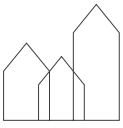


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# **SEMESTER- SYLLABUS 4TH SEMESTER INTERNSHIP AND FINAL PROJECT**

AP Graduate of Construction Technology

VIA University College Aarhus

Spring 2018

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# SEMESTER SYLLABUS

## Welcome to the 4th semester!

You are due to start your final semester on the Construction Technology programme.

The purpose of the Construction Technology programme is to qualify the graduates to collaborate with others in planning and carrying out tasks within the area of construction and civil engineering, and industrially manufactured building components. The programme is an AP degree programme, which allows the student to continue their education on the Bachelor Degree programme in Architectural Technology and Construction Management.

We expect that you, and your fellow students, can work independently, acquire new knowledge, analyse professional issues and make well-informed decisions.

The semester includes two parts, respectively an Internship and a Final Project:

*The Internship* provides you with the competencies in application of the key subject areas of the programme, as well as professional practice.

*The Final Project* is an individual written project, where you demonstrate your competencies to handle planning and management of construction and civil engineering projects.

## Quality assurance and development

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

- Final teaching evaluation 3<sup>rd</sup> semester
- Final teaching evaluation 4<sup>th</sup> semester
- Final teaching evaluation of studies abroad
- Student satisfaction survey

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. Finally, the main section describes how to assess the fulfilment of your learning aims, through tests and evaluations, as well as what criteria form the basis for the evaluation.

**3. Your Implementation.** This section contains a time schedule for the semester and a detailed description of the content of the Internship and Final Project.

# 1 THE PROGRAMME

The Construction Technology programme is a full-time Higher Educational programme with 4 semesters, corresponding to 120 ECTS points. Each ECTS point corresponds to a workload of 27.5 hours, and each semester is organised over 20 weeks, including examination. Hence, you are expected to spend approximately 41 hours per week on your education<sup>1</sup>.

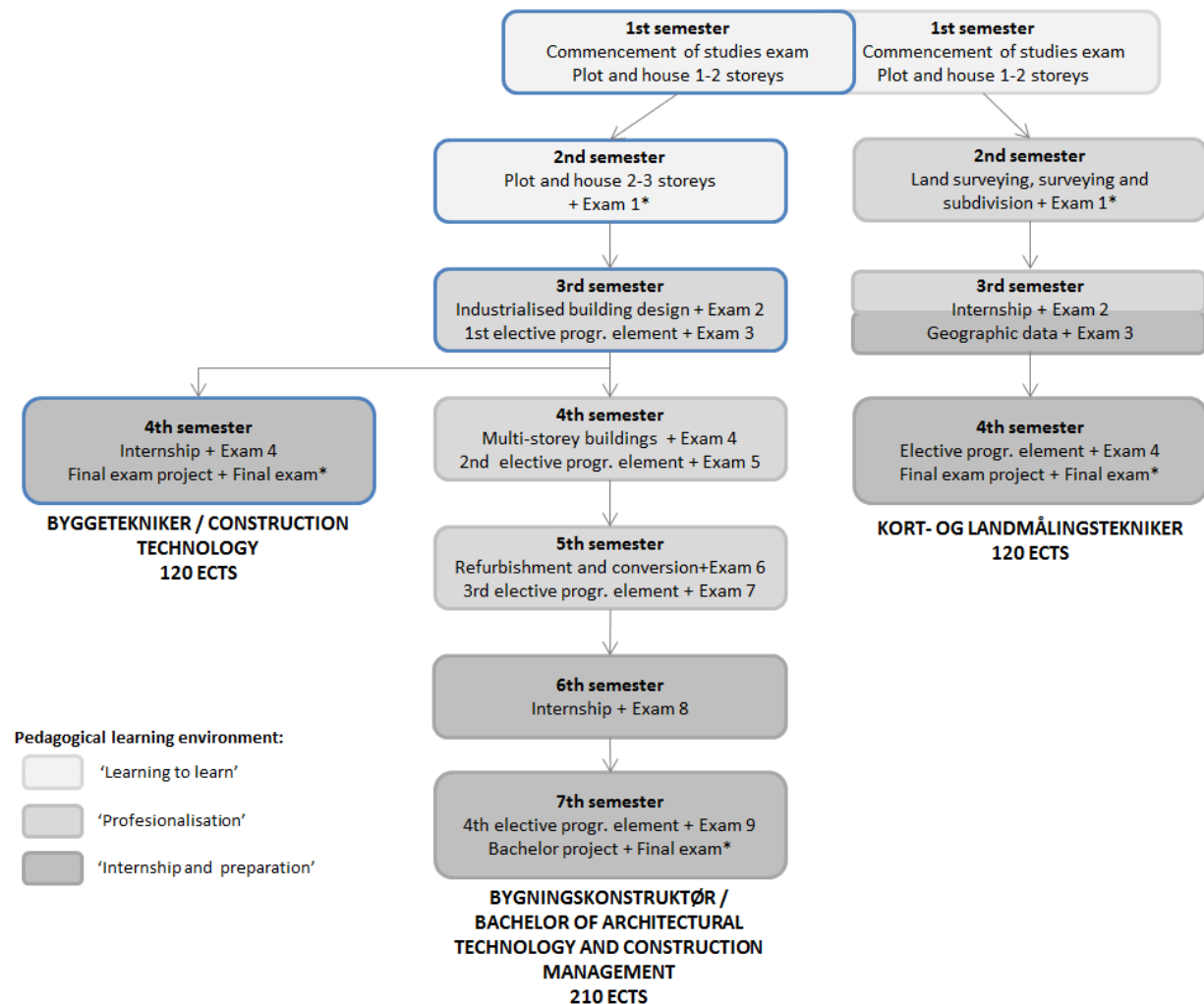
As a student, you have your own 'workplace' at the college, which we encourage you to use. The 'workplace' will change from semester to semester, depending on the size of the classes and your choice of specialisation.

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, in order to ensure a natural progression in the learning during the course of the programme, see Figure 1:

Figure1: The three academic learning environments



Source: Created at VIA Built Environment

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

### "Learning to learn"

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 Work Approaches

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.

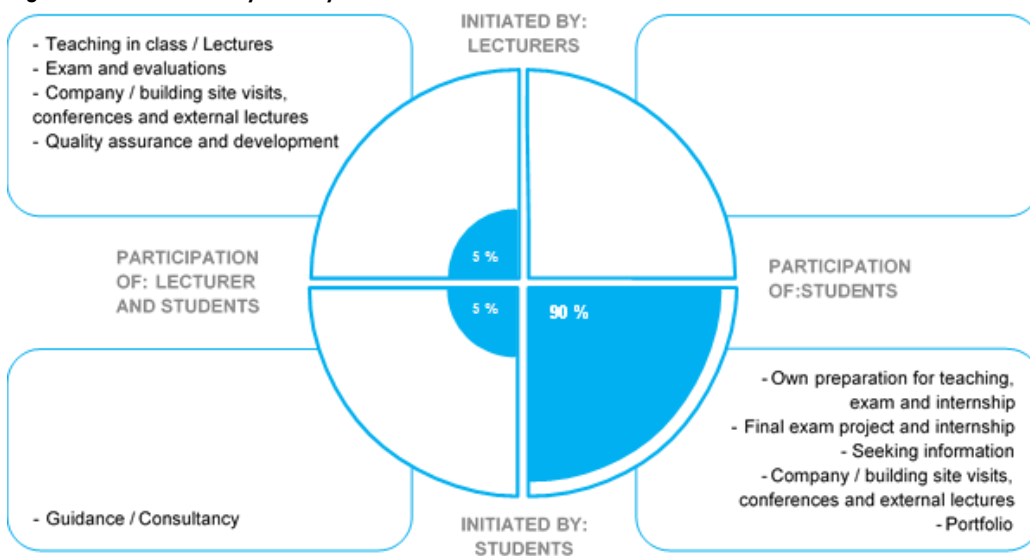
Portfolio is an important tool in the study programme, which you are to use to reflect upon your own learning.

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

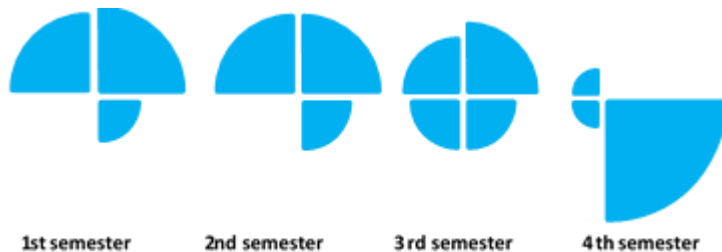


Source: Development at VIA Built Environment

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, your opportunities to get consultancy, 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](http://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.

It is expected that you use these offers as an important addition to your learning, as it is expected that you seek knowledge through other relevant knowledge-services.

## 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 Internship and Final Project
- contribute to knowledge sharing in the class (that you use each other to discuss solutions and let yourself be inspired by each other's work)
- take initiative in regards to seeking consultancy advice
- acquire the literature/materials you need in relation to the Final Project
- hand in your Final Project on time
- attend to meetings related to your education (status meetings, guidance meetings, evaluations, etc.) and meet well prepared and motivated
- reflect upon and evaluate your learning process

You have the highest prerequisites for 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 each other.

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, e.g. in the form of a logbook, mails etc.

## 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

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## 2 THE SEMESTER

The semester consists of two parts; the Internship (15 ECTS-points) and the Final Project (15 ECTS-points).

### 2.1 Entrance Requirements

In order to be admitted to the 4th semester, you must have been registered for the exam in the 3<sup>rd</sup> semester, or be able to document that you in other ways have equivalent competencies. You have to end your internship before you can take the exam in your final project.

### 2.2 Learning Aims for the 4<sup>th</sup> Semester

The learning aims are transcribed from [the curriculum](#).

#### Knowledge

At the end of the semester, you should have acquired:

- knowledge about and understanding of applied practice, theories and methods used within management, design, planning and execution of construction and civil engineering assignments
- knowledge about relevant communication methods and approaches used in the dissemination of technical issues relating to the profession. This includes the use of digital media used within the building profession and in general
- knowledge about principles and standards used within the profession for the establishment of a business, their operation and organisation
- knowledge about social and technological issues that may affect the construction process, including energy, work environment and sustainability in both a local and global perspective
- knowledge about managerial, social, linguistic, cultural and ethical aspects of solution of construction projects, both independently and in cooperation with others

#### Skills

At the end of the semester, you should be able to:

- apply relevant methods for design, planning and management of construction and civil engineering tasks, including the use of relevant IT-programs and systems
- assess, combine and integrate knowledge into the solving of construction issues
- disseminate findings of research into construction issues to relevant parties using relevant media
- assess business and organisational affairs
- assess and understand known associations in constructional development, including aspects regarding energy, work environment and sustainability
- select relevant methods and justify the selection based on professional considerations
- assess and understand the social, cultural and ethical relationship in development of relatively complex construction projects, including the collaborative aspects of execution of these

#### Competencies

At the end of the semester, you should be able to:

- design, plan, manage and execute construction and engineering tasks
- participate in research and development activities within the field of practice
- incorporate relevant theory and own practice from the construction sector in solving of practical assignments, hereunder specifically issues regarding energy and sustainability
- partake in communication with consumers, developers, consultants, designers and contractors about technical design, tendering and execution of relatively complex construction assignments
- handle administrative tasks and project management of relatively complex construction assignments
- acquire new skills and knowledge in relation to practice in a structured manner

## 2.3 The Internship

The final aim of the internship is future employment as a Construction Architect. The internship should take place in a private or public company in Denmark or abroad. The company must be able to provide assignments relevant to the profession and provide appropriate guidance for such assignments.

The type of company you choose for the internship should correspond to your line of specialisation. It is your responsibility to make contact with the company and your responsibility to sign a contract for the internship in accordance with the time schedule for the semester.

In collaboration with the company, you must initiate the elaboration of a plan for the internship, including the formulation of learning aims and definition of work conditions, etc. It is your responsibility to ensure that the learning aims described correspond to the aims and contents defined for the internship.

Your learning aims have to be approved by the company and thereafter by the school's Internship Coordinator.

Throughout the internship, you are expected to solve the assignments given to you by the company to the best of your ability. It is expected that you participate in the company's daily routines like any other employee. The internship is non-paid but you are entitled to receive SU, if you are already eligible for this.

During your internship, the company is responsible for taking out insurance for you corresponding to that of the other employees in the company. You must arrange to have your own full-time accident insurance.

### 2.3.1 Documentation

During the internship, you must produce a daily Logbook. The Logbook will be used as a basis for the dialogue with the Placement Coordinator approximately half way through the internship. At the end of the internship, you must produce a report of 8-10 pages, where the Logbook must be included as an attachment.

#### 2.3.1.1 The Logbook

The learning aims and content of the Logbook is shown in the following table.

Table 2: The Logbook

<b>Duration</b>	Integrated part of the internship.
<b>Learning aims - Knowledge</b>	You must gain knowledge about: - how to make systematic reports regarding work assignments in practice
<b>Learning aims - Skills</b>	You must be able to: - give short and precise reports, with the purpose of using the information as a tool guide by the recipients
<b>Content</b>	The Logbook should contain a short description of the theoretical and practical work tasks you have solved during the day – either independently or in collaboration with others. Furthermore, it should be possible to use the Logbook as a management tool – by the student, the contact person at the company and the Placement Coordinator.

Source: Created at VIA Built Environment

#### 2.3.1.2 The Report

The learning aims and content of the Report can be seen in the following table.

Table 3: Report

<b>Duration</b>	Integrated part of the internship.
<b>Learning aims - Knowledge</b>	You must show knowledge about: - relevant learning aims for this specific internship and an demonstrate an understanding of the Construction Technician's role and responsibility within the industry, in relation to other professions that you may encounter during your internship

<b>Learning aims - Skills</b>	You must be able to: <ul style="list-style-type: none"> <li>- Plan relevant learning aims for the internship in collaboration with the company</li> <li>- Identify the Construction Technician's role and responsibilities within the industry, in relation to other professions within the building industry</li> <li>- Identify individual learning requirements in relation to the internship</li> </ul>
<b>Content</b>	<ul style="list-style-type: none"> <li>- Reflection upon whether the study programme has led to you gaining the necessary competencies to manage the tasks you were given</li> <li>- Reflection upon whether you have reached your learning aims during your internship</li> <li>- Info about your choice of topic for the Final project, possibly in collaboration with the internship company</li> </ul>

Source: Created at VIA Built Environment

## 2.4 The Final Project

### 2.4.1 Choice of Topic

You are free to choose within any of the professional subjects taught on the programme and it is your choice whether to focus on design or construction.

Your Final Project is the main product of your education, where you must demonstrate your understanding of professional practice and application of theory and approach in relation to the chosen project. The Final Project can concern a specific assignment/project within the construction and civil engineering industry.

The College must approve your chosen topic and hypothesis.

When you devise your hypothesis, you must ensure that your response can document:

- your understanding of applied professional practice
- your application of theory and approach
- that you are able to design, plan and manage construction and civil engineering assignments
- possession of all required competencies of an AP Graduate in Construction Technology

Some students will be allowed to complete the Final Project in a company, as long as a range of conditions for the student and company are fulfilled.

### 2.4.2 Supervisors

You will be allocated a Supervisor for the Final Project. Your Supervisor will typically be a Lecturer from the 3<sup>rd</sup> semester.

### 2.4.3 Format

The Final Project is an independent project.

There are no specific requirements for quantitative content, procedure, format or presentation. However, it is recommended to use a format similar to those used in projects on previous semesters.

The Final Project is 'submitted' through a presentation, where you must justify your choices and restrictions within the hypothesis, your research and chosen outcome.

On previous semesters, analysis and process have been the main focus (how you have solved the problem). In the Final 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).

Conclusions and solutions must be your own.  
You can use your Portfolio to document your choices.

## 2.4.4 Tuition

In principle, there will be no tuition on the semester, see 0.

As the learning environment is project orientated, the supervisors will organise individual guidance and/or group teaching sessions as and when considered necessary.

## 2.5 Examination and Assessment

Table 4 is an overview of the different study elements and schedules assessment time in relation to the Final Examination.

Table 4: Study elements and assessment

Study Element	Assessed before the Final Examination	Assessed at the Final Examination
Internship	X	
Exam 4: Final Project		X

Source: Created at VIA Built Environment

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

### 2.5.1 Examination Guidelines

You are automatically registered for the Final Examination, when you start the semester.  
For current guidelines, you are referred to the current Curriculum for the programme, which refers to the enforced rules and regulations.

### 2.5.2 Assessment of the internship

The following criteria form the basis of the assessment:

- Fulfilment of learning aims for the semester (knowledge, skills, competencies)
- Written presentation, reflection and conclusions (knowledge, skills, competencies)

Your supervisor, in collaboration with the Internship Coordinator, will assess the report for the internship.

### 2.5.3 Assessment of the Final Project

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

The Final 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

In sections 1 and 2, you have read about the formal framework of the semester, including internship and final project for Construction Technology programme. The current section 3 concerns the specification of the structure and content of the semester.

It is ideal that you find an assignment to use for your Final Project with the company where you are doing your internship. Another option is for one of the company's associates to help you out.

Please be aware that the assignment does not need to be a construction project that is a finished design or building. It should be an assignment for a new building. However, as an exception, a renovation or extension assignment can be accepted.

The assignment must be treated in its entirety, allowing the opportunity to treat technical building or construction issues of an appropriate difficulty for a Final Project. A small assignment, such as a single-family house, will not be suitable, as the level of difficulty of the building and construction issues typically will not be high enough. Likewise, very big assignments are not ideal either, as the assignment is expected to be dealt with from start to finish.

The above-mentioned makes demands on implementation, complexity and scale of the building, which is approved by your counsellor.

The above-mentioned makes demands on implementation, complexity and scale of the building, which is approved by your counsellor.

#### 3.1 Proposed Time Schedule

The semester will proceed, where possible, in accordance with the proposed Time Schedule shown in Fig 2. The time schedule is also uploaded on VIA Studynet ([link](#)).

Figure 4: Proposed Time Schedule dated 30.10.2017.

HALDINGSUDELSE	CALENDERUDELSE	45	46	47	48	49	50	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	27									
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REKSAMEN	REEXAMINATION																																										

FERIE / HOLIDAYS

Source: The semester team's creation

#### 3.2 References and Reading List

Se semester syllabus for 3rd semester S18.