

SEMESTER SYLLABUS

SEMESTER 5

**Semester theme: Renovation
Specialization: Construction Management**

Bachelor's Degree Programme in Architectural Technology and Construction Management

VIA University College

Revised February 2019

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Welcome to Semester 5 with the accent on construction management!

You are now about to start the final semester in the learning environment we call 'Professionalization'; this is also the last semester to be primarily teacher-led.

You should be considering whether there are areas in which you will have to make a special effort to improve your skills before you go on placement, work on local subject components, do your Bachelor's project and, ultimately, venture out into the labour market.

The theme of the semester project is 'Renovation'.

In the project work, you and your group will learn about the special requirements associated with preliminary studies and the recording, set-up, structures, materials and conversion planning of existing buildings. The semester's national subject component carries 15 ECTS credits and includes the following subject areas: Production (5 credits) and Structural Design (10 credits).

This semester also includes two local subject components requiring you to work on elective topics. Your work must follow the science-theory-based method to which you were introduced earlier in the programme.

You must describe a specific problem within building renovation and conversion, which you will investigate and propose one or more solutions to.

The local subject components make up 15 of the semester's 30 ECTS credits, and they include:

- the elective study component (EPC), developed as a continuation of the compulsory study component and worth 10 ECTS credits;
- the local study component (LPC), developed in connection with the compulsory study component and worth 5 ECTS credits.

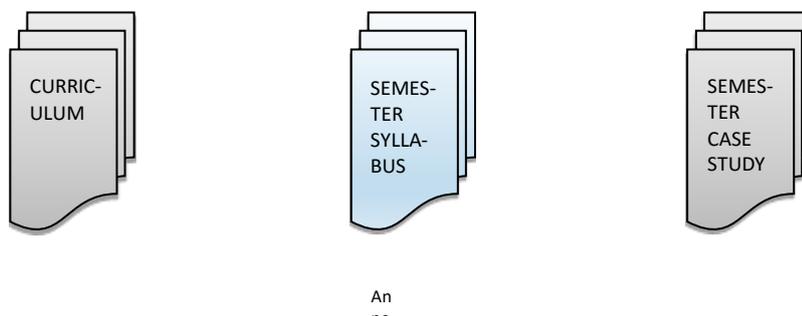
These, then, give you a lot of scope to target your education according to what you want to do afterwards.

In the course of this semester, you also need to decide where you will go on placement in Semester 6.

Recommended reading

As guidance to you and others on the different semesters of the programme, a syllabus like this one has been prepared for each semester.

Figure 1: Document hierarchy



Source: prepared at VIA Built Environment

Each semester syllabus consists of two main sections:

1. The Semester, which is introduced with a description of the overall structure of the semester, followed by a brief description of the prerequisites we need you to have in place in order to start the semester. The content of the semester is then described in more detail: the *interdisciplinary semester project*, including subjects and other study components, and the *local subject components*.

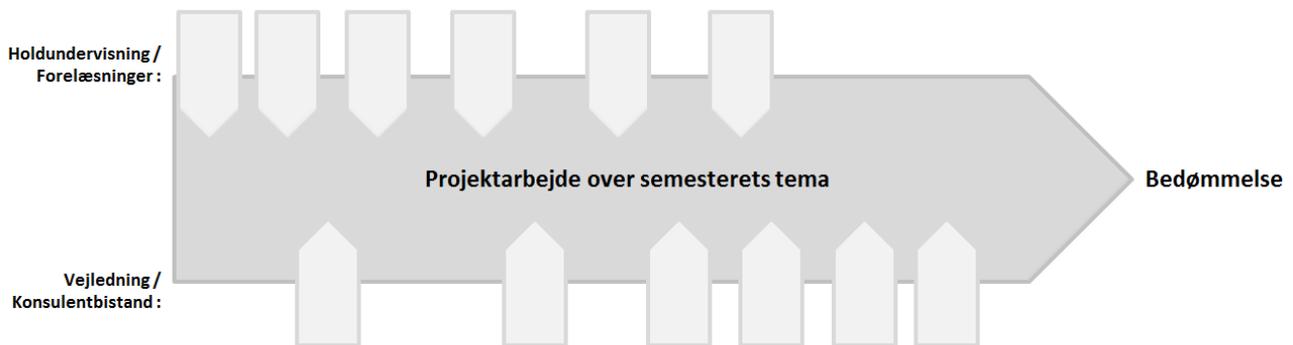
2. The Teaching: the semester team's description of their particular semester case study and teaching plan, and a reading list. They have designed these to enable you to attain the learning objectives set.

1 THE SEMESTER

In this semester, you will mainly be working on one continuing project within the overall theme of the semester. As shown in Figure 2, each subject will be directed towards the project.

Theoretical presentations by the teaching staff are often mostly concentrated at the beginning of the course; later on, the teachers will mainly assist with guidance/consultancy relating to the project. It is through the process of working towards the solution of problems that you, the student, will develop your competency as an architectural technologist.

Figure 2: Interdisciplinary project work



Class teaching/lectures:		
	Project work on the theme of the semester	Assessment
Guidance/consultancy:		

Source: prepared at VIA Built Environment

In this semester, the elective programme components will give you the opportunity to tailor your education. The electives are independently organized courses of study.

1.1 Admission requirements

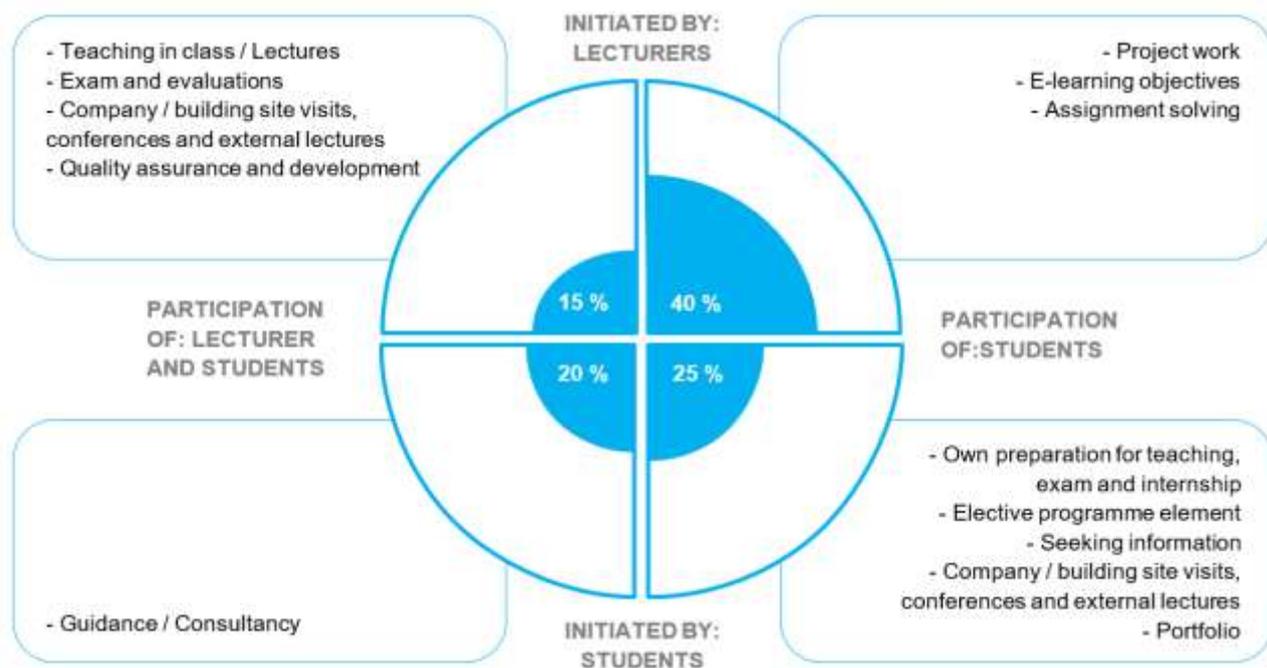
In order to enrol on Semester 5, you must have been entered for the Semester 4 examination or otherwise gained approved credit.

1.2 Study activity

The teaching and working formats used in this semester are shown in the Study Activity Model for the semester.

The Study Activity Model indicates that we expect you, the student, to spend approximately 825 hours studying in each semester, and also that there are a variety of teaching and working formats, indicating that not all learning is initiated by the teaching staff and/or has a teacher present. This means that you, the student, also bear considerable responsibility for your own learning. Thus, the Study Activity Model also shows what we expect of you as a student and what you can expect of us as regards your attainment of the learning objectives.

Figure 3: The semester's Study Activity Model



Source: prepared at VIA Built Environment

The Portfolio is an important tool on the programme, and you should use it to reflect on your own learning.

1.3 Quality assurance

You and your fellow students play a vital role in the quality assurance and quality development of the programme. It is important for management and teaching staff to receive your feedback so that, together, we can both ensure that you and your fellow students obtain a high level of educational benefit, and create the conditions for a satisfactory teaching and learning environment.

The table below shows how you as students will be involved in the evaluation of teaching activities during Semester 5, who will be the main users of your feedback, and when the evaluation will be carried out.

Table 1: Student involvement in teaching evaluation during the semester

Element	Method	Main users	When held
Expectation adjustment at the start of a new course of instruction at the institution	Dialogue, based on the semester syllabus, at the introductory session of the semester	Teachers and students	At the start of each semester
Halfway evaluation of course of instruction at the institution	Method chosen by teaching team	Teaching team	Approx. halfway through semester, as shown in indicative timetable
Final evaluation of course of instruction at the institution	Online questionnaire	Programme management and teaching team	Each semester to undergo final evaluation once in every three times it is taught.

			If due to be held, will be shown in indicative timetable.
Ongoing dialogue	Dialogue between teachers, students and programme managers, e.g. day-to-day or via the local campus/programme student council	Teachers and students	Ongoing
Final evaluation of placement in Denmark and abroad	Online questionnaire aimed at all placement venues	Programme management, International Office and placement coordinators	Placement venue final evaluation to be carried out after each placement period
Quality assurance, including final evaluation of study visit abroad	Online questionnaire etc.	Programme management and International Office	At the end of each study visit abroad
Student satisfaction survey	Online questionnaire	Programme management and VIA senior management	Every 2 years. If due to be held, will be shown in indicative timetable.

Source: prepared at VIA Built Environment

You can see results, KPIs and action plans for yourself at [Studienet \(Aarhus\)](#), [Studienet \(Horsens\)](#) or [Studienet \(Holstebro\)](#).

Here, you will also find further information on the work VIA University College does around quality. The results of current evaluations are presented at the semester introductory session. Your class representatives also play a vital role in communicating what is discussed at campus/programme student council meetings.

1.3.1 Local student council

At VIA, there is one combined Student Council per campus with class representatives from all study programmes, but the individual programmes also have local student councils.

The VIA Built Environment management teams at Horsens, Aarhus and Holstebro continually involve the local student council in discussions about the quality assurance and quality development of the programme, including:

- employer involvement,
- graduate involvement,
- final evaluation of teaching,
- final evaluation of placements in Denmark and abroad,
- final evaluation of study visits abroad,
- student satisfaction survey,
- dropout analysis.

1.4 Project work

Project work consists partly of assignments to be tackled individually and partly of assignments to be tackled in groups of 2-4 students.

The reason for working in groups is partly that this is a very widely used working style in the building sector, and partly that there is learning value in problem-focused collaboration on a specific project with other students who have different experience and skills.

Although students work in groups, it is nevertheless important that you as a student can independently acquire and apply the knowledge you gain from the different subjects.

1.4.1 Subject-focused teaching

Single-subject teaching covers rules, theories, methods and techniques within each specific subject area. When the individual topics are taught will be set out in detail in the team's teaching plans, which will be made available on It's Learning. Examples of specialist interpretations of the Semester 5 learning objectives for the individual subjects are listed in Annex 3.1.

Table 2 shows the areas each subject is divided into. The subject areas are described separately in the subsections to follow.

Table 2: Subjects, subject areas and subject distribution

Subject	Subject areas	Distribution
Building Design (BDS)	Building Construction (BDS/BCN) Materials Science (BDS/MAT)	27%
Structural Design (STD)	Structural Design (STD)	10%
Building Services (BSE)	Building Services (BSE)	10%
Building Planning and Management (BPM)	Building Planning and Management (BPM)	40%
Law (LAW)	Law (LAW)	13%

Source: prepared at VIA Built Environment

1.4.1.1 Building Design (BDS/BCN)

The subject presentations under BDS will support attainment of the learning objectives for the semester, alone and in interdisciplinarity with content under other subject groups. Teaching will be based on the following content:

Building Design:

Recording of an existing older building, i.e. there will be a partial recording: parts of the records will be given out, and other parts will be reconstructed by the students, e.g. in a small assignment.

In the implementation part: follow-up of the drawing basis for the conclusion of the contract and drawings as working basis during implementation.

Building Design BDS/BCN

- statutory requirements;
- project scrutiny;
- layout of structures and service installations;
- building technology for renovation;
- prefabricated building components;
- knowledge of materials;
- Analogue and digital tools for sketching and describing buildings;
- The following topics will be covered in particular depth in this semester:
 - roof structures in renovation projects;
 - typical structural configurations in renovation projects;
 - steel structures as primary building fabric components in extensions; corrosion and corrosion protection;
 - lightweight structural floors and walls, primarily with profiled sheeting frames, in extensions.

Building Design BDS/MAT

- preparation of content journal;
- preparation of materials specification on drawings;
- preparation of materials analysis for selected materials.

1.4.1.2 Structural Design (STD)

The subject presentations under STD will support attainment of the learning objectives for the semester, alone and together with content under other subject groups. Teaching will be based on the following content:

- load determinations and building systems;
- static analysis of buildings: existing, future and under construction;
- table-based dimensioning;
- steel structures as building components;
- bracing of buildings during conversion;
- imposts on masonry and replacement of masonry;
- foundation reinforcement/underpinning

1.4.1.3 Building Services (BSE)

The subject presentations under BSE will support attainment of the learning objectives for the semester, alone and together with content under other subject groups. Teaching will be based on the following content:

- sound analysis;
- analysis of current Building Code requirements for U-value and linear thermal transmittance, and energy consumption in renovation and extension of older properties;
- analysis of the use of renewable energy sources
- heat recovery ventilation systems;
- service ducts, plant rooms and shafts/cores in older properties.

1.4.1.4 Building Planning and Management (BPM)

The subject presentations under BPM will support attainment of the learning objectives for the semester, alone and together with content under other subject groups. Teaching will be based on the following content:

- scrutiny and risk assessment;
- quantity take-off and calculation;
- Work Process Evaluations (construction processes)
- building and production management
- construction phases and services
- the logbook: overview of the building process for contractors
- Civil Engineering 2: Building Process Management

1.4.1.5 Law (LAW)

The subject presentations under LAW will support attainment of the learning objectives for the semester, alone and together with content under other subject groups. Teaching will be based on the following content:

- Introduction to ABR (General Conditions for Consulting Services) on the supervisor's role as the Client's authorized representative;
- legal scrutiny of tender documents in accordance with AB (General Conditions for Provision of Works and Supplies);

- the contractor's contracts with the Client and with the Subcontractor/Supplier;
- AB with reference to extra work, handover, cessation of liability, and disputes;
- contractual damages;
- the Executive Order on Winter Measures;
- public procurement law in relation to the semester case study, including the Contractor/Subcontractor relationship;
- regulations on authority;
- the Statutory Limitation Act (Forældelsesloven);
- the ILO conventions generally;
- recourse to court, arbitration and Procurement Board practice;

Primary focus on Client/Contractor and Contractor/Subcontractor relations.

1.4.2 Other study components (local subject components)

During the semester, the semester team may arrange other study components, in consultation with the students if appropriate. This will then appear on the timetable or the schedule planner for the particular class.

1.5 Local subject components

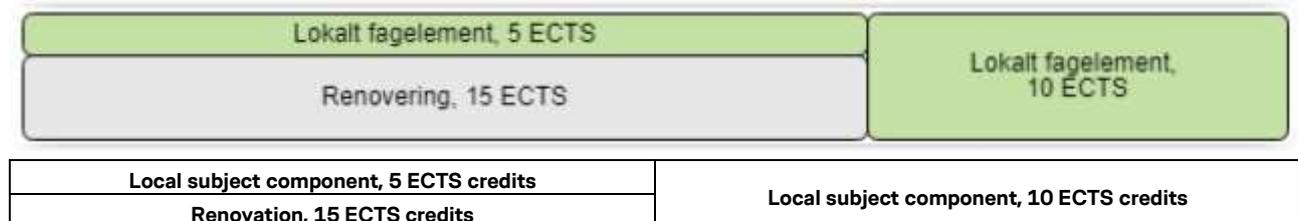
A local subject component is defined as either a local programme component (LPC) or an elective programme component (EPC).

The local subject components in Semester 5 will give you the opportunity to work on specific building technology topics or renovation problems chosen by you. They will cover a problem or topic arising out of the compulsory renovation/conversion project.

The aim is that you will extend your knowledge and competencies within the chosen area, and enhance your methodological and analytical skills and building technology competencies.

The figure below shows how the LPC and EPC stand in relation to the compulsory part.

Figure 3: ECTS distribution –national subject components and elective programme components



Source: Curriculum

As part of the elective programme component, you can take part in a study trip/university collaboration at one of VIA University College's partners abroad. Another possibility in the elective is an interdisciplinary collaboration with external partners, e.g. a collaboration with other programmes or with employers. For planning reasons, this choice must be made in Semester 4.

1.5.1 Elective programme component (EPC, 10 ECTS credits)

In order to strengthen collaboration between students and ensure the best possible tuition and consultancy support for the elective, the College has defined different types of **course of study**:

- construction management
- special interprofessional course

The learning objectives and content of the courses of study are described in detail in the institutional part of the curriculum, under Section 3.1, Elective Programme Components, EPC (3.1.3, Elective Programme Component, Semester 5).

The elective consists of individual study. There is the option of working in a group on the elective, but here it is important that there is a clear definition of your personal part of the assignment, as it is important from the point of view of the examination that your ability to work independently at a professional level can be assessed.

1.5.2 Local programme component (LPC, 5 ECTS credits)

The student must bring to the elective programme component the knowledge gained from the programme's subject areas.

In Semester 5, the student must take one local programme component (LPC). Figure 3 shows when in the semester it is taught. The student chooses one of three possible LPC topics: Build 4.0, Sustainable Building or Energy. Content and learning objectives are described in detail in the institutional part of the curriculum under Sections 3.2.1, 3.2.2 and 3.2.3.

In addition, you will be given an introduction to the LPC components.

1.5.2.1 Build 4.0

This is the student's opportunity to gain an educational specialization in the tools and methods associated with Build 4.0 in construction management.

1.5.2.2 Sustainable Building

The student will gain a deeper understanding of sustainability both as a concept and as regards its significance for the specific building project. It also aims to make the student aware of the challenges of the phenomenon from the point of view of conversion and development.

1.5.2.3 Energy

The student will gain a deeper understanding of active and/or passive energy measures both as a concept and as regards their significance for the specific building project.

1.6 Examinations and evaluations

There are 3 examinations during Semester 5. The material to be examined is described in the institutional part of the curriculum under Section 3.7.

You and your group will present the semester project and then receive an individual mark based partly on what you have done as a group and partly on your independent part of the project.

Significant parts of the project must be presented digitally/orally, with an oral evaluation by the teachers to follow.

As this is the last semester before the company placement, considerable weight is attached to independence in the tackling of the assignment, including the ability to work methodically, analytically and professionally when searching for relevant information.

Please see the [current guidance](#) for information on the conduct of the concluding examination as regards the use of digital presentation.

Table 3 is an overview showing the various study components and their assessment in accordance with Section 3.7 of the Curriculum.

Table 3: Study components and their assessment

Examination	Material examined	Assessed at end of study component?
Examination 7	Project work on Renovation	X
Examination 8	Presentation of synopsis or problem statement and participation in the semester's project work	X
Examination 9	Project material from Elective 3	X

Source: prepared at VIA Built Environment

General information on examinations is available on [Studienet \(Horsens\)](#). [\(Aarhus\)](#) [\(Holstebro\)](#)

1.6.1 Assessment of the compulsory programme component

Assessment is based on the following criteria:

- method and work process (knowledge, skills, competency);
- technical solutions and documentation (knowledge, skills, competency);
- oral presentation and defence (knowledge, skills, competency).

1.6.2 Assessment of the elective programme component

Assessment is based on the following criteria:

- method and work process (knowledge, skills, competency);
- technical solutions and documentation (knowledge, skills, competency);
- oral presentation and defence (knowledge, skills, competency).

1.6.3 Assessment of the local programme component

Assessment is based on the following criteria:

- method and work process (knowledge, skills, competency);
- technical solutions and documentation (knowledge, skills, competency);
- oral presentation and defence (knowledge, skills, competency).

2 THE TEACHING

Please see the class area on It's Learning, where the semester case study, the timetable, information on the semester project and the teaching matrix/plan will be uploaded.

2.1 Indicative timetable

The semester timetable will be reviewed at the beginning of the semester.
The indicative timetable will then be available in the class folder on IT's Learning.

2.2 Reading list and knowledge base

2.2.1 Additional subject-specific sources

Additions to the reading list and knowledge base are listed in Annex 3.3.

3 Annex

The annex represents a subject-specific interpretation of the Semester 5 learning objectives. In Semester 5, you, as a student, have now reached a point in your education where you are working professionally on your own learning, and hence on the pre-requisites for gaining knowledge, skills and competencies. Studying in Semester 5 means constantly moving into new discipline areas and going beyond those that are already known. The theme for Semester 5, Renovation, is the most difficult discipline the architectural technologist has to deal with.

To help you find your way around this new subject area, below is an example of a subject-based interpretation of the learning objectives based on the end goals of the semester. This interpretation should give you an understanding of what is expected and how the subject teaching relates to the national subject components of the curriculum (Production and Structural Design).

3.1 Overview of learning objectives supported by subject teaching

Building Design (BDS/BCN)

Examples of learning objectives supported by BDS content:

Building Design BCN

Knowledge of:

- the principles and possible applications of planning, design and execution methods and techniques for renovation of older buildings, with particular emphasis on improvement of energy conditions through sustainable renovation/conversion/extension;
- the history of older multi-storey buildings and the building physics issues, structures and details associated with these buildings;
- the complex of legislation, literature, recommendations etc that is the commonly accepted technical basis for renovation and conversion projects in Denmark;
- sustainability in relation to economic, social and environmental considerations, including certification schemes.

Skills:

- produce drawing and specification documents as the working basis for construction;
- develop visualization and communication skills, including the use of ICT.

Building Design MAT:

Knowledge of:

- the use of building materials in the renovation of buildings;
- environmentally harmful substances in building materials;
- composition, properties, processing, standards requirements, environmental impact, working environment, protection, trading, structural conditions, reuse, maintenance, life cycle evaluation etc of these materials:
 - timber,
 - masonry,
 - concrete,
 - steel/metal,
 - roofing materials,
 - sheet materials,
 - environmentally harmful substances.

Skills:

- analyse, select and incorporate the above-mentioned building materials;
- justify and document choices of materials.

Structural Design (STD)

Examples of learning objectives supported by STD content:

Knowledge of:

- important structures giving cohesive stability in the structures in the existing building and any extensions;
- table-based dimensioning of structures for extensions and conversions, including beams, columns and joints;
- bracing methods in renovation of an existing building, including possible underpinning.

Skills:

- understand and account for existing systems;
- account for the structural connections between existing building systems and any new ones in connection with major construction interventions;
- carry out simple estimated dimensioning of relevant structures, e.g. steel columns and beams;
- give an account of execution in connection with the design and planning of interventions in existing buildings;
- give an account of and propose relevant loads on the building as a whole;
- incorporate industrial building components as part of the statics in the completion of the building;
- communicate static analyses orally, in writing and graphically, and put the case for the choices made.

Building Services (BSE)

Examples of learning objectives supported by BSE content

Knowledge of:

- building services in older properties, including ducts and materials; principles of water, heating, drainage and sewerage;
- mechanical/balanced heat recovery ventilation in older properties;
- sound conditions and possible improvements to them in older properties;
- energy optimization methods for older properties and extensions, including use of renewable energy sources.

Skills:

- propose improvements to sound conditions in older properties;
- select the most suitable ventilation system for the property, ensuring sufficient space for its components;
- determine ducting routes for water, heating, ventilation and drainage pipes taking space, fire safety and sound conditions into account;
- calculate the profitability of an energy improvement measure in accordance with the current Building Code;
- analyse possible use of alternative energy sources and document some of the energy-related, pollution-related, financial or other consequences.

Building Planning and Management (BPM)

Examples of learning objectives supported by BPM content

Knowledge of:

- the differences in terms of planning and management between the design and implementation of new build and of renovation/conversion;
- the significance of verbal and written media and methods for interdisciplinary communication between construction parties;
- insight into organizational structure and contract types;
- quality assurance during construction, including scrutiny methods and risk assessment;
- organizational aspects in a main contract, e.g. site management, building site and in-house production;
- construction phases, from receipt of tender documents to handover of building to client, and an understanding of the principles and possible uses of planning, management and pricing;

- insight into construction processes in connection with the theme of the compulsory programme component.

Skills:

- present and communicate interdisciplinary complexity throughout the different phases of the building project, orally and in writing;
- updating of the Health and Safety Plan (HSP);
- carry out overall network planning of the project on the basis of relevant calculations;
- plan the execution of a main project within applicable statutes, regulations, recommendations etc;
- produce the drawings that might be needed to plan the execution of the works – generally for the main contract (building site) and in more detail for in-house production;
- scrutinize, calculate, plan and (in theory) execute parts of a main contract and in-house production from receipt of the tender documents to handover of the building to the client;
- give an account of the financial estimates on the basis of a recognized calculation principle (perhaps marginal costing);
- understand and carry out overall network planning of the project on the basis of relevant calculations;
- plan and execute parts of a main contract and in-house production to serve as the basis for tendering and execution.

Law (LAW)

Examples of learning objectives supported by LAW content:

Knowledge of:

- contractual damages (focusing on the AB (General Conditions) system);
- cessation of liability, including claims and time-barring;
- the consultant's supervisory role with particular reference to his authority.

Skills:

- give an account of the equal treatment and transparency provisions in the public procurement regulations and of the regulations governing the call for tenders from subcontractors;
- scrutinize the tender documents in the semester case, with particular focus on extra work, handover, cessation of liability and disputes, and prepare a legal risk assessment in the company;
- give an account of the significance of conditions agreed between main contractor and client in relation to conditions agreed between main contractor and subcontractor/supplier;
- prepare an invitation to tender to a subcontractor;
- draw up contracts and use the Common Conditions, focusing on the Client-Main Contractor and Main Contractor-Subcontractor relationships with reference to risk management, time management and financial management for the Contractor, especially in the areas of defects, time/delays and payment (top-up to Semester 3) and extra work, handover and cessation of liability.

3.2 Additional subject-specific sources

Interdisciplinary sources

- [ICT and BIM](#)
- [List of textbooks and readers](#)

Building Planning and Management (BPM)

- <http://bk-guide.dk/dk/> (VIA Logbook. Overview of the building process for contractors)
- <http://www.vaerdibyg.dk/>
- <https://arbejdstilsynet.dk/da/>
- www.haandbogen.info/da/forside
- www.danskbyggeri.dk
- www.byggeproces.dk

Building Design

Architecture and Building Design (BDS/ABD)

- Danish architecture since 1754, The Danish Architecture Press
- Guide to Danish Architecture 1, 1000 – 1960
- Danmarks arkitektur, Byens huse, Byens plan (The Architecture of Denmark: City Houses, City Plan). Gyldendal
- Analyzing ARCHITECTURE, Simon Unwin, ROUTLEDGE
- Danish Architecture, Tobias Faber, Det Danske Selskab
- www.bygningskultur.dk
- www.danskebygningsmodeller.dk
- <http://www.historiskehuse.dk>

Building Construction (BDS/BCN)

- BvB (Building Defects Fund for Building Renewal) recommendations and associated literature and guides (etc)
- BvB logbook
- Multi-Storey Residential Building in Copenhagen 1850 – 1900 – SBI report 142
- BPS publications 100 / 101 / 116 / 119
- Good Roofs – BvB
- 3 Good Wetrooms – BvB
- Danish Building Models (link on previous page)
- BR18 (Building Code) and Collection of Examples on Fireproofing of Buildings 2012
- SBI Recommendation 272
- BIPS standards (especially drawing standards)
- [On Fireproofing of Buildings \(historical material\)](#)
-

Materials Science (BDS/MAT)

- SBI recommendation 104 Corrosion Prevention in Residential Building Structures (out of print)
- BPS publications (100, Foundations and Cellars; 101, External Walls, 116, Internal Building Components; 119 Renovation of Multi-Storey Properties for the Elderly and Disabled)
- SBI CONCRETE 4, 13 betonsygdomme (Thirteen Concrete Diseases) (out of print)
- Choosing underlay material www.duko.dk

ICT (BDS/ICT)

- Digital Construction
- Bips.dk
- Students.autodesk.com

Structural Design and Understanding (STD)

- Teknisk Ståbi (Technical Vade Mecum)
- Dimensionering med tabeller (Table-Based Dimensioning) (Knud Ahler)
- Eurocode 0 (DS/EN 1990) with associated Danish annex
- Eurocode 1 (DS/EN 1991) with associated Danish annex
- Eurocode 2 (DS/EN 1992) with associated Danish annex
- Eurocode 3 (DS/EN 1993) with associated Danish annex
- Eurocode 5 (DS/EN 1995) with associated Danish annex

Building Services (BSE)

- Current Building Code
- SBI Recommendation 272, Recommendation on the Building Code 2018 - BR18
- SBI Recommendation 213, Energy Requirements of Buildings: Calculation Guide
- The Building Code's collection of examples on energy (<https://eksempelsamling.bygningsreglementet.dk/eksempelsamling-energi/0/51>)
- Knowledge Centre on Energy Savings in Buildings: Energy Requirements BR18 –Quick Guide

- Enterprise and Housing Agency: Let facade- og etagedæksystem til renovering (Lightweight Façade and Suspended Floor System for Renovation)
- Aarhus School of Engineering: Ombygning og bygningsrenovering (Conversion and Building Renovation)
- Jesper Engelmark: Etagebyggeriet gennem 150 år (150 Years of Multi-Storey Building)
- BPS Publication 115, Renovation of Multi-Storey Properties: Installations
- SBI Recommendation 237, Sound Insulation Between Dwellings: New Build
- SBI Recommendation 243, Sound Insulation Between Dwellings: Existing Buildings
- SBI Recommendation 244, Sound Insulation of the Building Envelope
- SBI Recommendation 245, Sound Insulation in Buildings: Theory and Evaluation
- DS 490, Sound Classification of Dwellings
- SBI Recommendation 252, Wetrooms
- SBI Recommendation 221, Post-Insulation of Multi-Storey Residential Buildings
- SBI Recommendation 224, Moisture in Buildings
- BYG-ERFA 09 10 29, Internal Post-Insulation of older external masonry walls
- Knowledge Centre on Energy Savings in Buildings: Internal Post-Insulation of Solid Masonry Walls
- BvB Building Defects Fund for Building Renewal: Topic Booklet, External Insulation and Slate Roofs
- Energy and Environment Association: Energihåndbogen (The Energy Handbook)
- DS 418, Calculation of Heat Loss from Buildings, 7th edition 2011
- DS 447 Ventilation for Buildings, 2013
- DS 432 Code of Practice for Sanitary Drainage: Wastewater Installations
- <http://www.kloakviden.dk/>
- SBI Recommendations 255, 256 and 257, Wastewater Installations
- Sewerage Reader for Architectural Technologists, VIA 17 June 2013 – ETS
- DS 428 Code of Practice for Technical Measures for Fire Protection of Ventilation Systems, 4th ed. 2011
- Choosing a Ventilation System in Use Classes 4, 5 and 6, VIA, 8 August 2016 23 August 2018 - PCSS
- Ventilation Reader for Architectural Technologists. VIA 2nd edition July 2017 – PCSS
- Knowledge Centre on Energy Savings in Buildings: Guide to Heat Recovery Ventilation in Existing Multi-Storey Properties
- COWI et.al.: Erfaringer fra prøvelejlighed Ryesgade 30C 1tv (Learnings from the Test Apartment at Ryesgade 30C 1 Left), Interim Report, June 2011

Building Services (BSE/ICT)

- BIPS Drawing Standards, Part 5, Plumbing & Ventilation

Law (LAW)

- Mogens Hansen et.al.: AB 92 for praktikere (AB 92 Common Conditions for Practitioners)
- Competition Authority recommendations on the public procurement regulations: kfst.dk
- Niels Struer Kragelund: Byggejura (Building Law), Erhvervsskolernes Forlag
- Teacher's reading suggestions
- ABR89 (General Conditions for Consultancy Services), AB 92 (General Conditions for Provision of Works and Supplies), the Public Procurement Act, the Statutory Limitation Act – all available at www.retsinfo.dk
- www.retsinfo.dk
- www.klfu.dk
- www.kfst.dk
- www.danskbyggeri.dk