUST already developed and applied the e-Hust App. We should add the function of library in the App so that SEM can communicate closely with students about their needs.

**Criterion 5.1**

We have recognized some errors in the calculation of the workload to transferring to ECTS. We have recalculated the workload of all modules and submitted as the new version of the Module Handbook (see further in Evidence [D.1.3.02a, b, c]).

In fact, the courses require variable workloads due to the differences in required hours of theoretical lecture, assignment, practice in a lab, or self-study. Therefore, one credit hour for each module type is approximately equivalent to 2 ECTS (as shown in the documentation accompanying this feedback and Evidences [D.1.3.02a, b, c]). We have adjusted the Module Handbook regarding to the conversion of HUST's credit to the ECTS.

We highly appreciated the expert panel recommends to publishing the entire module handbooks online for everyone interested in the programmes. The website of School of Economics and Management has information of all three programmes such as programme overview, programme study, module, course list, course description and course contents (website: https://sem.hust.edu.vn/education) (please refer to the Appendix H)

**Criterion 5.2**

Regarding to your advices, SEM will continue to improve the Diploma Supplement to clarify the information about the intended learning outcomes, the official duration, the access requirements, and the grading system of the degree programme in order to meet the European HEI Standard's requirement.

In HUST, each School's website (http://sem.hust.edu.vn) ensures easy and universal access to all relevant stakeholders. The information related to degree programs is completed and updated at this website.

**Criterion 6**

We have reviewed and evaluated the innovation regarding to the training programmes, student services, as well as infrastructures after each stakeholder survey. However, this job still needs systematic and is usually submitted only in the form of a data report as showed in the evidence provided to the peers. We have planned to make the adjustments to improve the quality of training as well as the quality loop.

Appendix

Mistakes of typing and translation on the Programme Learning Outcomes and curricular (p47 & p48; p49 & p50)

# F Summary: Peer recommendations (10.03.2023)

The peers summarize their analysis and final assessment for the award of the seals as follows:

| Degree Programme | ASIIN-seal | Subject-specific label | Maximum duration of accreditaiton |
|---|---|---|---|
| Ba. Industrial Economics | With requirements for one year | - | 30.09.2028 |
| Ba Industrial Management | With requirements for one year | - | 30.09.2028 |
| Ba Business Administration | With requirements for one year | - | 30.09.2028 |

## Requirements

**For all degree programmes**

A 1. (ASIIN 1.2) Ensure that the name of the degree programme, its intended learning outcomes and its content correspond with each other.

A 2. (ASIIN 2.1) Credits have to be awarded to all compulsory modules of the curriculum and the workload has to be determined accordingly

A 3. (ASIIN 2.2) Verify the students' total workload and award the ECTS points accordingly. Define how many hours of students' workload is required for one ECTS point.

A 4. (ASIIN 3) Disability measures and compensations for disabled students must be implemented

A 5. (ASIIN 5.1) The module descriptions need to include the correct information about the teaching methods, the students' workload and the awarded credits (Vietnamese and ECTS).

A 6. (ASIIN 5.1) Ensure that the latest version of the module descriptions of the general education modules is made accessible for students and teaching staff

A 7. (ASIIN 5.2) The Transcript of Records needs to list the acquired ECTS points of each course and how many ECTS points are awarded for the whole degree programme. The Diploma Supplement needs to include statistical data about the distribution of final grade according to the ECTS Users' Guide.

A 8. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the intended learning outcomes, the official duration, the access requirements and the grading system of the degree programme.

A 9. (ASIIN 5.3) Make the information about the degree programs (study plans, module descriptions, intended learning outcomes, etc.) available to all stakeholders e.g. by publishing them on the Faculty's webpage.

A 10. (ASIIN 6) The teaching evaluation is to be organized in such a way that a feedback of the results to the students is ensured.

## Recommendations

### For all degree programmes

E 1. (ASIIN 1.3) It is recommended to improve the soft skills of the students with a focus on communication and presentation and English especially in order to work in international environments.

E 2. (ASIIN 1.3) It is recommended to integrate practice and theory at earlier semesters, including guest lectures from companies, excursions to companies, etc.

E 3. (ASIIN 1.3) It is recommended to foster the connection between management and engineering, particularly for the programs Industrial Management and Industrial Economics

E 4. (ASIIN 1.3) It is recommended to include relevant topics for the future such as electrical vehicles, renewable energy, greenhouse gas emissions, zero emission, circular economy.

E 5. (ASIIN 4.3) It is recommended to extend the opening hours of the library according to the student demands

# G Comment of the Technical Committee 06 – Engineering and Management, Economics (17.03.2023)

*Assessment and analysis for the award of the ASIIN seal:*

The committee members discuss the case and follow the assessment of the peers without any changes.

The Technical Committee 06 – Engineering and Management, Economics recommends the award of the seals as follows:

| Degree Programme | ASIIN-seal | Subject-specific label | Maximum duration of accreditaiton |
|---|---|---|---|
| Ba. Industrial Economics | With requirements for one year | - | 30.09.2028 |
| Ba Industrial Management | With requirements for one year | - | 30.09.2028 |
| Ba Business Administration | With requirements for one year | - | 30.09.2028 |

## Requirements

**For all degree programmes**

A 1. (ASIIN 1.2) Ensure that the name of the degree programme, its intended learning outcomes and its content correspond with each other.

A 2. (ASIIN 2.1) Credits have to be awarded to all compulsory modules of the curriculum and the workload has to be determined accordingly

A 3. (ASIIN 2.2) Verify the students' total workload and award the ECTS points accordingly. Define how many hours of students' workload is required for one ECTS point.

A 4. (ASIIN 3) Disability measures and compensations for disabled students must be implemented

A 5. (ASIIN 5.1) The module descriptions need to include the correct information about the teaching methods, the students' workload and the awarded credits (Vietnamese and ECTS).

A 6. (ASIIN 5.1) Ensure that the latest version of the module descriptions of the general education modules is made accessible for students and teaching staff

A 7. (ASIIN 5.2) The Transcript of Records needs to list the acquired ECTS points of each course and how many ECTS points are awarded for the whole degree programme. The Diploma Supplement needs to include statistical data about the distribution of final grade according to the ECTS Users' Guide.

A 8. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the intended learning outcomes, the official duration, the access requirements and the grading system of the degree programme.

A 9. (ASIIN 5.3) Make the information about the degree programs (study plans, module descriptions, intended learning outcomes, etc.) available to all stakeholders e.g. by publishing them on the Faculty's webpage.

A 10. (ASIIN 6) The teaching evaluation is to be organized in such a way that a feedback of the results to the students is ensured.

## Recommendations

**For all degree programmes**

E 1. (ASIIN 1.3) It is recommended to improve the soft skills of the students with a focus on communication and presentation and English especially in order to work in international environments.

E 2. (ASIIN 1.3) It is recommended to integrate practice and theory at earlier semesters, including guest lectures from companies, excursions to companies, etc.

E 3. (ASIIN 1.3) It is recommended to foster the connection between management and engineering, particularly for the programs Industrial Management and Industrial Economics

E 4. (ASIIN 1.3) It is recommended to include relevant topics for the future such as electrical vehicles, renewable energy, greenhouse gas emissions, zero emission, circular economy.

E 5. (ASIIN 4.3) It is recommended to extend the opening hours of the library according to the student demands

# H Decision of the Accreditation Commission (24.03.2023)

*Assessment and analysis for the award of the ASIIN seal:*

The Accreditation Commission discusses the accreditation procedure. The accreditation commission decides to delete the requirement A1, because it does not con contribute to the specific qualification of the three study programs under review. With regard to the remaining requirements and recommendations, the accreditation commission follows the assessment of the peers and technical committee without any changes.

The Accreditation Commission decides to award the following seals:

| Degree Programme | ASIIN-seal | Subject-specific label | Maximum duration of accreditaiton |
|---|---|---|---|
| Ba. Industrial Economics | With requirements for one year | - | 30.09.2028 |
| Ba Industrial Management | With requirements for one year | - | 30.09.2028 |
| Ba Business Administration | With requirements for one year | - | 30.09.2028 |

## Requirements

**For all degree programs**

A 1. (ASIIN 2.2) Verify the students' total workload and award the ECTS points accordingly. Define how many hours of students' workload is required for one ECTS point.

A 2. (ASIIN 3) Disability measures and compensations for disabled students must be implemented

A 3. (ASIIN 5.1) The module descriptions need to include the correct information about the teaching methods, the students' workload and the awarded credits (Vietnamese and ECTS).

A 4. (ASIIN 5.1) Ensure that the latest version of the module descriptions of the general education modules is made accessible for students and teaching staff

A 5. (ASIIN 5.2) The Transcript of Records needs to list the acquired ECTS points of each course and how many ECTS points are awarded for the whole degree programme. The Diploma Supplement needs to include statistical data about the distribution of final grade according to the ECTS Users' Guide.

A 6. (ASIIN 5.2) Ensure that the Diploma Supplement contains detailed information about the intended learning outcomes, the official duration, the access requirements and the grading system of the degree programme.

A 7. (ASIIN 5.3) Make the information about the degree programs (study plans, module descriptions, intended learning outcomes, etc.) available to all stakeholders e.g. by publishing them on the Faculty's webpage.

A 8. (ASIIN 6) The teaching evaluation is to be organized in such a way that a feedback of the results to the students is ensured.

**For the bachelor program "Industrial Economics"**

A 9. (ASIIN 1.2) Ensure that the name of the degree programme, its intended learning outcomes and its content correspond with each other.

## Recommendations

**For all degree programs**

E 1. (ASIIN 1.3) It is recommended to improve the soft skills of the students with a focus on communication and presentation and English especially in order to work in international environments.

E 2. (ASIIN 1.3) It is recommended to integrate practice and theory at earlier semesters, including guest lectures from companies, excursions to companies, etc.

E 3. (ASIIN 1.3) It is recommended to foster the connection between management and engineering, particularly for the programs Industrial Management and Industrial Economics

E 4. (ASIIN 1.3) It is recommended to include relevant topics for the future such as electrical vehicles, renewable energy, greenhouse gas emissions, zero emission, circular economy.

E 5. (ASIIN 4.3) It is recommended to extend the opening hours of the library according to the student demands

# Appendix: Programme Learning Outcomes and Curricula

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Industrial Economics:

"On successful completion of the Industrial Economics program, students will be able to

- Demonstrate knowledge of and proficiency in the terminology, theories, concept, practices and skills specific to the field of economics and management
- Demonstrate knowledge and proficiency for professional work and/or further learning.
- Exhibit competency in applying social skills to work effectively in a multidisciplinary managerial group and in an international environment.
- Exhibit competency in applying the knowledge and reasoning skills to produce creative economic and business solutions in the situation of globalization, knowledge economy, and increasingly competitive environment.

Demonstrate autonomy, well-developed judgement of knowledge and responsibility

The following **curriculum** is presented:

| | | | | |
|---|---|---|---|---|
| Year 1<br>Semester 1 | GENERAL EDUCATION: 15 Credits<br>FL1100 - MI1113 - MI2020 - IT1130<br>EM1100 - Principles of Microeconomics | | EM1600 - Introduction to the Major of Industrial Economics | Complementary Electives<br>EM1010 |
| Year 1<br>Semester 2 | GENERAL EDUCATION: 15 Credits<br>FL1101 - EM1170 - MI1143 - PH1110<br>EM1110 - Principles of Macroeconomics | | EM3211 - Principles of Marketing | |
| Year 2<br>Semester 1 | GENERAL EDUCATION: 8 Credits<br>SSH1111 - MI3131 - PH1120 | | EE1010 - Introduction to Electrical Engineering<br>EM3512 - Financial Market and Institutions<br>EM3130 - Econometrics<br>Professional Concentration - 2 Credits | |
| Year 2<br>Semester 2 | GENERAL EDUCATION: 7 Credits<br>SSH1121 - MI1133 - EM2300 | EE3469 - Power Supply Systems<br>EE4111 - Power Generation Technologies | EM3300 - Business Process Management<br>EM3230 - Applied Statistics<br>EM4611 - English for Industrial Economics | |
| Year 3<br>Semester 1 | GENERAL EDUCATION: 2 Credits<br>SSH1131 | EM3140 - International Economics<br>EM3417 - Operations Management<br>EM4617 - Power System Operating Economics | EM4736 - Managerial Accounting<br>Professional Concentration - 2 Credits | Complementary Electives<br>EM1622 |
| Year 3<br>Semester 2 | GENERAL EDUCATION: 2 Credits<br>SSH1141 | EM3614 - Energy Project Analysis and Management<br>EM4615 - Energy Pricing<br>EM4624 - Oil and natural gas economics | EM4413 - Human Resource Management<br>Professional Concentration - 3 Credits | |
| Year 4<br>Semester 1 | GENERAL EDUCATION: 2 Credits<br>SSH1151 | ***Professional Concentration - 9 Credits*** | | Complementary Electives<br>4 Credits |
| | ***Internship (13 Credits)*** | | | |
| Year 4<br>Semester 2 | EM4650 - Graduation Internship<br>EM4651 - Bachelor Thesis | | | |

| Professional Concentration 1 (16 Credits) | | | Professional Concentration 2 (16 Credits) | | |
|---|---|---|---|---|---|
| Course ID | Course Name | Credits | Course ID | Course Name | Credits |
| EM2120 | Kinh tế và quản lý công nghiệp | 2 | EM2120 | Kinh tế và quản lý công nghiệp | 2 |
| EM4625 | Kinh tế tài nguyên và môi trường | 2 | EM4625 | Kinh tế tài nguyên và môi trường | 2 |
| EM4628 | Thị trường năng lượng | 3 | EM4633 | Phân tích và dự báo nhu cầu năng lượng (BTL) | 3 |
| EM4629 | Quy hoạch phát triển năng lượng | 3 | EM4641 | Mô hình tài chính cho các dự án năng lượng | 3 |
| EM4632 | Chính sách năng lượng | 3 | EE3012 | Năng lượng tái tạo: Công nghệ, thị trường và chính sách phát triển | 3 |
| EM4633 | Phân tích và dự báo nhu cầu năng lượng | 3 | EM4643 | Quản lý sử dụng năng lượng trong doanh nghiệp | 3 |

| INTERNSHIP (16 Credits) | | | |
|---|---|---|---|
| Course ID | Course Name | Credits | Note |
| EM2120 | Managerial Economics | 2 | |
| EM4028 | Energy Market II | 3 | Project-based |
| EM4043 | Energy Usage Management | 3 | Project-based |
| EM4625 | Natural Resources and Environment Economics | 2 | |
| EM4633 | Energy Demand Analysis and Forecast | 3 | |
| EM4640 | Field Study | 3 | Project-based |

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Industrial Management:

"On successful completion of the Industrial Management program, students will be able to

- Demonstrate knowledge of and proficiency in the terminology, theories, concept, practices and skills specific to the field of economics and management
- Demonstrate knowledge and proficiency for professional work and/or further learning.
- Exhibit competency in applying social skills to work effectively in a multidisciplinary managerial group and in an international environment.
- Exhibit competency in applying the knowledge and reasoning skills to produce creative economic and business solutions in the situation of globalization, knowledge economy, and increasingly competitive environment.

The following **curriculum** is presented:

| | | | | |
|---|---|---|---|---|
| Year 1 Semester 1 | GENERAL EDUCATION: 15 Credits<br>FL1100 - MI1113 - MI2020 - IT1130<br>EM1100 - Principles of Microeconomics | | EM1400 - Introduction to the Major of Industrial Management | Complimentary Electives EM1010 |
| Year 1 Semester 2 | GENERAL EDUCATION: 15 Credits<br>FL1101 - EM1170 - MI1143 - PH1110<br>EM1110 - Principles of Macroeconomics | | EM3211 - Principles of Marketing<br>EM3417 - Operations Management | |
| Year 2 Semester 1 | General Education: 8 Credits<br>SSH1111 - MI1133 - MI3131 | EM2120 - Managerial Economics<br>EM3230 - Applied Statistics | EM3432 - Supply Chain Management<br>EM4411 - English for Industrial Management | |
| Year 2 Semester 2 | General Education: 5 Credits<br>SSH1121 - - PH1110 | EM2420 - Industrial System Engineering<br>EM3190 - Organization Behavior<br>EM3300 - Business Process Management | EM4412 - Quality Management<br>EM4425 - Optimization Models<br>EM4430 - Innovation Management | |
| Year 3 Semester 1 | General Education: 7 Credits<br>SSH1131<br>EM2300 - PH1120 | EM4736 - Managerial Accounting | ***Professional Concentration - 5 Credits*** | Complimentary Electives EM1422 |
| Year 3 Semester 2 | General Education: 2 Credits<br>SSH1141 | EM3222 - Business Law<br>EM3419 - Computer -Integrated Manufacturing System<br>EM4212 - Business Performance Analysis | ***EM4218 - Management Information System***<br>***EM4435 - Project Management***<br>***Professional Concentration - 2 Credits*** | |
| Year 4 Semester 1 | General Education: 2 Credits<br>SSH1151 | ***Professional Concentration - 9 Credits*** | | Complimentary Electives 4 Credits |
| | ***Internship (13 Credits)*** | | | |
| Year 4 Semester 2 | EM4450 - Graduation Internship<br>EM4451 - Bachelor Thesis | | | |

| Professional Concentration 1 (16 Credits) | | | Professional Concentration 2 (16 Credits) | | |
|---|---|---|---|---|---|
| **Course ID** | **Course Name** | **Credits** | **Course ID** | **Course Name** | **Credits** |
| EM3414 | Workforce Planning | 2 | EM2105 | International Trade Terms and Techniques | 2 |
| EM4420 | Industrial Maintenance Management | 2 | EM3414 | Workforce Planning | 2 |
| EM4421 | System Simulation | 2 | EM4421 | System Simulation | 2 |
| EM4423 | Manufacturing System Design | 2 | EM4429 | Purchasing Management | 2 |
| EM4446 | Productivity Improvement | 3 | EM4443 | Inventory and Warehouse Management | 3 |
| EM4448 | Quality Control | 2 | EM4445 | Transportation Management | 2 |
| EM4457 | Operations Planning and Scheduling | 3 | EM4446 | Productivity Improvement | 3 |
| **INTERNSHIP (17 Credits)** | | | **Professional Concentration 4 (16 Credits)** | | |
| **Course ID** | **Course Name** | **Credits** | **Course ID** | **Course Name** | **Credits** |
| EM4014 | Workforce Planning II | 2 | EM4400 | Field Study | 2 |
| EM4046 | Productivity Improvement II | 3 | EM4401 | Productivity Management in Manufacturing | 3 |
| EM4421 | System Simulation | 2 | EM4402 | Productivity Management in Service | 3 |
| EM4440 | Field Study | 3 | EM4403 | Digital Productivity | 3 |
| EM4443 | Inventory and Warehouse Management | 3 | EM4423 | Manufacturing System Design | 2 |
| EM4457 | Operations Planning and Scheduling | 3 | EM4446 | Productivity Improvement | 3 |

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Business Administration:

"On successful completion of the Bachelor program, students will be able to

- Demonstrate knowledge of and proficiency in the terminology, theories, concept, practices and skills specific to the field of economics and management
- Have professional and personal skills and attributes including lifelong learning and self-study abilities to pursue higher levels of education to get adapted to the on-going scientific and technological development
- Have communication, foreign language and teamwork skills to work in interdisciplinary, cross-cultural, and multinational environments
- Have abilities in applying the knowledge and reasoning skills to conceive ideas, participate in designing, and implementing creative economic and business solutions in the situation of globalization, knowledge economy, and increasingly competitive environment.

The following **curriculum** is presented:

| | | | | |
|---|---|---|---|---|
| Year 1 Semester 1 | GENERAL EDUCATION: 15 Credits<br>FL1100 - MI1113 - MI2020 - IT1130<br>EM1100 - Principles of Microeconomics | | EM1300 - Introduction to the Major of Business Administration | Complimentary Electives<br>EM1010 |
| Year 1 Semester 2 | GENERAL EDUCATION: 15 Credits<br>FL1101 - EM1170 - MI1143 - PH1111<br>EM1110 - Principles of Macroeconomics | | EM3211 - Principles of Marketing | |
| Year 2 Semester 1 | General Education: 5 Credits<br>SSH1111 - MI3131 - PH1121 | EM3222 - Business Law<br>EM3230 - Applied Statistics<br>EM3417 - Operations Management | EM3500 - Principles of Accounting<br>EM3511 - Theory of Finance and Monetary | |
| Year 2 Semester 2 | General Education: 7 Credits<br>SSH1121 - MI1133 -<br>EM2132 - EM2300 | EM3300 - Quản trị quy trình kinh doanh<br>EM3432 - Quản trị chuỗi cung ứng | EM3519 - Corporate finance<br>EM4716 - Managerial Accounting | |
| Year 3 Semester 1 | General Education: 4 Credits<br>SSH1131<br>EM2300 | EM3140 - International Economics<br>EM3310 - Business Simulation | EM4413 - Human Resource Management<br>MI3600 - Data Analysis and Business Intelligence<br>Professional Concentration - 2 Credits | Complimentary Electives<br>EM1322 |
| Year 3 Semester 2 | General Education: 2 Credits<br>SSH1141 | EM4212 - Business Performance Analysis<br>EM4218 - Management Information System | ***EM4416 - Strategy Management***<br>***Professional Concentration - 4 Credits*** | Complimentary Electives<br>2 Credits |
| Year 4 Semester 1 | General Education: 2 Credits<br>SSH1151 | ***Professional Concentration - 9 or 10 Credits*** | | Complimentary Electives<br>2 Credits |
| | ***Internship (13 Credits)*** | | | |
| Year 4 Semester 2 | EM4350 - Graduation Internship<br>EM4351 - Bachelor Thesis | | | |

| Professional Concentration 1 (16 Credits) | | | Professional Concentration 2 (16 Credits) | | |
|---|---|---|---|---|---|
| **Course ID** | **Course Name** | **Credits** | **Course ID** | **Course Name** | **Credits** |
| EM3301 | Business Ethics | 2 | EM3301 | Business Ethics | 2 |
| EM4210 | Business Start-up | 3 | EM4210 | Business Start-up | 3 |
| EM4336 | E-commerce | 2 | EM4313 | Marketing Management | 3 |
| EM4216 | Business Research Methodologies | 2 | EM4336 | E-commerce | 2 |
| EM4314 | Consumer Behaviors | 2 | EM4317 | Service marketing | 2 |
| EM4323 | Branding Management | 2 | EM4331 | Digital Marketing | 2 |
| EM4435 | Project Management | 3 | EM4335 | Marketing Research | 2 |

| Professional Concentration 3 (16 Credits) | | | INTERNSHIP (16 Credits) | | | |
|---|---|---|---|---|---|---|
| **Course ID** | **Course Name** | **Credits** | **Course ID** | **Course Name** | **Credits** | **Note** |
| EM3537 | Contemprary Issues in Financial Technology | 3 | EM3301 | Business Ethics | 2 | |
| EM4533 | Risk Management | 2 | EM4037 | Productivity Norm II | 2 | Project-based |
| EM4536 | Fundamentals of Auditing | 3 | EM4060 | Applied Managerial Psychology | 2 | Project-based |