

Programme-Specific Appendix to the EER 2020-2021

For the Bachelor of Science programme

Industrial Engineering and Management science (B-IEM)

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1 Structure and study units of the programme

The Bachelor's programme in 'Industrial Engineering and Management science' (CROHO number 56994) uses the programme name 'BSc Industrial Engineering and Management' (B-IEM) in its communication.

1.1 Programme content

In the Twente Educational Model (TEM) on which the B-IEM curriculum is based, practical exercises and relations with the work field play an important role, especially in the form of a project (or sometimes several small projects) that is at the heart of each module. The programme therefore consists of 12 themed modules of which the first eight modules are the core of the programme. The two first modules of the third year (semester 5) are electives for broadening or deepening knowledge, skills and attitude, and for studying abroad. The two last modules of the programme (semester 6) are the preparation and the execution of the bachelor's thesis assignment in which the student shows to master all programme intended learning outcomes.

Each module consists of various study units (see Table 1) which are logically clustered around a particular topic in such a way that the offered knowledge, skills and attitude of different scientific disciplines and approaches are applied in cases, assignments and/or the project. Students work in groups on project-oriented assignments and gain new knowledge rather independently (under the support and supervision of tutors). Such a teaching approach requires a variety of assessment methods – individual and group assignments, individual written tests, group papers and presentations, etc. - which are applied in different phases in each module. More detailed information on the exam formats, including the test plan, can be found in the module descriptions, in Osiris and on the Canvas site of the module. Note that participating in the practical exercises is mandatory unless specified otherwise in the module test plan.

1.2 Study load of the programme

The programme has a study load of 180 EC¹ divided over three academic years (B1, B2 and B3) of 60 EC each. The B-IEM programme is compiled of 4 themed modules per year. Each module is compiled by a various amount of study units, adding up to of 15 EC (420 hours).

1.3 Programme-specific characteristics

B-IEM is a fulltime programme. The programme consist of:

- A major: 8 core modules and two graduation modules;
- A minor: two elective modules, scheduled in the first semester of the third year. The minor can be taken at the University of Twente, other universities in the Netherlands, or abroad.

1.4 Honours programmes

Students obtaining excellent results will be invited for participation in the University excellence honours programmes for broadening their knowledge. These programmes offer additional education to the programme. Participation means extra study load. Finalizing the excellence programme will be noted on

¹ For definitions of terms and abbreviations used in this document see Article 1.2 of the Guideline and Model Education and Examination Regulation Bachelor Programmes (EER) of BMS

the diploma supplement. Recommendation for participation is mandated to the study adviser. For extra information, see <https://www.utwente.nl/en/honours/>.

Table 1

Overview of the study units per module, their allocated EC and their place in the years (B1, B2 and B3) and Quartiles (Q1, Q2, Q3 and Q4).

B1					
Module 1 – 202000390 Introduction to IEM		Q1	Module 2 – 202000395 Operations Management		Q2
Study Units:		EC	Study Units:		EC
202001193	Intro to Mathematics + Calculus 1A for IEM	4	202001200	Calculus 1B for IEM	3
202000391	Probability	2	202000396	Operations Research	3
202000392	VBA Programming	2	202000397	Operations Strategy	3
202000393	Project and Core IEM Topics	4	202000398	Project Operations Management	4
202000394	Professional and Academic Development M1	3	202000399	Professional and Academic Development M2	2
Module 3 – 202000400 Business Intelligence and IT		Q3	Module 4 – 202000405 Supply Chain Management		Q4
Study Units:		EC	Study Units:		EC
202000401	Statistics and Probability	3	202001222	Calculus 2 for IEM	3
202000402	Business Intelligence and Databases	4.5	202000406	Statistics	3
202000403	Business Process Management	4.5	202000407	Demand Supply Planning and Inventory Management	3
202000404	Professional and Academic Development M3	3	202000408	Sourcing, Supply Network Design and Transport	2.5
			202000409	Business Game	3.5
B2					
Module 5 – 202000410 Finance for Engineers		Q1	Module 6 – 202000415 Consumer Products		Q2
Study Units:		EC	Study Units:		EC
202000411	Accounting and Finance	3.5	202000416	Technical Product Modelling 1	2.5
202000412	Option Pricing	2.5	202000181	Production 1	2.5
202000413	Project Finance for Engineers	6	202000418	Sustainable Supply Chains for Consumer Products	2
202000414	Professional and Academic Development M5	3	202000206	Project Consumer Products	8
Module 7 – 202000420 From Product Design to Online Business		Q3	Module 8 – 202000424 Modelling and Analysis of Stochastic Processes		Q4
Study Units:		EC	Study Units:		EC
202001207	Linear Algebra for IEM	3	202000425	Stochastic Models	5
202000421	Product Design to Online Business Theory	4	202000426	Project Stochastic Models	1.5
202000422	Project PDOB	6	202000427	Simulation and Heuristics	3
202000423	Professional and Academic Development M7	2	202000428	Project Simulation and Heuristics	3.5
			202000429	Multidisciplinary Project	2
B3					
Module 9 - Minor		Q1	Module 10 - Minor		Q2
Free choice		EC	Free choice		EC
	Minor or study abroad	15		Minor or study abroad	15
Module 11 – 202000430 Bachelor Thesis Preparation		Q3	Module 12 – 202000433 Bachelor Thesis IEM		Q4
Study Units:		EC	Study Units:		EC
202000431	Project Plan	10	202000434	BSc Research Assignment IEM	15
202000432	Professional and Academic Development M11	5			

Note: All core modules, except Module 6, and Module 9 and 10 are organised by the IEM programme. Module 6 is organised by the Industrial Design Engineering programme.

2 Goals and final qualifications

2.1 Aim of the programme

As envisioned in UT's 'High Tech Human Touch' vision, B-IEM particularly focuses on organizational problems in contexts with high societal relevance. B-IEM students can analyse the root causes, can design solutions, can prospectively assess solutions in a (optimization/simulation/analytical) model, and can implement the outcomes in situations where typically they need to work together with people from various other disciplines. B-IEM graduates specifically are able to support scientific decision making, by choosing a method that fits the problem, which means that they combine quantitative and problem-solving approaches of engineers with research methods and qualitative insights from the social sciences.

The first year has been designed to provide a realistic experience of B-IEM, to give each student insight in his/her suitability (*level, effort, and orientation*). Students get acquainted with all B-IEM domains. The focus is on developing students' maturity through development of meta-cognitive competences such as planning, researching literature, and reflection. In the second year the students continue to broaden their knowledge and skills in various real-life HTHT projects. Since various modules are shared between programmes, students have to work in multidisciplinary teams and on external projects. In case of shared modules, rules and regulations of the organising programme apply (see Table 1). The third year gives room for a student's personal ambition and personal choices. Students can broaden or deepen their personal interest by choosing a UT minor. Students can also choose courses outside UT, from (inter)national programmes to be approved by the programme management.

The programme leads to a T-shaped profile of BSc graduates with high level academic and professional skills. In support of the horizontal bar of the 'T', all UT students have 10 EC dedicated to reflection on science and corporate and social responsibility in their BSc programme. For the B-IEM programme this is integrated in the five *Professional and Academic Development* study units. Also, the B-IEM programme shares the math learning line with all engineering programmes.

2.2 Intended learning outcomes (ILOs)

The ILOs (or the so called Final Qualifications) of the B-IEM programme correspond with the requirements formulated by comparable programmes in the Netherlands and abroad, and by professional practice. We distinguish two groups of competences: domain-specific and general competences. The general competences have a specific operationalization: reflection, working in (multidisciplinary) teams, the preparation of student's lifelong learning, ethics and philosophy of science and Corporate Social Responsibility. Table 2 outlines the ILOs.

Table 2

Intended Learning Outcomes of the Bachelor Industrial Engineering and Management Science programme.

	A. Professional Academic Qualifications
	<p>The graduate is able to identify, comprehend, assess, correctly apply, and integrate existing scientific knowledge that can be used for analysing problems and designing solutions, in the domains of:</p> <ul style="list-style-type: none"> • Production and logistics; • Information systems; • Finance and accounting; • Other fields in business administration (law; marketing; human resources);

	<ul style="list-style-type: none"> Mathematics, statistics, empirical research methods.
A1	<p>Has a global overview of the <u>structure of research and design processes</u> and is able to:</p> <ul style="list-style-type: none"> Identify the various steps in performed research and design; Properly break up own research and design activities into subprocesses. <p><i>These processes are intertwined: Research is needed for producing knowledge that is used for designing solutions in a specific context. Such knowledge is produced in a purposeful and methodical way (using scientific research methods). It may or may not be generalizable knowledge</i></p>
A2	<p>Has an overview of quantitative and qualitative <u>empirical research methods</u> and is able to:</p> <ul style="list-style-type: none"> Analyse performed research as to the methodological aspects; Select an appropriate method and explain this choice for research to be performed; Apply this method in relatively simple cases.
A3	<p>Has an overview of quantitative <u>modelling techniques</u> for operational processes, specifically in the domains of</p> <ul style="list-style-type: none"> Operations research models Information systems models Finance and accounting models <p>and is able to</p> <ul style="list-style-type: none"> Analyse the results of modelling activities Select an appropriate modelling technique and explain this choice Apply this technique in relatively simple cases.
A4	<p>Is able to <u>integrate</u> existing knowledge, modelling techniques, and research results for designing, validating, and selecting solutions in relatively simple cases</p> <p><i>This is challenging, because existing knowledge may not fully apply to a specific situation, models are always stylised, empirical research always has limitations, and some aspects have been left out of scope from the beginning anyway</i></p>
A5	<p>Has an overview of <u>implementation methods</u> and processes and is able to:</p> <ul style="list-style-type: none"> (critically) Analyse ongoing or finished implementation processes; Plan globally an implementation process in a relatively simple case.
A6	<p>Has an overview of <u>evaluation methods and techniques</u> and is able to:</p> <ul style="list-style-type: none"> Analyse the results of performed evaluations; Select appropriate evaluation methods and explain this choice; Carry out an evaluation in relatively simple cases.
A7	<p>In order to be able to meet these competencies, the graduate must have mastered the following disciplines:</p> <ul style="list-style-type: none"> Mathematics and statistics - [2] (see Legend) Finance and accounting - [2] (see Legend) Production and logistics - [2] (see Legend) Information systems - [2] (see Legend) Law, organization theory, marketing - [1] (see Legend)
	B. General academic qualifications
B1	Is able to work autonomously and self-reliant
B2	Is able to work in multidisciplinary teams.
B3	Is able to communicate properly (in oral and written form) with various stakeholders
B4	Is able to conduct a bibliographic search and knows how to reference correctly
B5	Is able to reflect on professional behaviour and ethical and societal aspects of work
B6	Is able to reflect on and direct personal and professional development
B7	Is able to manage and concretise effectively his own learning process in the context of a MSc programme.
B8	Has enough basic knowledge and competencies to follow a broad range of MSc programmes which are adjacent to the IEM domain.

Level	Legend
[1]	Knowledge of the basic concepts and principles
[2]	Application in relatively simple and monodisciplinary cases
[3]	Application in relatively simple interdisciplinary cases

2.3 Connecting Master programme

Successfully completing the B-IEM programme automatically qualifies a student for immediate admission to the MSc programme Industrial Engineering and Management.

3 Exam and interim examinations

3.1 Exam

The B-IEM programme is successfully completed if all the exams of the study units, including the minor, have been taken successfully. The grade for a study unit is at least 6 to finish it successfully. The composition of the grades of the study units is clarified in the module manual.

3.1.1 Final examination: the Bachelor thesis

During the thesis graduation project, students have to work individually and independently on a chosen subject of professional relevance in a company or institution in the Netherlands or abroad. The graduation project is an individual and external research assignment, in which students have to show that they meet the programme intended learning outcomes. The graduation project involves the assessment of the total research process and of two deliverables, the Bachelor thesis and the presentation and defence of the research outcomes (or *colloquium*). The student is academically supervised by two examiners and an external supervisor from the hosting company/organisation takes care of daily supervision. The lead or first UT examiner monitors the progress of the project and grades the work, together with the second UT examiner. Only appointed UT-B-IEM examiners are authorised to grade the project; however, the external supervisor is consulted as well. The final grade is based on the criteria of the detailed Bachelor Project Assessment form students receive when starting with their project.

The Bachelor thesis is 15EC and has to be finished (receive '*Green light*'²) within the nominal study time (10 weeks). Extra graduation project time can only be authorised by the programme director with a maximum of 50% (5 weeks). The programme director may consult the examiners and/or study adviser before reaching a decision. Reasons for delay can be:

- Insufficient level of and/or progress by the student;
- Insufficient (level of) supervision in the specific research topic;
- Special circumstances.

If a *Green Light* has not been obtained within the time set, the assignment may be graded as insufficient. The student then has to do a new assignment. The student can file an appeal at the Examination Board

² The thesis is regarded by the supervisors to be of sufficient quality to pass with a sufficient grade. *Green light* is given to finish the report and prepare the end presentation (colloquium).

against the decision of the programme director. More information regarding the Bachelor graduation project can be found on the IEM Programme Information Canvas site.

3.2 Assessment formats

The exams of the study units within a module consist of a mixture of assessment methods. These may include individual and group assessment (in various forms) of practical exercises, written and oral test, reports and different forms of presentations (poster, verbal, paper). Per module a balanced variation in methods is offered.

3.3 Required sequence of exams / prerequisites

The formal sequence of the modules and their study units is the order as recorded in Table 1. However not every student will be able to exactly follow this sequence. For those situations the following prerequisites should be followed:

1. Prerequisite to be allowed to do a project in a second year module has two conditions:
 - a. The project(s)³ of the first year module in the same quartile has been passed, and;
 - b. No more than one study unit of the first year's module in the same quartile has not been passed.
2. Prerequisite to start with module 8: at most one study unit of module 4 has not been not passed
3. Prerequisite to start with the minor: at least 5 modules have been finished
4. Prerequisite to start with module 11:
 - a. The first year's modules have been finished, and;
 - b. Of the second year no more than two study units have not been passed.
5. Prerequisite to start with module 12: module 11 has been finished.

4 General Information

4.1 Admission to the programme

In addition to the stipulations in Paragraph 2 of the Education and Examination Regulations (EER) and the admission regulations laid down in the 'Colloquium Doctum', there are no extra statutory requirements.

4.2 Language of teaching and exams

The B-IEM programme is taught in English. All course materials (textbooks, readers, etc.) and assessments are in English.

4.3 International agreements

The B-IEM programme is designed to give students the option to study abroad (see Section 4.4).

Students can use the international exchange programme contacts from all over the world, to find their most suitable fit to gain the required knowledge and experiences. The options for an international experience are:

- Study abroad: In the first semester of the third year students can choose for a semester (30 EC) study abroad (exchange) at partner universities. Arrangements for study abroad at non-partner

³ For module 3 the study units *Business Intelligence and Databases* and *Business Process Management* are regarded as projects.

universities are subject to special procedures and requirements as specified on the UT study abroad website, www.utwente.nl/en/study-abroad. Detailed information on Faculty level can be found on the website www.utwente.nl/en/bms/education/study-abroad/ and the BMS Study Abroad Canvas site;

- The minor 'crossing borders' gives students the opportunity to go abroad for a field study or a study tour. For more information see www.utwente.nl/minor;
- Executing a bachelor thesis project abroad. Students can organise a thesis project on their own initiative. The thesis project needs approval from the supervisor before the start of the project execution.

4.4 Elective programme space

In year 3 students can choose the content of the two 15 EC minor modules, provided they have finished at least 5 modules completely. Students can study abroad within their minor space, see Section 4.3. Or students can choose to take courses at any University in the Netherlands. Offered at the UT are:

- High Tech Human Touch minors;
- Crossing Border minor (see Section 4.3);
- Join-in minors;
- Transfer minors (premaster);
- The 'leren lesgeven' minor (in Dutch only).

Students can participate in UT minors without approval of the Examination Board or the programme director. However, minors may have admission requirements. For more information see the website www.utwente.nl/minor.

4.5 Composition of the Programme Committee

For both the Bachelor and Master programme Industrial Engineering and Management a Programme Committee (PC) is appointed by the Faculty Board. The PC is the advisory board for the programme director. It consists of students and lecturers from the programmes on an equal basis. The members of the PC can be found on the website, <https://www.utwente.nl/en/iem/programme-committee/>

Tasks of the PC are:

- Advising (the programme director) on stimulating and ensuring the quality of the degree programme (WHW art 9.18);
- Advising and right of consent on the EER;
- Assessing the manner in which the EER is carried out;
- Advising (invited or not invited) on teaching and education issues related to both BSc and MSc programme.

For detailed information see Art. 9.18 of the Higher Education and Research Act.

4.6 Composition of the Examination Board

The Examination Board Management Science is the body that determines in an objective and expert manner whether a student meets the conditions set under the EER concerning the knowledge, comprehension and skills required to obtain a degree for the B-IEM programme. The Examination Boards main tasks are described in the common elements of this EER. The members of the Examination Board,

appointed by the Dean, and contact information can be found on the website:
<https://www.utwente.nl/en/bms/examboard/>.

4.6.1 Fraud/plagiarism

The EER includes handling of cases of alleged fraud, which is also covered in the Rules and Guidelines of the Examination Board (see <https://www.utwente.nl/en/bms/examboard/regulations/>). At the programme level, students are instructed about fraud and plagiarism in several ways. For written exams, IEM works with external observers and examiners. For written assignment work, IEM lecturers can use a digital fraud scanner.

Although formally re-using one's own work is not considered fraud, submitting work from earlier years is not allowed in the B-IEM programme. When fraud is detected the Examination Board will assess and rule on the case.

5 Transitional arrangements

5.1 TEM1.0 to TEM2.0

For the transition from TEM1.0 to TEM2.0 (see <https://www.utwente.nl/en/tom/>) the following transitional arrangements apply to 2019-2020 modules:

- All module parts **that would remain valid** after August 31st 2020 under the rules published in the IEMs PSA 2019-2020, will remain valid indefinitely⁴;
- All module parts that **would not be valid** after August 31st 2020 under the rules published in the IEMs PSA 2019-2020, will not be valid on September 1st 2020;
- **Repairing a 2019-2020 module** in academic year 2020-2021:
 - Two attempts for 2019-2020 tests will be made available in 2020-2021 in order to repair the 2019-2020 module;
 - Compensation rules of 2019-2020 will be maintained for these modules;
 - The result for the repair of a 2019-2020 module will be administered in the 2019-2020 study programme in Osiris to complete that module;
- The results of 2019-2020 modules that **have not been repaired successfully** in 2020-2021 will be converted to TEM2.0 and the new curriculum before September 1st 2021. **Further attempts to finish the missing (now) study units must be done within TEM2.0 and the new curriculum from then on.**
 - All compensation rules of 2019-2020 expire.
 - Students will receive a tailor-made programme if necessary.

5.2 Research Methodology

The content of Research Methodology will change gradually. In 2020-2021 the content of the first year will change, but re-takers will take tests about the old content. In 2021-2022 the content of Research methodology in year 2 will change. For 2021-2022 a transitional arrangement for Research Methodology for 2nd year students will be formulated. The content of the Research Methodology offered in year 3 will

⁴ Although the EC of not yet finished 2019-2020 modules will not be visible in Osiris, if they apply to the rules those EC of the module parts will be regarded and treated as valid indefinitely.

be changed such that it aligns with both the old and the new content of year 1 and 2 and thus no transitional arrangement is necessary.

6 Study advice first year

As formulated in the EER, Article 6.3, students receive during the first year a (*binding*) *recommendation on the continuation of study* (or Binding Study Advice - BSA) from the Programme Director. This BSA is based on the number of successfully obtained EC together with the advice of the study adviser. A student who receives a negative BSA cannot enrol in the B-IEM programme in the next three academic years. A positive study advice at the end of the first year is given if the student meets the criteria below.

To receive a positive BSA, there are two options:

- A. The student has successfully finished **three modules** of the first year completely of 45EC in total, or;
- B. The student has successfully finished **45EC** of the first year study load with the following additional criteria:
 1. At least **two modules** have been finished completely;
 2. At least **six out of the eight** study units mentioned below have been passed:
 - a. Intro to Mathematics + Calculus 1A
 - b. VBA
 - c. Calculus 1B
 - d. Operations Research
 - e. Statistics and Probability
 - f. Calculus 2
 - g. Statistics
 - h. Demand Supply Planning and Inventory Management

The programme director has to approve the positive BSA on the continuation of studies. If a student unenrolls before February 1st, the student is not allowed to enrol in B-IEM modules until the next academic year.

7 Additional subjects

7.1 Graduation with distinction (Cum laude)

The B-IEM programme has a regulation for graduating with distinction for the bachelor's degree programme. If during the Bachelor's examination, the student has given evidence of exceptional capability, 'cum laude' (with distinction) will be recorded on the degree certificate. A student is considered to have exceptional capability if each of the following conditions is met:

- a) The unrounded weighted average of individually tested Study Units of module 1 to 8 and 11 (and including *Business Intelligence and Databases* and *Business Process Management* of module 3) is at least 8⁵. In this average the number of EC determine the weight of the study unit⁶;
- b) The Bachelor programme has been finished within nominal time plus 25% (i.e. 45 months);
- c) The Bachelor Thesis has been completed with at least an 8.0;
- d) The student has not committed fraud during the entire duration of the programme, as evidenced by the fraud registry of the examination board management sciences.

In exceptional cases the Examination Board may grant the designation of ‘graduation with distinction’ if the conditions mentioned above have not been fully met. The rules applied by the Examination Board can be found in the Rules & Regulations of the Examination Board.

7.2 Validity of test results

As stated in Article 4.1 and Article 4.7 of the EER all study units with a rounded grade of 6.0 and above are passed and remain valid indefinitely⁷. All partial exam results of a study unit will expire at the end of the academic year if the unit is not finished. Exception to this rule applies to the partial exam results for the study unit *Professional and Academic Development*; they remain valid indefinitely.

Exceptions due to personal circumstances are to be assessed and determined by the Examination Board.

7.3 Overlap of math study units

In some cases, due to changing to another study programme or choosing a minor module, an overlap in the math study units shared with the other engineering programmes may occur (see Table 2). In that case the student must take a replacement course, with permission of the study advisor, either replacing the math course of the (minor) module of the other programme or replacing the math course in the IEM module. A list of replacement courses is available from the study advisors. In the unlikely case the overlapping study unit is part of an integrated module of another programme, the situation will be assessed individually by the programme management.

Table 3

Overview of the corresponding math study units per IEM module.

IEM module 1		IEM module 2		IEM module 4		IEM module 7	
202001193	Intro. to Math. + Calculus 1A for IEM	202001200	Calculus 1B for IEM	202001222	Calculus 2 for IEM	202001207	Linear Algebra for IEM
202001187	Intro. to Math. + Calculus 1A for BIT	202001194	Calculus 1B for BIT	202001216	Calculus 2 for AT	202001202	Linear Algebra for BIT
202001188	Intro. to Math. + Calculus 1A for BMT	202001195	Calculus 1B for BMT	202001217	Calculus 2 for EE	202001203	Linear Algebra for BMT

⁵ I.e. the projects of module 1, 2, 4, 5, 6, 7, and 8 and the skills parts of *Professional and Academic Development* are excluded from this calculation

⁶ The weight of *Professional and Academic Development* is determined by the number of EC of the sub-tests that are graded numerically

⁷ Note that for minor modules the rules of the organising programme/educational institute apply.

202001189	Intro. to Math. + Calculus 1A for CE	202001196	Calculus 1B for CE	202001218	Calculus 2 for ME	202001204	Linear Algebra for CE
202001190	Intro. to Math. + Calculus 1A for CS	202001197	Calculus 1B for CS	202001219	Calculus 2 for BMT	202001205	Linear Algebra for CS
202001191	Intro. to Math. + Calculus 1A for CSE	202001198	Calculus 1B for CSE	202001220	Calculus 2 for CE	202001206	Linear Algebra for CSE
202001192	Intro. to Math. + Calculus 1A for ID	202001199	Calculus 1B for ID	202001221	Calculus 2 for CSE	202001208	Linear Algebra for AT
		202001201	Calculus 1B for ME			202001209	Linear Algebra for EE
						202001210	Linear Algebra for ME
						202001211	Linear Algebra for TN

7.4 Transferring from BIT to IEM

The IEM programme works closely together with the BIT programme. The programmes share various study units. Students who wish to transfer from BIT to IEM are able to transfer certain study units to the IEM programme, as listed in Table 4.

Table 4

Overview of corresponding and transferrable study units of the BIT and IEM programmes.

BIT Study Unit		EC	IEM Study Unit		EC
B1					
202001062	Introduction to BIT	4	202000393	Project and Core IEM topics	4
202001068	Business Intelligence and Databases	4,5	202000402	Business Intelligence and Databases	4,5
202001069	Business Process Management	4,5	202000403	Business Process Management	4,5
B2					
202001073	Accounting and Finance	3,5	202000411	Accounting and Finance	3,5
202001074	Option Pricing	2,5	202000412	Option Pricing	2,5
202001075	Project Finance for Engineers	6	202000413	Project Finance for Engineers	6
202001085	Product Design to Online Business Theory	4	202000421	Product Design to Online Business Theory	4
202001086	Product Design to online Business Project	6	202000422	Product Design to online Business Project	6