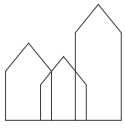


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SEMESTER SYLLABUS 7TH SEMESTER ELECTIVE PROGRAMME ELEMENT AND BACHELOR PROJECT

Bachelor of Architectural Technology and Construction Management

VIA University College Horsens and Aarhus

Spring 2018

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SEMESTER SYLLABUS

Welcome to the 7th semester!

To finish your education, you now have to do your elective programme element and Bachelor project. Combined, the 2 projects must document that you fulfill the overall learning aims of this programme. The elective programme element and the bachelor project will be evaluated individually.

Through the elective programme element, you must document that you are capable of researching and working with a given building technology problem from a relevant, theoretical and analytical perspective. Furthermore, you must prove that you are able to communicate your work in the form of a report. You can select a topic/problem in relation to your internship-place and the tasks you have worked with or/and in relation to your Bachelor project.

In the Bachelor project, you must document that you independently, guided by the main and secondary supervisors in the semester, are able to organize and plan the design and implementation of a given construction and civil engineering task.

We urge you to carry out your bachelor project and possibly the elective programme element in dialogue with e.g. an external client or a company, maybe your internship-place.

Due to the way the 7th semester is organized, you are required to join a Study group. Partly to ensure that can support and inspire each other in your work with the bachelor project, partly because you have to function as opponents on each other's bachelor project at two mandatory project evaluations during the semester.

Quality assurance and development

In the following links, you can find the latest action plans, developed by the programme management based on your assessments.

Find other action plans in relation to the work with quality assurance and development of the study programme on [Studynet \(Aarhus\)](#).

Join [VIA Bygningskonstruktør / Architectural Technology and Construction Management](#) on LinkedIn and become a part of a professional network with other students, graduates, teachers and employers.

Reading guide

To guide you about the different semesters in this programme, a semester syllabus has been developed for each semester. The semester syllabus contains three main sections:

1. The programme. This section describes the basic approach to the pedagogy and teaching-forms, including our expectations of you in terms of achieving the learning aims. This section also describes our work with quality assurance and development of the programme and the role you play in this context.

2. The semester. This section starts with a brief description of the overall planning of the semester, followed by a brief specification of requirements and prerequisites for admission on the semester as well as the overall learning objectives for the semester. Subsequently, you will find a detailed description of semester content, i.e. the cross-disciplinary project, including single subjects and other elements. Finally, the main section describes how to assess the fulfillment of your learning aims, through tests and evaluations, and what criteria form the basis for the evaluation.

3. Your implementation. This section contains a time schedule prepared by the semester team (teachers).

1 THE PROGRAMME

The Architectural Technology and Construction Management programme is organized as a full-time education with 7 semesters, equivalent to 210 ECTS-points. The Construction Technologist Programme consists of 4 full-time semesters corresponding to 120 ECTS-points. Each ECTS-point corresponds to a workload of 27.5 hours and each semester is organized over 20 weeks, including the exam. Hence, you are expected to spend approximately 41 hours per week on your education¹.

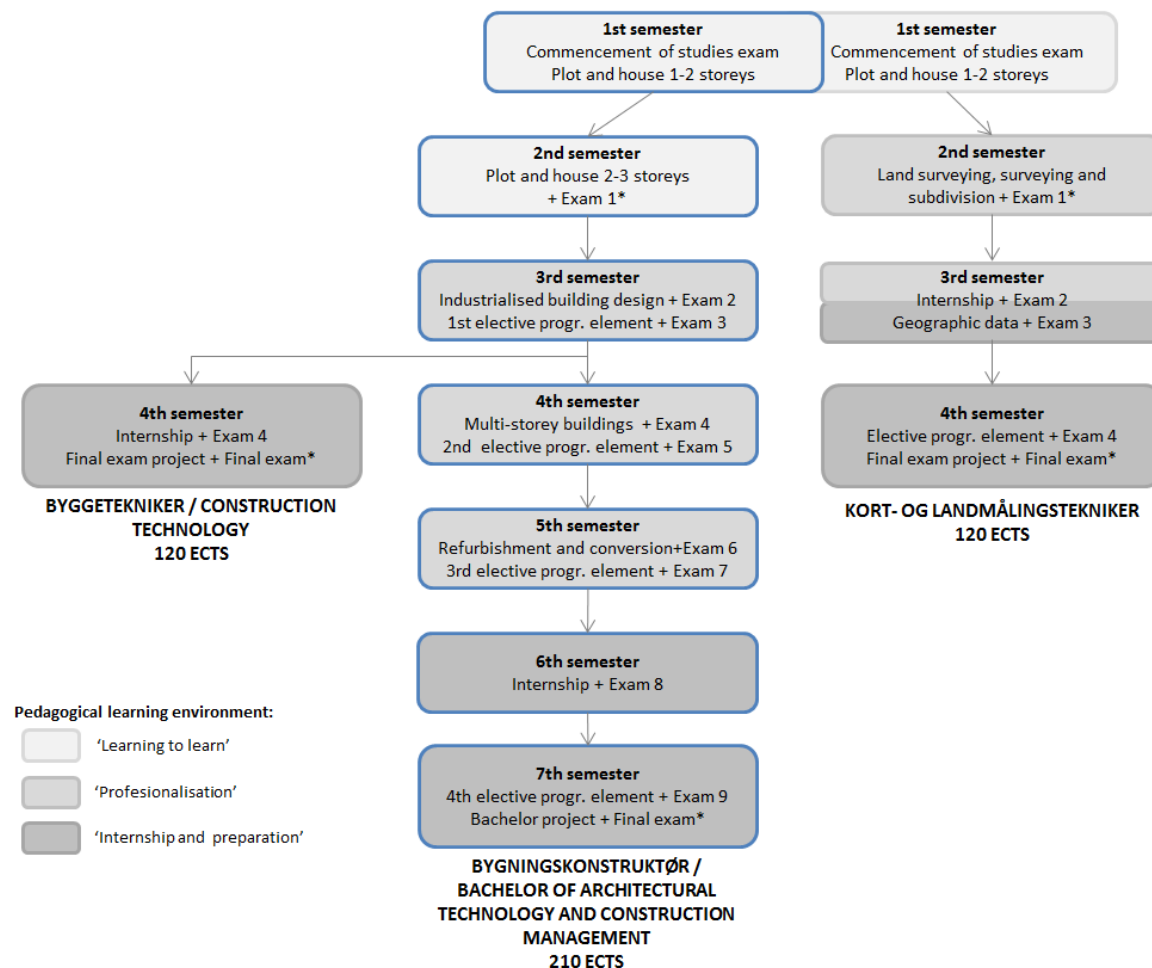
As a student, you have your own 'workplace' at the college, which we encourage you to use. The 'workplace' will change from semester to semester, depending on the size of the classes and your choice of specialization.

You also have access to resources and equipment made available to you by the campus. The type of resources and equipment may vary slightly from campus to campus.

1.1 The study environments

The programme is based on three different study environments, ensuring a natural progression in the learning during the course of the programme, see Figure 1:

Figure 1: The three study environments at VIA Built Environment



Source: Created at VIA Built Environment

"Learning to learn"

¹ During the internship, a workload of approximately 37 hours/week is accepted.

This environment emphasizes the learning of how to be a successful student – finding your own learning style and gaining good study- and work-habits. Furthermore, special emphasis is put on Portfolio as the controlling element which ensures focus on the process oriented approach.

“Professionalization”

This environment increases focus on the professional content of the projects. At the same time, your ability to learn yourself is enhanced. This happens in relation with you learning more about advanced methods for carrying out analyses.

“Internship and job preparation”

Through the internship in a company of your own choice, the elective programme element and bachelor project, you are required to immerse yourself further and independently into the relation between theory and practice.

1.2 Teaching- and workforms

The Architectural Technology and Construction Management programme is based on Problem-based Learning (PBL). That is, the turning point in each of the compulsory programme elements is one cross-disciplinary project. In the work with the project problems, the student develops and demonstrates gained knowledge, skills and competences across the academic areas of the semester.

To prepare the student as much as possible for the profession, the primary work form is group work. Other teaching and workforms are organised in relation to the project work. Theory lessons are primarily placed in the beginning of the compulsory programme element, as it is seen as general contributions within the theme of the semester.

Besides from this, the student has to seek and process anything else that might be relevant for carrying out the project.

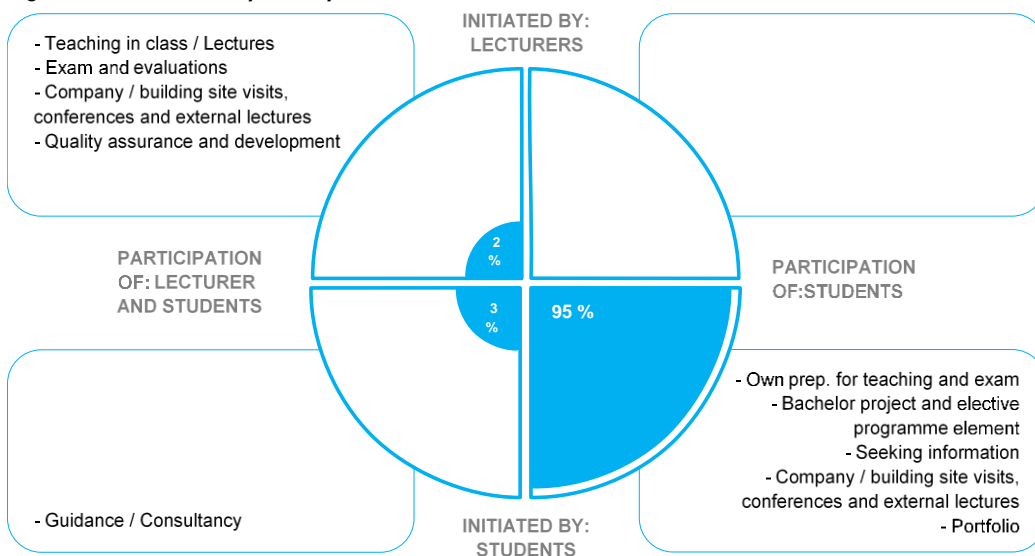
Portfolio is an important tool in the study programme, which you are to use to reflect upon your own learning.

The teaching- and workforms used in this semester are presented in the semester Study activity model.

The Study activity model clarifies partly that we expect you as a student to spend approximately 825 hours in each semester, partly that there are different types of teaching- and workforms which indicate that not all learning is initiated by a teacher and/or with the presence of a teacher. I.e., as a student you also carry a great responsibility for your own learning.

Hence the study activity model is also an illustration of what we expect from you as a student and what you can expect from us in relation to reaching the learning objectives.

Figure 2: Semester Study activity model

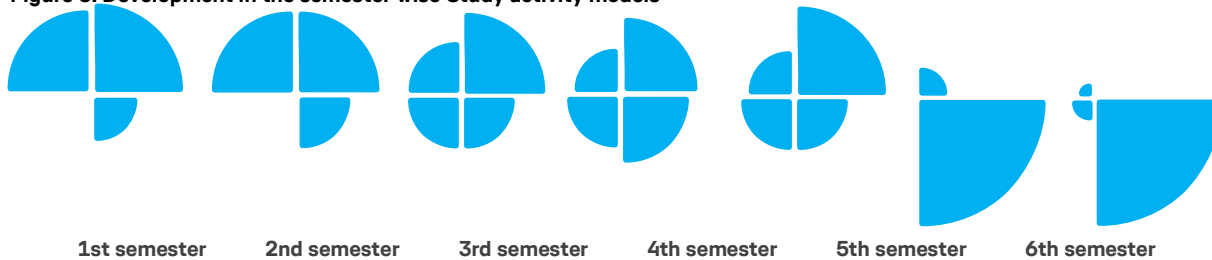


Source: Development at VIA Built Environment

The percentage distribution of hours in the four categories is an expression of the degree of independence we expect of you as a student.

If we look at the development in the semester wise Study activity models it follows the development in the pedagogical learning environment.

Figure 3: Development in the semester wise Study activity models



Source: Development at VIA Built Environment

All Study activity models can be found on the study programme's [website](#).

1.2.1 Individual learning offers

Besides from the guidance available, you have a great opportunity to seek new knowledge, e.g. by using the various offers of online teaching made available to you on 'Studynet' at this address: www.Openvia.dk. In this database, you can find numerous instructional videos and tutorials, which may support your individual learning. You may also find material that can support you in the use of certain it-tools or material that offers repetition of specific academic topics.

You are expected to make use these offers as a supplement to your own learning-process, and you are also expected to seek knowledge through other relevant services (such as the library).

1.3 Study activity / Attendance

As in previous semesters, you are expected to be an active student. In other words, we expect that you:

- work seriously with your elective programme element and Bachelor project
- contribute to knowledge sharing in the class by participating actively in the dialogue in the mandatory study groups and project evaluations during the semester
- take initiative in regards to seeking guidance
- procure the literature you need in relation to the elective programme element and Bachelor project
- hand in your elective programme element and bachelor project on time
- attend to meetings related to your education (status meetings, guidance meetings, evaluations, etc.) well prepared and motivated
- reflect upon and evaluate your learning process

You have the highest prerequisites for learning something in this semester if you work in an academic learning environment. This is best created by working in the class, where you are close to the supervisors and your fellow students.

Note! The supervisors are obligated to keep the college informed of possible lacking study activity and attendance. You have to be able to document your study activity through participation in a study group, guidance and project evaluation, and in the form of minutes, logbooks or mails.

1.4 Quality assurance and development of the programme

We work systematically and goal-oriented with quality assurance and development of the study programmes at VIA Built Environment with regards to ensuring your learning and the content of the study programmes. This includes ensuring an updated knowledge base, the right academic level and the study programmes' relevance for the employers.

1.4.1 Your involvement

You and your fellow students play an important part in assuring and developing the quality of the study programme. It is important for the programme management and the teachers to get your feedback, partly to ensure that you and your fellow students gain a high learning outcome, partly to ensure a satisfactory study- and teaching environment.

From the table below, you can get an overview of how you as students are involved in evaluating the courses at and outside of VIA, who primarily uses your feedback and when the evaluations are carried out.

Table 1: The students involvement in evaluation of the courses at and outside of VIA

Element	Method	Primary users	Time
Alignment of expectation at the start of a new course at the institution	Dialogue at the Semester introduction with a starting point in the semester syllabus	Teachers and students	At the start of each semester.
Midterm teaching evaluation of a course at the institution	The Teacher team select a method	The teacher team	Approximately half way through the semester – is stated in the guiding time schedule.
Final teaching evaluation of a course at the institution	Online survey	The programme management and The teachers and the teacher team	Each semester is evaluated every 3rd time it is carried out. It will be stated in the guiding time schedule if the semester is to be evaluated.
Ongoing dialogue	Dialogue between the teachers, students and programme management, e.g. in the daily life or through the local DSR/KSR	Teachers and students	Continuously.
Quality assurance, incl. final evaluation of internship in Denmark and abroad	Among other things online survey	The programme management, internship coordinators and the international office	Each semester is evaluated every 3rd time it is carried out. It will be stated in the guiding time schedule if the semester is to be evaluated.
Quality assurance, incl. final evaluation of studies abroad	Among other things online survey	The programme management and the international office	By the end of each period of studies abroad.
Student satisfaction survey	Online survey	The programme management and VIAs upper management	Every 2nd year. It will be stated in the guiding time schedule if there is a Student Satisfaction survey in the given semester.

Source: Development at VIA Built Environment

You can find results, Key Performance Indicators and action plans on [Studynet \(Aarhus\)](#). Results from the latest evaluations are presented at the Semester introduction. Furthermore, your class representatives play an important part in passing on the main points from the DSR-meetings.

1.4.2 The local DSR (Student Council)

At VIA there is one [DSR](#) at each campus with class representatives from all the study programmes, but there is also local DSR's at the study programmes.

The programme management at VIA Built Environment in Horsens, Aarhus and Holstebro respectively continuously involve the local DSR in a discussion of the work with quality assurance and development of the programme, including:

- Employer involvement
- Graduate involvement
- Final Teaching Evaluation
- Final Evaluation of the Internship in Denmark and abroad
- Final Evaluation of Study Abroad
- The Student Satisfaction Survey
- Drop-out analysis
- The Quality Report

2 THE SEMESTER

The semester consists of two parts; the elective programme element (10 ECTS-points) and the bachelor project (20 ECTS-points).

2.1 Entrance requirements

In order to be admitted to the 7th semester, you must have completed the 1st-6th semester (the mandatory and elective programme elements), or be able to document that you in other ways have equivalent competencies.

You have to pass the elective programme element in the 7th semester before you can take the exam in your bachelor project.

2.2 Learning aims for the 7th semester (transcribed from the curriculum)

In this section the learning aims for the entire semester (30 ECTS-points) are described. The learning aims are transcribed from [the curriculum](#).

Knowledge

At the end of the 7th semester, you should have learned:

- about and have an understanding of such principles, theories, and methods used when managing, designing, planning and executing complex construction and civil engineering tasks, and is able to reflect upon the use of the said theories and methods in different situations
- about scientific theories and methods relevant to the profession
- about relevant communication theories and methods used in the dissemination of technical issues pertaining to the profession. This includes the use of digital media used within the building profession and in general
- about principles and models used within the profession for the establishment of businesses, their operation and organization
- about social and technological issues which may affect the construction process, including such issues as energy, work environment and sustainability locally and globally
- about managerial, social, linguistic, cultural and ethical aspects of design and cooperation in construction projects

Skills

At the end of the 7th semester, you should:

- be able to assess and use relevant methods for management, design, planning and execution of complex construction and civil engineering tasks, including the use of relevant digital programmes and systems
- be able to select relevant method and be able to justify the selection based on professional considerations
- be able to assess, combine and integrate relevant research knowledge into the solving of complex construction issues
- be able to promulgate knowledge about construction research and development to relevant parties using relevant media
- be able to assess business and organizational issues
- be able to assess and understand the social and technological conditions influencing the design of buildings, including such aspects as energy, work environment and sustainability

Competencies

At the end of the 7th semester, you should:

- have the ability to manage, design, plan and execute complex construction and civil engineering tasks – independently and in collaboration with other professionals
- have the ability to identify his/her own needs for knowledge and learning and be able to acquire new knowledge and to transform this knowledge into practice with respect to the profession

- have the ability to handle communication between users, developers, consultants, designers and contractors about the technical design, procurement and execution of complex construction and/or civil engineering works
- have the ability to handle administrative tasks and project management within construction and civil engineering works
- have the ability to deal with social and technological aspects with respect to the design and processing of construction
- have the ability to address social, cultural and ethical issues occurring during the design and processing of construction projects, and enter into managerial and collaborative relationships with others who have different educational, linguistic and cultural backgrounds

2.3 The elective programme element

2.3.1 The topic

As soon as on the 6th semester, all choices regarding the elective programme element must be discussed and approved by your supervisor.

When selecting the subject/problem to be researched you are free to choose within any of the professional subjects represented in the education. As in previous semesters, you can choose to focus on Architectural Technology or Construction Management.

Given certain circumstances, it is possible to combine the elective programme element with the Bachelor project, but you can also choose to work with two completely separate topics.

You can find inspiration for the topic at [UC-Viden](#), where elective programme elements (elective dissertations) from previous years are available.

When you choose a topic, you have to make sure that you, through your work with the topic:

- can document that you are competent to do an elective programme element report relevant to the industry
- can document that you are capable of researching and working with a given problem from a relevant, theoretical and analytical perspective. Furthermore, you must prove that you are able to communicate your work in the form of a report.

When choosing your topic, it is essential that the college has at its disposal a qualified supervisor with sufficient knowledge about the topic in question.

2.3.2 The supervisors

You will be allocated a supervisor for the elective programme element.

2.3.3 Format

The elective programme element is carried out as an independent research. This implies the studying of relevant specialist literature such as books, articles, research results, etc. Moreover, it may be relevant to make a registration of practical examples and whenever possible carry out practical tests.

Comparative and absolute conclusions must be your own.

The elective programme element must be handed in as a report or similar. There will be no presentation or oral defense of the Elective programme element.

It is a requirement that the elective programme element is based on the principles of 'philosophy of science'. Either in methodological form you have learned by using [the report guide on Studynet](#), or in analytical form if this makes sense.

It could be in the form of a building program to a specific project with comprehensive feasibility studies and analysis and descriptions of the building being designed or tendered. It can also be a visualized and described analysis of methods, examples and experience of implementation of a bigger project carried out in a way that shows that you manage to analyze, use and communicate your knowledge to others in a professional and understandable form.

2.3.4 Registration

Notice that you have to upload the elective programme element in 2 places, in the following order:

1. At [UC-Viden](#)
2. At WISEflow

1. You have to register/upload the elective programme element (complete text as a pdf) at [UC-Viden](#) approximately 1 month² before the examination of the elective programme element.

A receipt for the registration at UC-viden/PURE is sent by mail to the Study Administration. Otherwise the hand-in cannot be approved.

2. Afterwards the elective programme element is uploaded on WISEflow. See the guide on Study net.

Upon completing/passing the exam, the registration will be approved by the secretary in the Study Administration. Your project will only be published (through 'UC-Viden') once you have passed your examination.

2.3.5 Language

The elective programme element is carried out in Danish or English.

If you wish to carry it out in another language (e.g. Norwegian) it will be possible if your supervisor master the language/accepts it.

2.4 The bachelor project

The bachelor project is carried out independently, but is organized in a way, where it is mandatory to be part of a study group of four students. The study group is established at the semester start in collaboration between the student at the main and secondary supervisor.

At the semester start you have to do your group and personal planning with final guidance and evaluation plan. The plan is approved by your main supervisor.

In principle, your study group receives counselling once a week by your main and secondary supervisor in regards to the agreements and approved plan.

We have chosen to organize the 7th semester like this, partly to ensure that you have a daily forum for dialogue and that you can support each other in your work with the project. Partly because you have to function as opponents on each other's bachelor project at two mandatory project evaluations during the semester.

2.4.1 The topic

The topic for the bachelor project is discussed with and approved by the main and possibly secondary supervisor in the start of the 7th semester.

² See the date for registration in the Activityplan on Study.

When selecting the topic/problem to be researched you are free to choose within any of the professional subjects represented in the education. As in previous semesters, you can choose to focus on Architectural Technology or Construction Management.

You have to formulate a problem, which is essential in relation to the education and the profession. You are welcome to do this in collaboration with an external client or a company, e.g. your internship-place. The problem, concern a new building or a refurbishment (covering all essential aspects) and should be based on technical problems or/and problems related to the execution of the project. Furthermore, the problem should be of a degree of difficulty matching the education.

When you formulate the problem, you must make sure that you, through your work with the project:

- can document your understanding and ability to reflect upon the profession in practice
- can document how you have applied theory and methods to a problem closely related to practice
- can document that you independently, guided by the main and secondary supervisors, are able to organize and plan the design and implementation of a given construction and civil engineering task.
- will include a minimum of 2-3 of the traditional design phases (corresponding to a representative part of the learning aims for this education)
- can document the BATCM's complete competencies

2.4.2 Main and secondary supervisors

You will be allocated your own main and secondary supervisor for the Bachelor project.

2.4.3 Format

There are no specific demands to quantity, procedure and presentation. It is, however, recommended that you use a form similar to the form used in earlier semester projects.

The bachelor project is 'handed in' partly by uploading to WISEflow before the exam, partly with a presentation at the exam where you explain the choice and delimitation of your problem as well as your analyses and chosen solutions.

In previous semesters, analysis and process (how you have solved the problem) have been the main focus. In the Bachelor project, it is expected that your decisions are based on preliminary research, analyses and theory, why the focus now primarily is you reaching a professional and qualified result or product (the solution to the problem).

Comparative and absolute conclusions must be your own.
You can use your Portfolio to document your own decisions.

2.4.4 Registration

Before the exam, you have to register/upload your bachelor project (an abstract and the total project in the form of a compressed zip-file) at WISEFLOW.

2.5 Tests and evaluations

One exam is carried out in the 7th semester. However, you will receive two individual grades for the elective programme element and the bachelor project respectively.

It is possible to carry out the bachelor project and the final test individually.

However, it is also possible to carry out the bachelor project as group work (of max. 3 people) as long as important parts are presented and assessed individually. Hence, the final test will be assessed based on the other group members' part of the project and your individual part of the project with one grade.

In group work it is important that it is clear who have done what and it is a requirement that you can answer questions about your group members' part of the project when it has an impact on your part of the project.

Table 2 is an overview of the different study elements and their evaluation before or in relation to the final test.

Table 2: Study elements and their assessment

Study element	Evaluated before the final test	Evaluated in the final test
Exam 9: The elective programme element		X
The Bachelor project		X

Source: Created at VIA Built Environment

Find general information about the exam on [Studynet \(Aarhus\)](#).

2.5.1 Guidelines

Provided all previous semesters have been completed in accordance with the college rules, you are automatically recommended for examination when you start the semester, but you have to document your study activity through attendance in your study group and contact with the supervisors. In case the supervisors finds that your study activity is not acceptable based on the two mandatory project evaluations or due to lack of participation in your study group, he/she may call you in for a meeting where you will be asked to present your project.

For everybody involved, it is important that the exam is carried through in the best possible way. We would therefore like to draw the attention to the following general conditions:

1. What are the consequences in case you withdraw from the exam on the grounds of illness or maternity?
 - You have not used your 1st attempt.
 - You are automatically enrolled exam on the same project
2. What are the consequences of failing to attend the examination
 - You have used your 1st attempt.
 - You are automatically enrolled of going for a 2nd attempt (re-examination) using the same project.
3. What are the consequences of being dismissed from an examination
 - You have used your 1st attempt.
 - You do not have the option of going for a 2nd attempt (re-examination) using the same project. Seen in this light – and from a time perspective - it is not realistic to be able to go through with the examination in a possible re-examination/make-up examination.
4. What are the consequences of not passing the examination?
 - You have used your 1st attempt.
 - You are automatically enrolled of going for a 2nd attempt (re-examination) using the same project.

If you have not passed your examination or your project has not been approved, you have more options and/or duties:

- In case you do not understand the grounds on which you have been graded, you may ask for an interview with your supervisors. You must try to arrange for the interview to take place immediately after your supervisors have finished the examination of your class.
- In case you wish to launch a formal complaint you should approach the programme management. A list of examination inspectors is available at the Study Management Office.

Especially regarding hand-in of the elective programme element:

If you get sick or in another way, without blame, is prevented from handing in your elective programme element at the right time, you must contact your supervisor. The supervisor and the programme management then will decide if the elective programme element can be handed in at a later time and e.g. possibilities for a re-examination due to disease.

Disease usually has to be documented in the form of a medical certificate.

2.5.2 Assessment of the elective programme element

The elective programme element is assessed by the supervisor and by an external examiner appointed by the college. You will not participate in the assessment.

The assessment criteria are defined as:

- The relevance of the collected material, quotes, references, registrations, literature references.
- Your processing of data, comments, conclusion and independent assessment in relation to the defined goals. Such personal manifestations will be assessed with respect to their professional value in the given context.
- Your ability to communicate in writing and graphically.

The elective programme element is awarded with one grade. Hence, the Bachelor project, or parts of it, cannot influence the assessment of the elective programme element or vice versa.

In order to pass, you must obtain a grade of minimum 02.

2.5.3 Assessment of the Bachelor project

Essential parts of the bachelor project must be submitted digitally. Your main and secondary supervisor (examiners) and 1-2 external examiners will assess the Bachelor project. Their assessment will be based on your presentation of the project followed by an oral examination.

The bachelor project will be assessed according to the 7-point grading scale.

Examination dates will be published, alongside the examination order and guidelines, approximately 4 weeks prior to the examination.

3 TEACHER TEAM SPECIFICS

3.1 Guiding time schedule

To the extent possible, the semester will proceed in accordance with the guiding time schedule presented in Figure 4.

Figure 4: Guiding time schedule

Period: last 4 weeks of 6th semester and 7th semester from February 5 2018 to June 29 2018																												
Month	January				February				March				April				May				June							
Calendar week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
Teaching week	17	18	19	20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
7th semester start and introduction																												
Elective Program Element																												
Problem statement																												
Completion and hand-in																												
Assessment																												
The Bachelor Project																												
Forming study groups with main supervisor																												
Clarifying bachelor project with main supervisor																												
Approval of personal planning with main supervisor																												
Completion and hand-in with main supervisor																												
Time with secondary supervisor																												
1st project evaluation - study group and main supervisor																												
2nd project evaluation - study group, secondary supervisor and main supervisor																												
Exam with secondary supervisor and main supervisor																												

Source: The semester team's creation