



B Business Engineering
Maastricht University

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Project code P2406

Contents

- Summary 4
 - Score table 5
- Introduction..... 6
 - Procedure..... 6
 - Panel 7
 - Information on the programme 7
- Description of the assessment..... 8
 - Recommendations previous panel 8
 - Standard 1. Intended learning outcomes 8
 - Standard 2. Teaching-learning environment..... 11
 - Standard 3. Student assessment 17
 - Standard 4. Achieved learning outcomes 20
 - General conclusion 21
 - Recommendations 21
- Appendix 1. Intended learning outcomes 22
- Appendix 2. Programme curriculum..... 24
- Appendix 3. Programme of the site visit..... 25

Summary

Standard 1. Intended learning outcomes

The panel concludes that the mission and profile of the programme are both clearly defined and well formulated. It appreciates the transdisciplinary character of the profile and recognizes the need for professionals who are able to function as bridge builders within industry. The aims and objectives of the programme are well thought out and elaborated upon, and aligned with the overall mission of the profile. The panel mainly recognizes this in how the projects are implemented as a tool for integration of both areas of expertise, and for students to learn to apply the skills and knowledge to a real life challenge. It compliments the programme on this strong and practical approach and the broad profile in which students have plenty of opportunity to shape their own curriculum. The profile and ILOs are clearly based on the needs from industry, since the programme was initiated because of these needs. At the same time, the panel also recognizes that the programme would benefit from a continuous and structural communication with external stakeholders from industry. It therefore encourages the programme to install an advisory board with external professionals who could help update the ILOs and the profile according to recent developments within the field. Students are clear on the profile of the programme, but it is not always clear to them for which future master- or career options the programme aims to educate them. The panel advises the programme to communicate clearly to (prospective) students what the career and master options are and continue to analyse data from alumni. Having studied the ILOs, the panel concludes that they are well aligned on a bachelor's level and clearly translate the profile and the aims of the programme.

Standard 2. Teaching-learning environment

The panel concludes that the curriculum of the programme is solidly structured, with the compulsory courses in the first year offering the students the necessary knowledge and skills to continue. The way in which students are guided through the broad and open curriculum of the second and third year ensures that the balance between business and engineering is maintained and that students choose feasible and coherent options. The coherence of the programme is ensured by the projects, which tie everything students have learned in a period together, and by the alignment between courses and course coordinators. The panel appreciates that although this is sufficient, it would improve the coherence even further if this alignment is further formalized, especially on course level. It encourages the programme to keep working on the alignment between the various curriculum components. The panel concludes that the ILOs are reflected well in the curriculum, noting the broadness and the balance between both business, science and engineering courses. The ILOs being translated into course ILOs that are connected to the Dublin descriptors helps to ensure that the profile and aims are covered. The panel is happy to find that students get the opportunity to go abroad for a semester, and continue their studies internationally. It finds this to be a very valuable addition to the already internationally oriented programme. The panel advises the programme to make the balance between the business and engineering component explicit in the TRP, since this balance is sometimes lost.

Students with impairments are offered extra guidance by the UM wide policy, which the panel appreciates. The panel is positive about the teaching staff, who they deem to be of high quality and diverse in their different expertise. The panel finds the programme's choice for English as a common language to be a logical one in the context of the broad and international orientation of the programme, and concludes that it also facilitates the international classroom. The laboratories that are available for science and engineering courses and projects are a great asset to the programme, the panel finds. Since experiments are an important part of the curriculum, these facilities are very valuable to students and staff.

Standard 3. Student assessment

The panel concludes that the quality of the assessment of the Business Engineering bachelor's programme is adequate, transparent and reliable. There is variety in the assessment methods used throughout the curriculum, and the projects include peer review in their assessment which the panel appreciates.

The panel appreciates thesis assessment, and approves of the recent change to have TRPs assessed by two internal assessors instead of one, enhancing reliability, and the TRP rubrics that provide consistency. It also appreciates the use of midterm evaluations as a valuable formative tool. The panel identified a case where a poor thesis report was compensated by other components, allowing the student to pass. It recommends requiring students to pass all TRP components to graduate. In this regard, the panel was happy to learn that the BoE is advising to revise the assessment rubric to require passing all components. The panel commends this revision and encourages its implementation to enhance assessment reliability. Additionally, the panel advises making explicit the relation between the TRP assessment criteria and programme ILOs. The panel reviewed the Board of Examiners' (BoE) structure, annual reports, and legal responsibilities, concluding that it effectively ensures assessment quality. It finds the existing checks, such as exam sampling, appropriate and reliable. Regular meetings with the Assessment Committee further strengthen assessment validity.

Standard 4. Achieved learning outcomes

The good quality of the theses, as well as the career paths or master's programmes of alumni, convinced the panel that graduates of the BSc Business Engineering achieve the intended learning outcomes. Alumni are finding relevant master's or jobs, and appear confident. The panel encourages the programme to continue to strengthen ties with alumni.

Score table

The panel assesses the programme as follows:

Bachelor's programme Business Engineering	
Standard 1: Intended learning outcomes	meets the standard
Standard 2: Teaching-learning environment	meets the standard
Standard 3: Student assessment	meets the standard
Standard 4: Achieved learning outcomes	meets the standard
General conclusion	positive

Prof. Dr. Ir. Ivo Adan, panel chair
Date: 14-04-2025

Sarah Boer, panel secretary

Introduction

Procedure

Assessment

On 31 January 2025, the bachelor's programme Business Engineering of Maastricht University was assessed by an independent peer review panel. The assessment followed the procedure and standards of the NVAO Assessment Framework for the Higher Education Accreditation System of the Netherlands (April 2024).

Quality assurance agency Academion coordinated the assessment upon request of Maastricht University. Sarah Boer acted as coordinator and secretary in the assessment. She has been certified and registered by the NVAO.

Preparation

Academion composed the peer review panel in cooperation with the institution and taking into account the expertise and independence of the members. On 6 November 2024, the NVAO approved the composition of the panel. The coordinator instructed the panel chair on his role in the site visit according to the Panel chair profile (NVAO 2016).

The programme composed a site visit schedule in consultation with the coordinator (see appendix 3). The programme selected representative partners for the various interviews. It also determined that the development dialogue would be made part of the visit. A separate development report was made based on this dialogue.

The programme provided the secretary with a list of graduates from 2024. In consultation with the secretary, the panel chair selected 15 theses. He took the diversity of final grades and examiners into account. Prior to the site visit, the programme provided the panel with the theses and the accompanying assessment forms. It also provided the panel with the self evaluation report and additional materials (see appendix 4).

The panel members studied the information and sent their findings to the secretary. The secretary collected the panel's questions and remarks in a document and shared this with the panel members. In a preliminary meeting, the panel discussed the initial findings on the self-evaluation report and the theses, as well as the division of tasks during the site visit. The panel was also informed on the assessment framework, the working method and the planning of the site visits and reports.

Site visit

During the site visit, the panel interviewed various programme representatives (see appendix 3). The panel also offered students and staff members an opportunity for confidential discussion during a consultation hour. No consultation was requested. The panel used the final part of the site visit to discuss its findings in an internal meeting. Afterwards, the panel chair publicly presented the preliminary findings. Because of health reasons, Robert Malina could not join the site visit. After deliberation with the programme and the NVAO, the site visit continued without him present. He did provide questions which were asked and answered during the visit, and was involved in the preparation and completion of the reaccreditation process.

Report

The secretary wrote a draft report based on the panel's findings and submitted it to an Academion colleague for peer assessment. Subsequently, the secretary sent the report to the panel for feedback. After processing

this feedback, the secretary sent the draft report to the programme in order to have it checked for factual irregularities. The secretary discussed the ensuing comments with the panel chair and changes were implemented accordingly. The panel then finalized the report, and the coordinator sent it to the faculty.

Panel

The panel assessing the programme consisted of the following members:

- Prof. Dr. Ir. Ivo Adan, Professor of Manufacturing Networks at the Eindhoven University of Technology (Chair);
- Prof. Dr. Margriet Van Bael, Professor of Physics and vice-dean of Education at the Science Faculty of the Katholieke Universiteit, Leuven;
- Dr. Bo Karlson, Lecturer and director of studies Industrial Economics and Management at the Royal Institute of Technology, Stockholm;
- Prof. Dr. Robert Malina, Professor of Environmental Economics at the University Hasselt;
- Sibel Gökbekir MSc, alumna of the master's programme Complex Systems Engineering and Management at the Technical University Delft – Student member.

Information on the programme

Name of the institution:	Universiteit Maastricht
Status of the institution:	Publicly funded institution
Result institutional quality assurance assessment:	Positive

Programme name:	Business Engineering
CROHO number:	50769
Level:	Bachelor
Orientation:	Academic
Number of credits:	180 EC
Location:	Maastricht
Educational minor:	Not applicable
Mode(s) of study:	Fulltime
Language of instruction:	English
Submission date NVAO:	1 May 2025

Description of the assessment

Recommendations previous panel

The previous accreditation of the BSc BE programme was the initial accreditation, which was carried out by the NVAO. The panel recognized BSc BE as a broad programme delivering bridge-builders between experts and problem-solvers in a business environment, rather than experts in a specific discipline. It also indicated that the ILOs were feasible and worthwhile, despite the large variety of graduates due to the large share of electives in individual paths. The panel was concerned whether the academic breadth and depth would be sufficient for the enrolment in master's programmes. However, the first cohort shows that BSc BE gives graduates the opportunity to enrol in a wide variety of master's programmes, as was envisioned during the development of the programme. To enhance the enrolment towards specific master's, the NVAO panel indicated that developing tracks might be helpful. To help students orient towards a master's programme, the programme provided study advisors with an overview of potential learning lines and their outcomes in specific domains to assist students in making curriculum choices, as some master's require a minimum ECTS within a certain domain.

Standard 1. Intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Findings

The BSc Business Engineering (BE) is a transdisciplinary programme, equipping students with skills and knowledge from several disciplines. It is offered by the collaborative efforts of the Faculty of Sciences and Engineering (FSE) and the School of Business and Economics (SBE) of Maastricht University, who each supply the programme with experts in the fields to teach the associated disciplines. The programme is designed to meet the increasing demand for graduates who have both scientific and technical understanding, as well as expertise on business processes, specifically business processes in industrial and service sectors. It is based on the idea that technology is not limited to production or operation processes but has found its way in managing business processes as well. BE strives to deliver graduates who have the capabilities to bridge the domains of business, science and engineering. It aims to provide students with the skills and knowledge necessary to respond to the complexities of today's society and its growing importance of technologies, with special focus on the planet's limited resources. Examples include the widespread use of new technologies such as additive manufacturing or virtual reality applications, or the growing importance of analysing and interpreting big data, to understand how to use the limited natural resources on the planet more effectively. Students work on problems like these in an interdisciplinary approach. For instance, delays in the production of aircrafts due to engine problems can only be solved by combining and integrating different disciplines which might include materials science, product engineering and operations management. The programme teaches students to think in an interdisciplinary way, to be able to ask and answer questions such as: "How quickly do materials wear and tear?", "Should the design of the aircraft be changed to solve the problem?" and "How could inventory management be optimized to prevent production delays?".

In terms of content, the programme provides students with a skillset consisting of mathematical, economic, technological, social and scientific competencies, with a ratio of 60/40 between STEM (Science, Technology, Engineering and Mathematics) and business courses. These skills are mainly focused on designing, developing, and optimizing complex value-creating processes. The programme intends for students to obtain a foundational level in these skills, on which they will build throughout their curriculum. They are

meant to develop these competencies through combining strategic, operational and social perspectives. The programme's broad profile allows students to develop into different directions, following their own learning path. In the second and third year, the programme offers plenty of elective space and helps students compose their individual trajectories in accordance with their future goals.

The BSc BE teaches students to combine their knowledge and skills in the different disciplines to solve problems effectively. In order to accomplish this, the programme combines core courses with skills education, electives and projects using the Problem-Based Learning (PBL) approach, which is characteristic of Maastricht University. PBL is an active form of learning in which students focus on a specific problem to which they find a solution by applying the knowledge and skills taught in the courses. PBL is based on four key principles, known as the CCCS principles. First, learning is a *constructive* process in which knowledge is continuously constructed and restructured. Second, learning is based on interaction between students, and is therefore a *collaborative* process. Third, *context* is provided through meaningful situations or real-life problems. Fourth, learning is *self-directed* as students shape their own learning process. Using the PBL method, the students work mostly independently on problems drawn from real world (industry) settings, in a small-scale tutorial group environment. They do this under the guidance of a tutor, who helps them if they have questions on the theory or skills they need to solve the problem.. The programme furthermore uses projects in order to teach the students how to apply the knowledge they have gained in the classroom in a contextual and self-directed manner

The panel studied the documentation provided by the programme and conducted interviews with students and staff during the site visit. It considers the profile and aims of the programme to be clearly formulated, making a clear connection between business and engineering. The panel appreciates the programme's mission to educate bridge builders, capable of transdisciplinary collaboration in both academic and professional life. It recognizes that this aim is relevant to the societal challenges which the professional field is facing today, which ask for transdisciplinary thinkers. It commends the programme on how it addresses the need for such professionals, who are equipped to navigate both the science and the business aspect of a complex problem. The panel concludes from documentation and interviews that these aims are well elaborated upon and thought through. This is mainly visible in the way the projects are implemented as a period of integration and practice. The projects are grounded in the PBL method; students are challenged to apply their newly learnt skills and knowledge to a real-life problem directly from industry. The set up of the projects requires students to combine both their business and their engineering expertise in a hands-on and concrete manner, and practice skills such as communication that are needed in the professional field. The panel was happy to find that the programme is well-balanced in its aims, with this distribution of 60% STEM to 40% business courses, and the integration of these two during the projects. These aspects of the profile, as well as combining science and business skills, give the programme a strong and practical approach. The panel commends the programme for these characteristics and how they give substance to the unique profile of the programme.

The panel also appreciates the broadness of the profile, which it finds leaves plenty of room for students to design their own learning paths. This is made possible by the solid foundation of knowledge and skills in several disciplines that the programme aims to provide each student with. During interviews with students, the panel concluded that this is also appreciated by the students themselves, as it gave them the freedom to shape their curriculum to their own interest or align it with their future plans.

When studying the documentation, the panel found that the programme was initiated as a result of conversation with industry, and that the profile and ILOs are aligned with its needs. BE was developed based on a desire from the industry. The industry indicated that current communication and understanding between the technological and the business domains were lacking. During the first accreditation, the

programme obtained its current form after discussions with an advisory board from industry, consisting of CEOs, managers and directors of several organizations such as Brightlands Chemelot Campus and Blue Engineering.

These discussions resulted in a vision on the skills and competences to be obtained by the graduates and their fit with a future work field in a business environment and the service sectors.

The programme keeps informal lines of communication open with representatives from the professional field, for example via the compulsory internships of the third year. The panel appreciates that the programme is actively keeping in touch with external stakeholders from industry, but also thinks that a more structural connection would benefit the programme's continuous alignment with industry. It encourages the programme to consider installing an advisory board with external professionals from industry to safeguard this link. This advisory board could be included in reviewing the profile and ILOs based on the current challenges in their respective fields.

From the interview with students, the panel concludes that students found the profile of the programme to be clear. Although the programme takes care to prepare students for the entry requirements of several follow-up master's programmes, which was also recommended by the initial accreditation panel, students indicated to the panel that they would welcome more general information on what kind of follow-up education and future careers the programme aims prepare students for. During interviews with the programme management and from reading documentation, it became clear that the programme is aware of this issue and finds it stems from the fact that the programme does not yet have many alumni, since it is relatively young. Nonetheless, the panel advises the programme to make clear to (prospective) students what the career and master options are and continue to analyse data from alumni.

Intended Learning Outcomes

The programme has five overall intended learning outcomes (ILOs) (see appendix 1). The ILOs are translated into 22 programme objectives that are in line with the Dublin descriptors for bachelor's programmes and describe how students realize the ILOs. The programme objectives are connected to the courses, skills and projects by means of an assessment programme. One minor change is envisioned in the Education and Examination Regulations (EER) of 2025/2026 for ILOs 4.1 and 4.3: sustainability increasingly influences society, becoming an important consideration in business decision making. Discussions on sustainability are an integrated subject in projects and several courses. Therefore, the sustainability context will be added to the aforementioned ILOs on top of the professional, social and cultural context.

The panel studied the ILO's, and concludes that they are appropriately formulated and well developed. They are at the level of a bachelor's programme and have a clear academic orientation. The panel appreciates the translation of the transdisciplinary profile of the programme into the ILOs.

Considerations

The panel concludes that the mission and profile of the programme are both clearly defined and well formulated. It appreciates the transdisciplinary character of the profile and recognizes the need for professionals who are able to function as bridge builders within industry. The aims and objectives of the programme are well thought out and elaborated upon, and aligned with the overall mission of the profile. The panel mainly recognizes this in how the projects are implemented as a tool for integration of both areas of expertise, and for students to learn to apply the skills and knowledge to a real life challenge. It compliments the programme on this strong and practical approach and the broad profile in which students have plenty of opportunity to shape their own curriculum. The profile and ILOs are clearly based on the needs from industry, since the programme was initiated because of these needs. At the same time, the panel also recognizes that the programme would benefit from a continuous and structural communication with

external stakeholders from industry. It therefore encourages the programme to install an advisory board with external professionals who could help update the ILOs and the profile according to recent developments within the field. Students are clear on the profile of the programme, but it is not always clear to them for which future master- or career options the programme aims to educate them. The panel advises the programme to communicate clearly to (prospective) students what the career and master options are and continue to analyse data from alumni. Having studied the ILOs, the panel concludes that they are well aligned on a bachelor's level and clearly translate the profile and the aims of the programme.

Conclusion

The panel concludes that the programme meets standard 1.

Standard 2. Teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Findings

Curriculum

The programme distinguishes five core elements in the curriculum that complement and support each other. These core elements are: business oriented courses, engineering oriented courses, mathematics courses, skills and transdisciplinary projects. The projects are meant to integrate knowledge and skills from the other core elements, and help students contextualise the material they cover during the respective period. They also prepare students for the Thesis Research Project (TRP) and allows them to practice with the complexity of potential future professional tasks. The projects in the BSc Business Engineering are grounded in the principles of the PBL teaching method: small-scale and student-oriented. Students work in small groups on complex and challenging projects that require them to develop skills such as collaboration and communication. Projects can be defined as real-world problems that require analytical and problem-solving skills from students where they have to apply newly acquired knowledge. This way, students immediately apply what they have learned from the course material and lectures to real-life problems. An example of this is the Circular Economy Project, in which student teams analyse a value chain of a product and assess the opportunities of this value chain in its quest to become more circular. They also evaluate the effects of improved circularity on the sustainability impact. Companies are asked to provide interesting cases for the projects. Students report and present their findings at the end of the project, and provide each other with peer feedback.

The programme has translated the 22 programme objectives into course objectives, each of which corresponds with one or more Dublin descriptors. The ILOs for the compulsory courses, skills and projects are shown in the curriculum map, as well as their relation to the programme's objectives and the Dublin descriptors. This way, the programme aims to ensure coherence throughout the curriculum. The programme offers students a lot of freedom and flexibility, with the second and third year offering a lot of space for elective courses. If a student opts to study abroad for a semester, or plans to take elective courses outside of the BE programme, they have to have their individual learning paths approved by the Board of Examiners (BoE), in order to safeguard that they meet the ILOs with their selected courses. The programme's academic year contains two semesters with four courses/electives, one skill course and one project (each 5 EC, 30 EC in total) per semester. Each semester contains 20 weeks split up into three periods: two course/skills periods of seven weeks with exams in week 8, and one project period of four weeks.

BSc BE combines theoretical core courses with skills, electives and projects. The core courses within the field of business, economics, engineering and mathematics, concentrate on basic theoretical knowledge. The PBL approach in courses focuses on combining theoretical background with application, in order to advance the learning process. Most of the core courses use undergraduate books to shape the course. This secures that students have the theoretical background that complies with global standards. A course typically starts with a theoretical outline during a weekly lecture. In tutorials, actualities are introduced through tutorial tasks in small classroom settings for in-depth understanding. Students have to explore additional information by self-study to solve problems or fulfil learning goals. The compulsory mathematical courses 'Calculus', 'Linear Algebra' and 'Multivariable Calculus' are of an academic engineering level. These are not only required for courses later in the programme, but also for any master's in the STEM domain. In skills, students study the theoretical background and prove their understanding by performing practical assignments. An example is 'Laboratory and Research Skills'. Students study the background of a chemical reaction, perform the synthesis, do an analysis and prepare a poster to present their work.

During the first year, students are provided with necessary knowledge and skills in science, business and engineering courses. These are all integrated in compulsory courses, to ensure that students have a solid foundation upon which to build their curriculum with more freedom. This also ensures that students at least have similar bases of knowledge. After a fully compulsory first year, students have a limited elective space in the second year in which they can choose their own business and engineering courses (20 EC) besides compulsory courses, skills and projects (40 EC). The projects bring these two disciplines together and ensure that students practice in applying the skills and knowledge they have learnt in a hands-on manner. In the third year, the programme offers a broader choice of electives in the domains of business, economics, engineering and data science. Some electives were explicitly added to meet the admission requirements of specific UM master's programmes.

In the first semester of the third year, students can take part in a semester abroad facilitated by the International Relations Office of SBE. Some of the SBE partner universities also offer engineering courses, like the University of Queensland. Approximately 50-60% of the students go on exchange. Exchange courses have to be approved by one of the programme directors to secure coherence with the BSc BE programme, a task that is delegated to them by the BoE. The alternative for the exchange is to stay and follow BE electives. In the second semester of the third year, all students follow the compulsory 'Ethics in Engineering' course and an elective, after which they end their bachelor's with a Thesis Research Project (TRP). This project is considered the capstone of the programme, and combines the thesis and the internship. During the TRP internship, students combine academic research with an internship in a company or a university research group. Students need to be in the third year of their studies and have completed all first year courses, skills trainings and projects, before being allowed to start the bachelor thesis research.

The programme noticed that students are not always aware that the projects are meant to prepare them for the TRP. It aims to improve this by mentioning it more explicitly during projects and considers to add tutorials at the start of the TRP.

The panel studied the programme's curriculum and the manuals and content of some of the courses, as well as the way in which the TRPs are set up. The panel found the programme to be well-structured with the first year as a solid foundation in necessary skills and knowledge and year two and three offering more freedom. The projects function as a guideline throughout the curriculum, which ensure coherence during the three years. The panel concludes that the programme offers students a strong and broad curriculum, and compliments the programme on this structure. It considers that the curriculum as a whole is coherent, helped by the link between the programme's ILOs and the course ILOs, by the projects, and often also by the informal alignment between course coordinators, tutors and other teaching staff. On the other hand, the

panel thinks that the programme might benefit from a more structural alignment between course coordinators. Because the programme is organized by two different faculties, not all teaching staff have regular contact. Formalized alignment processes can help consolidate the coherence on course level. The panel learnt that there was a recent meeting with course coordinators to shape the curriculum and prevent that future misalignments such as overlapping course content creeps in where informal alignment and align the courses. The panel encourages the programme to further structuralize the alignment between course coordinators, for example by giving these meetings a structural position in the programme coordination.

The panel concludes from the course manuals and other documentation that the business and engineering components within the curriculum are well balanced. The panel was pleased to see that the two mindsets, that of a business professional and that of an engineer, are both very visibly present throughout the courses. The ILOs are translated directly into course ILOs, which are each connected to the Dublin descriptor. The panel considers this to be an effective way of ensuring that the profile and aims are reflected into the curriculum. The panel was enthusiastic about the opportunity offered to go on an exchange in the third year, and deems this international semester to be very valuable to students. It encourages the programme to keep stimulating students to go abroad, and to supply them with information about possible funding opportunities. The panel concluded from reading some of the TRP reports and other documentation that the business component is often overemphasized in this final project. Although in theory, it is possible to deep dive into both components, in reality students often end up with a business-heavy TRP. The panel advises the programme to make explicit that the TRP needs to have a balance between both elements as well.

Feasibility and guidance

The programme admits any VWO graduate who has graduated high school with higher mathematics (Wiskunde B) in their curriculum, and students who finished their first year of an HBO programme with higher mathematics at the level of a VWO graduate. To eliminate a mathematics deficiency, prospective students are offered an online course and exam. After passing this exam, students are welcome to start the programme. The programme informs students on things like assessment, their curriculum choices and study guidance in several ways. Study guides inform students on the way they are assessed and their course work throughout the semesters. For questions on the curriculum, elective choices or other study-related issues, students can reach out to a study advisor or programme director. Since the programme directors also teach at the programme, this means they are accessible and approachable for students with such questions. There are two study advisers available for the Business Engineering students. Study advisers help students with issues that influence their study progress such as personal circumstances or the adjustment to student life. In order to guide students through the open and broad curriculum, especially in the second and third year, study advisers can provide students with learning lines. These learning lines function as guidelines on specific curriculum choices which lead to expertise in different domains. For some master's programmes, a certain amount of EC's are needed in a specific area. Study advisors can use the learning lines to help students select the right elective courses they need in order to meet such criteria. Students can ask their study advisors for help if they have questions on shaping their curriculum. They are also guided in choosing electives keeping in mind the balance between business and engineering. Choosing electives, the study advisors make sure each individual student follows a curriculum that covers all the ILOs. Because of the tutorials, students can easily approach their tutor if they have questions on the course topic or other questions related to their study. This small groups of the tutorials, max. 15 students, allows for enough time and attention for individual students. Within the programme, students are restricted to two courses/electives and one skill course per period (12.5 EC) to prevent high study loads and make the curriculum more feasible.

To be able to start the bachelor's thesis research, students need an internship. Finding an internship has proven to be a challenge, especially for those students on exchange in the first semester of the third year. By building a network, the programme strives to publish more internship opportunities upfront.

For students with impairments, the programme abides by the UM wide policy on studying with a disability or chronic illness. Students who have challenges studying because of such issues can find support with the Disability Support unit consisting of a dean, (student) employee and a disability officer. This unit is responsible for providing information and advice on studying with a disability, as well as drawing up recommendations on facilities for the student in question, on which the Board of Examiners (BoE) has to approve.

In the case of students with severe physical impairment, lab work, which is a part of the curriculum, might prove difficult. The programme will facilitate these students by advising them which replacement skill courses they can take up instead of courses that require lab work. This is accommodated by the open programme with plenty of elective space. The programme aims to secure a coherent and qualitative curriculum for all students by involving the BoE early in this trajectory, although there have not been any students with severe physical impairments.

In June and August 2023, the first BE students graduated. The programme notes that 60 out of the 150 students who registered in 2020-21 graduated nominally; 52% of the students who were still in the programme by 2023. Most of the drop-out students did either not show up at all or dropped out during the first semester. Students who do not manage to gain 45 ECTS in their first year will receive a negative binding study advice (NBSA) indicating that the student is not allowed to enrol in the second year or again in the first year. The number of students who have dropped out and students with a NBSA is consistent over the three years of the programme. Of the programme's first cohort, 44 students graduated in their fourth year of studies, taking the extra year either to do their bachelor's thesis or to pass their final courses, like Multivariable Calculus in period 1. Most of the students struggle with the mathematics courses, despite the admission requirement of higher mathematics. The programme therefore adjusted the courses to motivate students to study more during the course weeks and not last-minute before exams. This kept students in an active study mode throughout the entire period by offering weekly graded quizzes and a participation bonus point. Further analysis, adjustments and discussions on absolute minimum requirements are on-going.

During the interview with students of the programme, the panel was told that most students are comfortable with the study load of the curriculum. The students noted that the study load is well balanced throughout the year with an expected condensed study load during exam periods. Students are overall happy with the two classes per course per week, and find that if you keep up with the course week the study load is well manageable. Students also expressed that they were content with the ways in which they are offered guidance throughout the programme.

The panel spoke to the students of the programme and studied the material on both the UM-wide and the programme specific guidance system. It found that the systems in place offer students the guidance that they need in order to successfully graduate within the allotted time. The curriculum structure and the guidance system make sure that the programme is feasible, according to the panel. Students are overall content with the guidance they are offered, both in terms of study impairment and in terms of the guidance in choosing their electives. The panel appreciates the freedom of choice and the control that students have over their own curriculum due to the amount of elective space, and finds the way in which students are guided in these decisions to be sufficient. It does note that if students have a clearer view of which learning lines are possible, the coherence of the programme would improve further (see also the discussion under

Curriculum). The panel therefore encourages the programme to clarify and emphasize the learning lines more visibly and explicitly.

Teaching staff

The programme's teaching staff originates from different research groups and institutes. Most of the teaching staff are employed by one of the two organizing faculties (SBE or FSE), although a small part is employed at a different faculty, mostly the Faculty of Health, Medicine and Life Sciences (FHML). All course coordinators are at least listed as a Lecturer, though most are either Associate Professors or Assistant Professors. Almost all have a PhD or are currently PhD candidates. Course coordinators and examiners are required to have a University Teaching Qualification (UTQ) or are in the process of obtaining their UTQ. In the latter case, this will be limited to newly hired academic staff or staff not previously deployed in educational tasks. Regardless of their UTQ status, staff always have expertise in the course subject. UTQ qualified teaching staff are required to take additional courses on educational topics each year (study load at least 16hrs/yr). These courses are organized by UM's Education Laboratory (EDLAB), the Centre for Teaching and Learning. For smaller courses, course coordinators and lecturers will be involved in tutoring themselves, for bigger courses research technicians, senior engineers, PhD students, master's students, other assistant and associate professors are included.

All new academic staff tutors need to participate in a tutor- or PBL training. This includes PhD students. After the training, tutors understand and apply the principles of PBL, effectively guide small tutorial groups, deal with group dynamics and provide feedback to students.

The panel has studied the list of teaching staff and talked to the teaching staff during the site visit. It concludes that the teaching staff are very involved in the programme and committed to their students. The panel compliments the programme on the quality of their teaching staff, which it finds quite high. From documentation it concludes that all teaching staff either have their UTQ or are in the process of obtaining it, which the panel finds to be indicative of the consistent quality of the teaching staff. It appreciates that the programme's teaching staff originates from different research groups and institutes, offering a diverse range of expertise for students to learn from. It also concludes from talking to both the teaching staff and the programme management that the collaboration between the faculties is arranged well, and that there are no scheduling problems or other logistical issues to speak of. The panel is impressed with this successful collaboration between the faculties.

Language

To prepare students for working in interdisciplinary and international teams, the programme is offered in an international classroom setting and English is the common language. Because of the specific educational nature and profile of the BSc Business Engineering, teaching and examinations are conducted in English and the programme has an English title. The content of the programme has an international focus and orientation as it is designed for students who can bridge the 'world of the natural sciences and engineering' and the 'world of business' in order to reflect on international issues and to cooperate and communicate in international contexts.

The panel finds the choice for English to be a logical one in the context of the broad and international orientation of the programme. It notes that the language choice furthermore allows for an international classroom, in which students and teaching staff with different cultural backgrounds are able to share their perspectives.

Programme specific facilities

The programme has access to several different laboratories, which are shared with students from other science and engineering programmes. To be able to understand the STEM concepts, theories and practices, students must be able to carry out scientific experiments. Dedicated laboratories at the Duboisdomein at FSE in Maastricht ensure that students gain the necessary practical insights. The programme can also make use of additional facilities offered by the Brightlands campuses to support research education. The labs are used in multiple courses, among which skills courses and the projects that run throughout each period.

The panel was offered a tour of the laboratories that are available to the BSc BE students, and was impressed by the variety of facilities offered by the university. It finds these laboratories to be a very valuable asset to the programme, since students can practise the necessary skills and work on their projects in these spaces. Experiments are an important part of the engineering component of the programme, which is why the panel was happy to find that these spaces are available to the programme to teach their science classes and let students collaborate on their projects.

Considerations

The panel concludes that the curriculum of the programme is solidly structured, with the compulsory courses in the first year offering the students the necessary knowledge and skills to continue. The way in which students are guided through the broad and open curriculum of the second and third year ensures that the balance between business and engineering is maintained and that students choose feasible and coherent options. The coherence of the programme is ensured by the projects, which tie everything students have learned in a period together, and by the alignment between courses and course coordinators. The panel appreciates that although this is sufficient, it would improve the coherence even further if this alignment is further formalized, especially on course level. It encourages the programme to keep working on the alignment between the various curriculum components. The panel concludes that the ILOs are reflected well in the curriculum, noting the broadness and the balance between both business, science and engineering courses. The ILOs being translated into course ILOs that are connected to the Dublin descriptors helps to ensure that the profile and aims are covered. The panel is happy to find that students get the opportunity to go abroad for a semester, and continue their studies internationally. It finds this to be a very valuable addition to the already internationally oriented programme. The panel advises the programme to make the balance between the business and engineering component explicit in the TRP, since this balance is sometimes lost. Students with impairments are offered extra guidance by the UM wide policy, which the panel appreciates. The panel is positive about the teaching staff, who they deem to be of high quality and diverse in their different expertise. The panel finds the programme's choice for English as a common language to be a logical one in the context of the broad and international orientation of the programme, and concludes that it also facilitates the international classroom. The laboratories that are available for science and engineering courses and projects are a great asset to the programme, the panel finds. Since experiments are an important part of the curriculum, these facilities are very valuable to students and staff.

Conclusion

The panel concludes that the programme meets standard 2.

Standard 3. Student assessment

The programme has an adequate system of student assessment in place.

Findings

The assessment system that the programme uses is based on and aligned with the UM wide vision on assessment. This vision is grounded in three principles: the assessment should be (1) meaningful for students' learning process, (2) supporting the CCCS principles, and (3) governed at the level of the programme. To incorporate these three principles, in each course, elective, skill and project there are at least two instances of summative assessment and some formative assessments. When students fail a course or skill, the programme provides a resit opportunity. For projects, the opportunity for a resit depends on which of the three assessment components (team report, team presentation or individual team performance) the student has failed. If the group fails the team report or the team presentation, a resit is possible. If the individual student fails on teamwork (assessed through peer review) however, a resit is not possible and the student has to take on the project again. The variety of examination methods includes writing assignments and papers, lab reports and presentations. For each course, the assessment components are connected to the ILOs and clearly described in the course syllabus. The primarily responsible person for the assessment is the examiner appointed by the BoE. Given their subject expertise, examiners are given considerable discretion in the assessment process, safeguarded by the framework of policies, rules and regulations. The programme maintains a four-eyes principle: major components of course assessment are critically assessed by an experienced second staff member. This safeguards the quality of the examination. Examiners perform the grading and communicate the results. They are required to inform students about the exact assessment arrangements and the grading scheme. In addition, coordinators must provide students with feedback to give them a clear understanding on the grading and enable them to learn from their mistakes. In examinations that constitute a major component of course assessment (weight 40% or higher), students have the right to comment on questions and/or answer keys or model answers for five days following the examination day.

The programme has a policy on how to use AI tools like ChatGPT that does not prohibit the use of such tools but rather encourages their responsible and ethical use. It allows AI tools as a new technology that has benefits in problem analysis and solving, in order to teach students how to use these tools to come up with better solutions. To reduce the risk of AI-written reports, the programme emphasizes the innovative character of the work in the grading and considers adjusting the grading weights of the examination components for the thesis and projects. For courses that include team reporting with a limited view on authenticity, the programme management urges examiners to replace the report assessment with an alternative or to include an oral presentation.

The panel has studied both the UM wide vision on assessment and the programme specific assessment system. During the site visit, the panel interviewed the teaching staff and examination board. It was happy to find that the principles of the UM wide vision are well embedded into the assessment system. Different types of assessment are used throughout the programme, fitting the material and matched with the learning objectives of the course. This ensures that all the ILOs are assessed throughout the programme. The panel appreciates that projects are assessed on different elements, which it finds safeguards the assessment and teaches students to give their peers feedback. It is further happy to note that the programme is well aware on the influence of generative AI on their assessment, all the while not banning it completely but rather incorporating the responsible use in their courses.

Thesis Research Project assessment

The programme assesses whether the student has achieved the ILOs with the final and individual project of the curriculum: the Thesis Research Project (TRP). During the TRP, the student shows their ability to apply their knowledge and problem-solving skills in a professional organization. They are supported and assessed by both an external supervisor and an UM internal advisor. The external supervisor is a content expert from the internship organization, and the internal advisor is part of the university staff. The internal advisor is appointed by the BoE as examiner and provides feedback on the students' research, the external supervisor sets the scope and provides support on the content of the project within the organization. Students are informed on the way they are assessed on their TRP in the TRP course guide, and by their internal supervisor. Recently, the programme introduced a second internal assessor to the process that acts as an independent second examiner. This was applied to all new and current projects, and is aimed to improve the validity of thesis assessment.

Students start with a Request for Approval (RfA) before the start of their thesis trajectory to secure an appropriate research question and time schedule. After approval by the TRP course coordinator, the student starts with a Research Proposal followed by a Midterm Evaluation and a final Report and Presentation with Defence. Students receive one grade for their TRP, with a part of the grade being awarded for the practical work and the other part for the academic (research) work. The initial grading scheme of the TRP 50% of the grade was determined on practical work and 50% on the academic work. In the current scheme, 25% of the grade is based on the practical work, and 75% on the academic work. This change was made in order to emphasize the academic work within the project. The TRP is graded on four different components for which there exist four separate rubrics: the proposal, the report, the final practical work, and the defence and presentation. The separate grades compensate each other, and together make up the final grade.

The panel is positive about thesis assessment in the programme. It appreciates the set-up of the process, as well as the recently implemented inclusion of a second internal examiner, as it ensures a more reliable assessment of the TRP. It is also happy to note that the programme uses midterm evaluations for the TRPs, which is a valuable form of formative assessment that helps students stay on track during the project. The panel studied the assessment of 15 TRPs and the TRPs in question. It found that the rubrics provide a solid and consistent way of assessing the theses. It did however also find one thesis report that was graded insufficient, with which the panel agreed in terms of the poor quality of the report. Due to compensation resulting from high grades on the other three graded components however, the student received a pass on their TRP on average and was allowed to graduate. The panel thinks that allowing compensation between satisfactory and unsatisfactory grades within the thesis assessment is not advisable, and recommends adapting the TRP assessment grading process to ensure that students who receive an insufficient grade in one or more components are not allowed to graduate. Only allowing students to graduate when they have passed all elements of the TRP would prevent cases like the one discussed above, however rare such a combination of low and high grades may be. This ensures a more reliable assessment and the alignment of the level reached when students graduate. During the interview, the panel questioned the Board of Examiners on this issue, and was happy to learn that the Board is aware of this, and is already implementing changes to prevent such cases. The BoE explained that they are in the process of revising the TRP rubric system to ensure that students have to pass all TRP components in order to pass the TRP. The panel commends the BoE on this revision and encourages it to follow through with this adaptation in the TRP assessment.

The panel furthermore notes that, although the TRP implicitly covers the programme objectives, the relationship between the TRP assessment criteria and the programme ILOs is not explicitly stated. It

therefore suggests that the programme makes the link between the two more explicit and, if necessary, changes the wording of the TRP assessment criteria to make the link to the ILOs more visible.

Board of Examiners

The BSc Business Engineering programme falls under the BoE of the School of Business and Economics, one of the faculties that organizes the programme. The BoE for the BSc BE consists of one chair for each chamber, members of the SBE academic staff, an external member, and an FSE member to provide FSE perspective in discussions on BE. The BoE participates in monitoring the assessment quality and the extent to which students meet the final qualifications of the programme. The BoE appoints examiners based on standardized eligibility criteria established on UM level. When appointing examiners, the BoE provides them with extensive information on their obligations regarding quality assessment, related to preventing, detecting, and reporting fraud, and on enabling inspection of examinations and on providing more extensive feedback to students on request. While course coordinators are primarily responsible for detecting potential fraud and plagiarism within course assessments, the BoE periodically reviews assessments for signs of fraud and plagiarism.

Apart from the BoE, the programme also has an Assessment Committee (AC), who oversee and monitor the assessment of student learning. Through the Assurance of Assessment cycle, which is closely linked to the Assurance of Learning (AoL) cycle, the AC reviews quality of assessments and provides a guarantee to the BoE that there is a quality assurance process in place. Furthermore, the SBE Learning Academy ensures proper follow-up and support for course coordinators and examiners on assessment.

The panel has read the documentation regarding the BoE and its structure, as well as the annual reports that were made available. Based on the documentation on the Board of Examiners and the discussion with the Board during the site visit, the panel concludes that the Board fulfils its legal obligations, assuring the quality of assessment of the programme. It considers that the checks and balances that are in place to safeguard the validity of the assessment, such as the sampling of individual exams and theses, are appropriate and reliable. During the discussion with the BoE, the panel concluded that the smooth collaboration between the two faculties is visible there as well, which is supported by the chamber structure of the BoE. Navigating the different ways of assessment between both faculties is going very well, according to the panel. The BoE meets with the Assessment Committee regularly to discuss the assurance of quality assessment, which the panel appreciates as another way of ensuring validity and reliability of the assessment.

Considerations

The panel concludes that the quality of the assessment of the Business Engineering bachelor's programme is adequate, transparent and reliable. There is variety in the assessment methods used throughout the curriculum, and the projects include peer review in their assessment which the panel appreciates.

The panel appreciates thesis assessment, and approves of the recent change to have TRPs assessed by two internal assessors instead of one, enhancing reliability, and the TRP rubrics that provide consistency. It also appreciates the use of midterm evaluations as a valuable formative tool. The panel identified a case where a poor thesis report was compensated by other components, allowing the student to pass. It recommends requiring students to pass all TRP components to graduate. In this regard, the panel was happy to learn that the BoE is advising to revise the assessment rubric to require passing all components. The panel commends this revision and encourages its implementation to enhance assessment reliability. Additionally, the panel advises making explicit the relation between the TRP assessment criteria and programme ILOs. The panel reviewed the Board of Examiners' (BoE) structure, annual reports, and legal responsibilities, concluding that it effectively ensures assessment quality. It finds the existing checks, such as exam sampling, appropriate and reliable. Regular meetings with the Assessment Committee further strengthen assessment validity.

Conclusion

The panel concludes that the programme meets standard 3.

Standard 4. Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

The panel reviewed a sample of 15 recent theses to assess the students' final level. It was pleased to note that the theses were of overall good quality, confirming that students meet the BSc level. Most of the TRPs were business oriented, but some of the theses were very technical and engineering oriented, which shows that each aspect of the programme is taught well. The panel values how the programme's profile is represented in the theses, with a diverse array of topics showcasing its transdisciplinary nature. The panel finds that in general, graduates achieve the ILOs of the programme and leave the programme with a high quality exit level.

The panel studied the information it received on the alumni of the programme and the choices for master's programmes. It concludes that graduates of the programme end up in a broad variety of master's programmes, mostly in the business domain. Some proceed into the engineering domain such as Chemical Engineering and Imaging Engineering. Master's in a combined domain like 'Technology Entrepreneurship', 'Sustainability and Technology', or 'Technology and Operations Management' were also popular among graduates. The panel appreciates that the choice of the master's programmes reflects the transdisciplinary and broad profile of the programme. A significant part of the graduates continue with a master's programme abroad, which shows the BSc BE connects well to the global academic level of master's programmes. This speaks for the international orientation of the programme specifically and the Maastricht University in general. Choices for the master's programme are in line with the aims of the Business Engineering Bachelor's, the panel finds. Although not many of the graduates directly entered the professional field, some were hired by their internship companies and started their career rather than continuing with a master. According to the panel, this shows that students are already equipped with a skillset needed to enter the workforce after their bachelor's programme, on which it offers it compliments. The alumni that the panel interviewed appeared confident and content with the BSc BE. The panel found that the number of Cum Laude graduates was relatively high: 25% of graduates received a Cum Laude. The programme is aware of this issue, and is considering to adapt the criteria for a Cum Laude in order to ensure the exemplary character. The panel encourages the programme to make this adaptation.

Considerations

The good quality of the theses, as well as the career paths or master's programmes of alumni, convinced the panel that graduates of the BSc Business Engineering achieve the intended learning outcomes. Alumni are finding relevant master's or jobs, and appear confident. The panel encourages the programme to continue to strengthen ties with alumni.

Conclusion

The panel concludes that the programme meets standard 4.

General conclusion

The panel's assessment of the bachelor's programme Business Engineering is positive.

Recommendations

1. Install an advisory board with external professionals who could help review the ILOs and the profile according to recent developments within the field.
2. Analyse the data the programme has on its alumni and communicate clearly which master- or career options their (prospective) students have.
3. Further improve the coherence of the curriculum by more visibly emphasizing the main learning lines and by formalizing the alignment between course coordinators.
4. Make the balance between the business and engineering component explicit in the TRP, since this balance is sometimes lost.
5. Continue the planned revising of the TRP assessment criteria, requiring students to pass all the components of the TRP in order to pass.
6. Make the relation between the TRP assessment criteria and the programme ILOs explicit.

Appendix 1. Intended learning outcomes

Intended learning outcomes	Programme Objectives
1. Students have a breadth of academic knowledge	1.1 Core knowledge. Students have knowledge of the basic concepts within science, technology, engineering and mathematics (STEM) and business
	1.2 Transdisciplinary approach. Students are able to identify appropriate theoretical frameworks to address a Business Engineering problem. They can connect concepts across disciplines. They are able to integrate and apply models, theories, methods and techniques in the field of business engineering
2. Students have in-depth academic expertise in the field of natural sciences, business and engineering	1. 2.1 Students can place knowledge in an academic or societal context in the field of the following disciplines: <ul style="list-style-type: none"> ▪ Mathematics, especially quantitative modelling and statistics; ▪ Sciences, especially biology/biotechnology, physics and chemistry; ▪ Management and Business, especially operations and supply chain management and entrepreneurship; ▪ Engineering, especially design of products and process
	2.2 Students have the ability to understand the relationship between product and process engineering and business processes
	2.3 Students have the ability to analyse a practical problem and assess which expertise, materials, laboratory infrastructure and experiments are required to investigate this problem in an efficient manner through scientific research
	2.4 Students have knowledge of the nature of complex problems that arise at the intersections of natural sciences, business and engineering
	2.5 Students are adequately prepared for relevant graduate programmes in the field of engineering and business
3. Students have a scientific attitude towards learning and problem solving	3.1 Students have a scientific attitude aimed at learning and the generation of new knowledge and viewpoints
	3.2 Students are capable of reviewing, expanding and applying acquired knowledge
	3.3 Students have the ability to form a critical opinion on their own conclusions
	3.4 Students have the ability to consult scientific sources and obtain and interpret the results from them
	3.5 Students have the ability to apply knowledge and understanding to complex, interdisciplinary problems, to formulate solutions and sustain arguments for those solutions in a professional fashion, both independently and in a team
4. Students have in-depth insights in the society in which they operate	4.1 Students have the ability to understand and apply the professional, social and cultural contexts within which they operate and oversee the implications of their decisions and work as business engineers
	4.2 Students have knowledge of the most important globalisation developments and relationships in business, technology and society
	4.3 Students are aware of the societal implications of new developments in science and Engineering
	4.4 Students have the ability to analyse ethical issues in academic and social environments in relation to their professional activities
	4.5 Students demonstrate a sufficient level of professionalism to communicate and collaborate effectively and appropriately with people from different socio-cultural and national backgrounds

Intended learning outcomes	Programme Objectives
<p>5. Students have highly-developed (inter)personal skills</p>	<p>5.1 Learning: Students have to quickly adapt to new emerging theories and techniques in the field of business and engineering as a result of the competence to increase and develop scientific knowledge through study. They have the attitude and skills required for life-long learning, professional growth and professional responsibility</p>
	<p>5.2 Critical Thinking: Students have the ability to reach and support a conclusion in a logically structured fashion based on evidence, in an intellectually honest and reflective fashion</p>
	<p>5.3 Team work. Students have the ability to share expertise and work effectively in a team or other social arrangements on solving problems and accomplishing tasks</p>
	<p>5.4 Leadership: Students have the ability to lead a multidisciplinary team of individuals and the ability to respond to current challenges by taking adequate decisions within teams when necessary</p>
	<p>5.5 Communication: Students have the ability to present scientific concepts as well as the objectives, methods used and results of a business or engineering project, being able to</p>

Appendix 2. Programme curriculum

YEAR 1 BACHELOR BUSINESS ENGINEERING 2024-2025

Year	S1	P1	BENC1001 Introduction to Business Engineering	BENC1002 Calculus	BENS1001 Academic Skills and Project Management
		P2	BENC1003 Fundamentals of Engineering	BENC1004 Linear Algebra	
		P3	BENP1001 Market Research Project		
	S2	P4	BENC1005 Economics for Business Engineering	BENC1006 Statistics	BENS1002 Software Skills
		P5	BENC1007 Materials Engineering	BENC1008 Experimentation in Science and Engineering	
		P6	BENP1002 Circular Economy Project (Life Cycle Assessment)		

YEAR 2 BACHELOR BUSINESS ENGINEERING 2025-2026

Year	S1	P1	BENC2001 Multivariable Calculus	Year 2 Elective	BENS2001 Computer Science Skills
		P2	BENC2002 Process and Product Engineering	Year 2 Elective	
		P3	BENP2001 Process and Product Design Project		
	S2	P4	BENC2003 Commercialising Science and Technology	Year 2 Elective	BENS2002 Laboratory and Research Skills
		P5	BENC2004 Corporate Finance and Investment	Year 2 Elective	
		P6	BENP2002 Research and Development Project		

YEAR 3 BACHELOR BUSINESS ENGINEERING 2026-2027

Year	S1	P1	Year 3 Elective	Year 3 Elective	BENS2003 Organisational Leadership and People Skills
		P2	Year 3 Elective	Year 3 Elective	
		P3	BENP2003 Engineering Business in Europe Project		
	S2	P4	BENC2013 Ethical and Philosophical Reflections 1	Year 3 Elective	BENP2004 Thesis Research Project 2
		P5			
		P6			

Appendix 3. Programme of the site visit

Time	Programme element	Location
08:30-09:00	Arrival of the panel	PHS1, reception desk
09:00-09:45	Interview faculty management and programme management	PHS1, B4.011
09:45-10:15	Internal panel session	PHS1, B4.011
10:15-11:00	Interview students and alumni	PHS1, B4.011
11:00-11:15	Break	PHS1, B4.011
11:15-12:00	Interview teaching staff	PHS1, B4.011
12:00-12:45	Lunch break	PHS1, B4.011

Time	Programme element	Location
12:45-13:30	Laboratory visit	DUB30
13:30-14:00	Interview Board of Examiners	PHS1, B4.011
14:00-14:45	Internal panel session	PHS1, B4.011
14:45-15:15	Concluding interview faculty management and programme management	PHS1, B4.011
15:15-15:30	Break	PHS1, B4.011

Time	Programme element	Location
15:30-16:00	Internal panel session	PHS1, B4.011
16:00-16:45	Development dialogue	PHS1, B4.011
16:45-17:00	Oral feedback by the panel (preliminary judgement)	PHS1, B0.003
17:00-18:00	Drinks	Bar Bistro SAAM

Appendix 4. Materials

Prior to the site visit, the panel studied 15 theses of the bachelor's programme Business Engineering. Information on the theses is available from Academion upon request.

The panel also studied other materials, which included:

- Self-Evaluation Report
- Programme SWOT Analysis
- FSE Document on Quality Assurance Policy (2023)
- Document on the Assurance of Learning
- Admission Criteria/Requirements
- UM Strategic Plan
- Initial Accreditation Self Evaluation Report (TNO)
- Panel Report Initial Accreditation
- A Complete List of ILOs
- Overview of Curriculum Academic Year 2024-2025
- Extensive Curriculum Map (incl. ILOs)
- List of the composition of the Teaching Staff (Course Coordinators / Other Faculty)
- Course Materials of several courses
- Information on Problem-Based Learning (PBL)
- Documentation on the International Classroom
- Documentation on EdLab
- UM policy plan Studying with a disability and/or chronic illness
- Annual Reports EPC (Educational Programme Committee) (2021 / 2022 / 2023)
- UM Vision on Assessment
- SBE Assessment Policy
- Education and Examination Regulations (EER)
- BoE Chamber Structure
- Annual Reports BoE (2020 / 2021 / 2022 / 2023)
- Policy Framework GenAI
- Thesis Course Manual
- Completion Rates
- Fact Sheet on study success, new registrations and graduations