AALBORG UNIVERSITET

CURRICULUM FOR THE MASTER'S PROGRAMME IN TECHNOLOGY (CONSTRUCTION MANAGEMENT AND BUILDING INFORMATICS), 2018

MASTER OF SCIENCE (MSC) IN TECHNOLOGY
AALBORG

MODULES INCLUDED IN THE CURRICULUM

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PROJEKTERING OG UDFØRELSE AF BYGNINGSKONSTRUKTIONER

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The student should have knowledge within the following areas:

- The interaction between design and construction of buildings.
- Processes, organization and supporting systems related to Architecture, Engineering and Construction (AEC)
- IT systems to support the design and construction processes.

FÆRDIGHEDER

The student should be able to:

- Explain fundamental processes and their relations in design and construction of buildings
- Describe a project organization including professional disciplines and legal relations between the parties in the construction project appropriate for management of the project.
- Explain the composition of selected functional systems of the building.
- Describe properties of ICT systems to support collaboration among the disciplines including systems for building modeling
- Analyze the time required for a construction project and set schedules
- Analyze the cost of construction of a building project and plan tender calculations in regards to the chosen construction methods.
- Analyze requirements and design a site that is appropriate for the building project.
- Explain the process that the semester group has gone through.
- Document project work and its results in a well-structured report.
- Plan and carry out a presentation of the project.

KOMPETENCER

- The student can critically review the organization of the design and construction processes regarding responsibilities, agreements, project organization and the relationship between sub-processes.
- The student can take part in decisions regarding organization and supporting ICT tools in the design and construction processesbased on an understanding of the technical and organizational relationships between design and execution.

UNDERVISNINGSFORM

Project work with teacher feedback supplemented with lectures, workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 15 ECTS which is corresponding to 450 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Projektering og udførelse af bygningskonstruktioner
Prøveform	Mundtlig pba. projekt Oral examination based on presentation seminar and project report.
ECTS	15
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Design and Construction of Buildings
Modulkode	B-BLI-K1-1
Modultype	Projekt
Varighed	1 semester
Semester	Forår
ECTS	15
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

PROJEKTLEDELSE OG ØKONOMI

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The student must have knowledge of the theories that describe the following areas:

- Must have knowledge of economic conditions for the construction industry
- Must have knowledge of operating, investing and financing calculations.
- Must have knowledge of budgeting and financial reporting.
- Must have knowledge of general project management models.
- Must have knowledge of basic project planning tools such as time and resource plans.
- Must have knowledge of general organizational and motivational and communication theories.
- Must have knowledge of working environment and safety and health on construction projects.

FÆRDIGHEDER

The student must have knowledge of the theories that describe the following areas:

- Must be able to use the usual methods for calculation of costs in manufacturing companies.
- Must be able to use the usual methods for the assessment of investment attractiveness.
- Must be able to use the usual methods of budgeting of business operations.
- Must be able to identify and evaluate the usual sources for financing the investments and operations of a manufacturing company.
- Must be able to prepare and analyze accounts and accordingly assess the economic situation.
- Must be able to argue for usual models of motivation, communication and management and use of models in less complex cases.
- Must be able to explain the traditional models of organization of construction projects as well as classical and modern forms of cooperation in such projects.
- Must be able to design appropriate time and resource plans based on among other things the principles of "lean construction".
- Must be able to assess specific cases for the purposes of health and safety tools.

KOMPETENCER

The student must have knowledge of the theories that describe the following areas:

- Must be able to explain the impact of project activities on the financial circumstances of the company as well as the managerial tasks in project management, including assignments related to organizational health and safety.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Projektledelse og økonomi
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Project Management and Economics
Modulkode	B-BLI-K1-2
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

INTRODUKTION TIL BYGGERIETS INFORMATIONSHÅNDTERING

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The students must have knowledge of the theories that describe the following areas:

- Concepts, technologies and methods to analyze and develop models that describe a building's functional systems and components as well as processes in construction.
- Concepts, techniques and methods to develop product and process models in construction
- Methods for management of knowledge and information in construction, including different types of models and data representation.

FÆRDIGHEDER

The student must be able to:

- Explain the fundamental differences between various types of building models and process models.
- Explain central aspects of model supported collaboration between actors of the construction process.
- Demonstrate knowledge of information standards in the field, including classification systems.
- Demonstrate knowledge of significant national and international initiatives regarding the use of information technology in the construction industry.
- Explain the properties of different information representations and their suitability for modeling of different systems.

KOMPETENCER

- The course provides students with a number of basic skills to participate in the implementation of ICT-based systems in construction business.

UNDERVISNINGSFORM

Lectures and exercises in groups supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Introduktion til byggeriets informationshåndtering
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5

Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Introduction to Building Information Management
Modulkode	B-BLI-K1-3
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

INTRODUKTION TIL PROBLEMBASERET LÆRING OG MODELLER I DET BYGGEDE MILJØ

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

LÆRINGSMÅL

VIDEN

Students who complete the module:

- Must have knowledge and understanding of project organized problem-based learning
- Must have knowledge about group work/conflicts and ways to solve conflicts
- Must have knowledge and comprehension of planning and structuring the documentation of a project
- Must have knowledge about models within the built environment

FÆRDIGHEDER

Students who complete the module:

- Must be able to apply the project organized learning to actual problem related work in groups
- Must be able to apply systematic methods
- Must be able to apply models within the built environment to problems within the relevant technical area
- Must be able to define goals for the project work and write a conclusion that answers the problem formulation of the project
- Must be able to describe and analyse one or more approaches to the project
- Must be able to apply proper terminology in oral, written and graphical communication and documentation of problems and solutions within relevant technical areas

KOMPETENCER

Students who complete the module:

- Independently be able to define and analyse scientific problems
- Must be able to establish, evaluate and reflect on models within the built environment on the essential problems within relevant technical areas
- Must be able to communicate the results of the project work in a project report
- Must be able to contribute successfully to teamwork within the problem area and make a common presentation of the result of the project work

UNDERVISNINGSFORM

Lectures, etc. supplemented with project work, workshops, presentation seminars, lab tests.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Introduktion til problembaseret læring og modeller i det byggede miljø

Prøveform	Mundtlig pba. projekt Oral exam based on presentation seminar and project rapport.
ECTS	5
Bedømmelsesform	Bestået/ikke bestået
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Introduction to Problem Based Learning and Models in the Built Environment
Modulkode	B-BLI-K1-4
Modultype	Projekt
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

PROJEKTLEDELSE OG PRODUKTION I BYGGERIET

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in the module Project Man-agement and Economics or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The student must have knowledge of the theories that describe the following areas:

- Must have knowledge of the collection and analysis of empirical data.
- Must have knowledge of analytical methods for contracting order process.
- Must have knowledge of project management theories and methods.
- Must have knowledge of modeling processes.
- Must have knowledge of geotechnics and foundation.

FÆRDIGHEDER

The student must be able to:

- Analyze a construction order process with emphasis on design and manufacturing issues.
- Process empirical project data.
- Explain the production, quality and cost issues in the order process.
- Interpret the relationship between activities in production through the construction of whole models and detailed models that describe these conditions.
- Analyze process flows and value creation.
- Reasoning between the project and the organization's structural, technical and resource building.
- Interpret the interaction between the parties involved in a project or contract manufacturing company's various organizational units.
- Argue by using precise production-related terminology.
- Describe the alternative shapes of selective structural elements, including foundation design.

KOMPETENCER

- Must be able to assess the proposed systems and their sensitivity to changes in e.g. customer demands, regulatory, quality, etc.
- Must be able to establish operational production models. The models can be based on a deterministic, stochastic or heuristic basis.
- Must be able to assess the importance for the company or the project of changing the current situation and introduce the proposed amendment, which must be assessed from e.g. economic, organizational, social and technical consequences.
- Must be able to prepare and reflect on concrete implementation plans
- Must be able to communicate the results obtained from the project work in a project report.
- Must be able to work around the problem field project and make a joint presentation of the project results.

UNDERVISNINGSFORM

Project work with teacher feedback supplemented with lectures, workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 15 ECTS which is corresponding to 450 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Projektledelse og produktion i byggeriet
Prøveform	Mundtlig pba. projekt Oral examination based on presentation seminar and project report.
ECTS	15
Bedømmelsesform	7-trins-skala
Censur	Ekstern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Project management and Production in Construction
Modulkode	B-BLC-K2-1
Modultype	Projekt
Varighed	1 semester
Semester	Efterår
ECTS	15
Undervisningssprog	Dansk og engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt
Censornorm	B

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

BYGGEPROCESSENS STYRINGSOMRÅDER

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in Project Management and Econom-ics or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The course introduces the students to the various management roles in building projects and for the communication and collaboration needs which is the prerequisite for achieving effective construction process. The students must have knowledge of the theories that describe the following areas:

- Must have knowledge of management roles and management areas, including the authorities.
- Must have knowledge of proactive and reactive conflict
- Must have knowledge of basic logistics for the construction of building projects.
- Must have knowledge of quality and environmental management works carried out at construction sites.
- Must have knowledge of advanced project financial management.
- Must have knowledge of facilities management

FÆRDIGHEDER

- Must be able to compare different management roles in a construction project and relate these to the phases of the building process.
- Must be able to account for the authorities, in connection with the construction of building and construction projects
- Must be able to use various conflict resolution models.
- Must be able to integrate logistical optimization in the management of building and construction projects.
- Must be able to explain the quality and environmental management systems.
- Must be able to analyze various economic problems in building and construction projects.
- Must be able to integrate facilities management theories in the construction process.

KOMPETENCER

- Must be able to understand the different analysis models and have a solid knowledge of the management tasks that occur during the building process.
- Must master a wide range of management areas for both large and small projects. Knowledge gained in this module must be used as skills in project management areas of logistics, economics, risk management, quality and environmental management and facilities management.

UNDERVISNINGSFORM

Teaching methods: Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Byggeprocessens styringsområder
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semester.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332985_vurderingskriterier.pdf

FAKTA OM MODULET

Engelsk titel	Management of the Construction Process
Modulkode	B-BLC-K2-2
Modultype	Kursus
Varighed	1 semester
Semester	Efterår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

BYGGERIETS RAMMEBETINGELSER

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The students must have knowledge of the theories that describe the following areas:

- Must have knowledge of national and international legislation and contractual relations in connection with the execution of building and construction works.
- Must have knowledge of work environment, including health and safety in the building and construction industry.

FÆRDIGHEDER

The students must have knowledge of the theories that describe the following areas:

- Must be able to demonstrate knowledge of the use of general conditions and tender law as basic national agreement between the construction parties
- Must be able to demonstrate understanding of different performance descriptions and explain their use
- Must be able to explain the current national regulation and associated guidelines for quality assurance
- Must be able to demonstrate knowledge of general international conditions and EU tender law as basic international agreement between construction parties
- Must be able to describe national and international (EU) legislation on inviting tenders and award of contract in connection with the construction.
- Must be able to describe the building's historic development and ongoing development initiatives including OPP, partnering and use of indicators.
- Must be able to analyze the construction context in connection with general societal trends
- Must be able to use the guidelines and rules about working in construction.
- Must be able to explain labor law.

KOMPETENCER

The students must have knowledge of the theories that describe the following areas:

- Must be able to explain the framework of construction.
- Must be able to relate a given project to the framework of construction including the work environment.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Byggeriets rammebetingelser
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Framework Conditions of Construction
Modulkode	B-BLC-K2-3
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

GRUNDLÆGGENDE GEOTEKNIK OG FUNDERING

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

The course will provide an understanding of typical Danish soil types and their geotechnical properties, including characteristic material, strength and setting parameters. Geotechnics must be applied. Insight into the foundation methods, field and laboratory investigation methods must be achieved and understanding of geotechnical reports.

LÆRINGSMÅL

VIDEN

- Must have knowledge of Danish soil types and their geotechnical properties.
- Must have knowledge of field survey methods.
- Must have knowledge of laboratory testing methods.
- Must be able to understand and explain geostatic.
- Must be able to manage and account for the foundation principles of simple structures.
- Must be able to understand and explain a geotechnical report.

FÆRDIGHEDER

- Must be able to apply methods for engineering geological description of the Danish landscape and soil types.
- Must be able to use geostatic of geotechnical structures.
- Must be able to determine sentences and the critical load for simple direct-based constructions
- Must be able to assess sentences timing and assess measures against the sentences.
- Must be able to perform and assess geotechnical classification tests.
- Must be able to use geotechnical drilling profiles and geotechnical reports.

KOMPETENCER

- Must be able to use the correct terminology in geotechnics and foundation.
- Must be able to assess foundation methods in relation to Danish soil conditions.
- Must be able to assess Danish soil types and apply geotechnical reporting.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars, laboratory visits and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Grundlæggende geoteknik og fundering
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5

Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Geotechnics and Foundation
Modulkode	B-BLC-K2-4
Modultype	Kursus
Varighed	1 semester
Semester	Efterår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

VIRTUELLE BYGNINGER OG DATAMODELLER

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in 1st semester or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

The project will contribute to the students' knowledge and skills within building modelling and the underlying data representations. The students who complete the project should have the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The students should have knowledge within the following areas:

- Building models and fundamental data models.
- Statement of requirements for the building and the relevant models.
- Modeling tools relevant for the various phases of the construction process and the lifecycle of the building including Building Information Modeling (BIM) tools.
- Organization of the construction process including the needs and requirements to data models, classification and ontologies.
- Intelligent and responsive buildings.

FÆRDIGHEDER

The student should be able to:

- Explain the principal construction, integration and use of different building product and process models.
- Explain the relationship between the different requirements to the building functional systems and models.
- Demonstrate thorough knowledge of national and international standards and initiatives related to the models and their use.
- Explain the fundamental differences between different types of data models.
- Demonstrate an overview of a representative selection of tools that can be used for modeling

KOMPETENCER

The course provides the students with a capability to:

- Advise on the specification, design and integration of product and process models in construction projects.
- Communicate the results from the project work in a project report.
- Investigate the problem thoroughly and conduct a joint presentation of results.

UNDERVISNINGSFORM

Project work with supervision supplemented with workshops, presentation seminars and other forms of active learning.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 15 ECTS which is corresponding to 450 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Virtuelle bygninger og datamodeller
Prøveform	Mundtlig pba. projekt Oral exam based on a presentation and project report.
ECTS	15
Bedømmelsesform	7-trins-skala
Censur	Ekstern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Virtual Buildings and Data Models
Modulkode	B-BIC-K2-1
Modultype	Projekt
Varighed	1 semester
Semester	Efterår
ECTS	15
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt
Censornorm	B

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

BYGGEPROCESSENS STYRINGSOMRÅDER

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in the module Project Man-agement and Economics or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The course introduces the students to the various management roles in building projects and for the communication and collaboration needs which is the prerequisite for achieving effective construction process. The students must have knowledge of the theories that describe the following areas:

- Must have knowledge of management roles and management areas, including the authorities.
- Must have knowledge of proactive and reactive conflict
- Must have knowledge of basic logistics for the construction of building projects.
- Must have knowledge of quality and environmental management works carried out at construction sites.
- Must have knowledge of advanced project financial management.
- Must have knowledge of facilities management

FÆRDIGHEDER

- Must be able to compare different management roles in a construction project and relate these to the phases of the building process.
- Must be able to account for the authorities, in connection with the construction of building and construction projects
- Must be able to use various conflict resolution models.
- Must be able to integrate logistical optimization in the management of building and construction projects.
- Must be able to explain the quality and environmental management systems.
- Must be able to analyze various economic problems in building and construction projects.
- Must be able to integrate facilities management theories in the construction process.

KOMPETENCER

- Must be able to understand the different analysis models and have a solid knowledge of the management tasks that occur during the building process.
- Must master a wide range of management areas for both large and small projects. Knowledge gained in this module must be used as skills in project management areas of logistics, economics, risk management, quality and environmental management and facilities management.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Byggeprocessens styringsområder
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semester.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Management of the Construction Process
Modulkode	B-BIC-K2-2
Modultype	Kursus
Varighed	1 semester
Semester	Efterår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

IT SYSTEMUDVIKLING

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in the module Introduction to Building Information Management or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The students should have knowledge of the theories that describe the following areas:

- IT system development.
- Object-oriented programming, visual programming and BIM
- Databases.

FÆRDIGHEDER

The student should be able to:

- Formulate specific requirements for a small-scale IT system.
- Master the basic techniques of object-oriented programming
- Develop applications by the use of a development tool/environment
- Structuring and modelling of relational databases

KOMPETENCER

The course provides the students with a capability to:

- Demonstrate a basic understanding of the software development process
- Develop small prototypes of programs.

UNDERVISNINGSFORM

Lectures and exercises in groups supplemented with workshops, presentation seminars and other forms of active learning.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study

EKSAMEN

PRØVER

Prøvens navn	IT systemudvikling
Prøveform	Skriftlig eller mundtlig

	Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	IT System Development
Modulkode	B-BIC-K2-3
Modultype	Kursus
Varighed	1 semester
Semester	Efterår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

BYGGERIETS VIDENSHÅNDTERING

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in the module Introduction to Building Information Management or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

The student should acquire knowledge about basic concepts, technologies and methods to analyze and develop models that describe a building's functional systems, components, processes in construction and knowledge management models.

LÆRINGSMÅL

VIDEN

The student should be able to:

- Knowledge representation in theory and practice including conceptual models and data models.
- Basic concepts, technologies and methods for knowledge management.
- Principles, methods and techniques for the design and evaluation of user environments for computer-aided interaction and collaboration, and knowledge exchange.
- The construction process' fundamental ontologies.

FÆRDIGHEDER

The students should have knowledge within the following areas:

- Use various knowledge representation properties and evaluate their practical suitability for modelling of different systems.
- Document knowledge for digital delivery of building models.
- Demonstrate basic knowledge of methods and systems for ICT-supported information and knowledge sharing in the construction process including Semantic Web technologies
- Identify support systems for knowledge management
- Demonstrate how simulation and analysis systems can be integrated with building models
- Perform conceptual modelling in e.g. IDEF0, E-R and UML
- Describe how a system can be implemented in cooperation with end-users, including methods to identify user requirements and evaluation of systems under development

KOMPETENCER

The course provides the students with a capability to:

- Specify building processes and building functional systems and how these can be modeled on a conceptual and data level.

UNDERVISNINGSFORM

Lectures and exercises in groups supplemented with workshops, presentation seminars and other forms of active learning.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study

EKSAMEN

PRØVER

Prøvens navn	Byggeriets videnshåndtering
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Knowledge Management in Architecture, Engineering and Construction Industry
Modulkode	B-BIC-K2-4
Modultype	Kursus
Varighed	1 semester
Semester	Efterår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

IMPLEMENTERING AF IT-BASEREDE SYSTEMER I ORGANISATIONER

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills, and competencies:

LÆRINGSMÅL

VIDEN

The students should have knowledge within the following areas:

- Paradigms for organizational change.
- Change management and change communication.
- Implementation of IT-based systems: Challenges related to the organizational implementation of IT-based systems from the project start to the successful implementation. The focus is on both managerial issues associated with organizational change and specific practical activities (e.g. user training).

FÆRDIGHEDER

The student should be able to:

- Demonstrate knowledge of both the managerial and practical issues associated with the implementation of IT-based systems in large organizations.
- Demonstrate knowledge within the theory of change management for IT-related change initiatives.

KOMPETENCER

The course provides the students with a capability to:

- Analyze change initiatives and develop strategies and plans for management of change related to the implementation of IT-based systems in large organizations.
- Manage organizational change processes dealing with the implementation of IT-based systems.
- Execute practical tasks associated with the introduction of new IT-based systems, including the planning and preparation of user training
- Assess and choose among scientific theories, methods, and tools for implementation of IT-based systems
- Communicate research-based knowledge and discuss professional and scientific problems in the implementation of IT-based systems with both colleagues and non-specialists

UNDERVISNINGSFORM

Lectures and exercises in groups supplemented with workshops, presentation seminars and other forms of active learning.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Implementering af IT-baserede systemer i organisationer

Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semes-ter.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Implementation of IT-based Systems in Organisations
Modulkode	B-BLI-K3-3
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

UDVIKLING AF KVALITETS-, RISIKO- OG PROJEKTSTYRINGSSYSTEMER I BYGGERI

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in module Project Management and Economics or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The course presents the student for selected models and methods used in connection with company and project quality and project management systems. Emphasis is placed on elements targeting the company's development as a whole via tight project management.

The student must have knowledge of the theories that describe the following areas:

- Quality management - business processes and supply chain.
- Project planning and management in multi-project environments.
- Models, methods and tools for the development of advanced quality and environmental and project management systems.
- Financial management and Risk management of activities in companies with production orders and long production time.
- Project Risk management and measurement.

The course supports the students in gaining knowledge of how quality, project management and financial management systems can be included as a strategic element in the organization overall. Also how quality, project management and financial management systems can be integrated with the organization's other systems. Finally, the focus is on project risk identification and management of order-based production, including how risk management can be used as a strategic business advantage.

FÆRDIGHEDER

The student must be able to:

- Understand quality management in relation to business and project processes and analyze the organization's need for quality management with a focus on supply chain, and suggest changes and improvements to all or parts of the system.
- Understand the financial management and risk management of activities in companies with production orders. Including cash management, financial capacity management and calculations for planning and follow-up on the company's order-based production.
- Understand resource-limited project management problems and plan the execution of projects with regards to this.
- Identify and analyze risk factors for the company's project portfolio and understand risk management systems and the use of risk management for strategic purposes.
- Apply advanced methods and models to develop proposals to improve the organization's existing quality and project management systems.

KOMPETENCER

- Must be able to understand the relation between quality management, project management, and financial management and the company's other management systems and relation with suppliers and customers in the value chain.

- Must be able to apply acquired knowledge to build quality and project management systems in companies with order-based production. This is carried out in terms of how such systems interact with the company's core business and the company's other systems, particularly the company's financial management.
- Must be able to apply acquired knowledge on techniques and management systems for contract manufacturing companies.
- Must be able to apply acquired knowledge gained on how to specify projects and the challenges that may arise in project-driven businesses.
- Must be able to apply acquired knowledge gained about how companies develop quality management systems.
- Must be able to analyze risk factors for the company's project portfolio and understand risk management systems and the use of risk management in connection with the organization's strategy development process.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Udvikling af Kvalitets-, Risiko- og Projektstyringssystemer i Byggeri
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semester.
ECTS	5
Bedømmelsesform	Bestået/ikke bestået
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Development of Project, Risk and Quality Management Systems in Construction
Modulkode	B-BLI-K3-4
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg

Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

STRATEGI OG PERFORMANCE MEASUREMENTS

2018/2019

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

- Must have knowledge of concepts, theories and methods for analysis, development and implementation of the strategy; including the ability to performance measure this by a combination of both economic and non-economic performance of the organization.

FÆRDIGHEDER

The student, should with the proper use of management concepts, be able to:

- Apply the learned theories and methods to understand and analyze the company's choice of strategy and performance measurements.
- Assess theoretical and practical problems by developing and implementing changing strategies in established organizations.
- Communicate such issues to other participants of occurring development projects.

KOMPETENCER

- Must be able to apply the learned knowledge elements and skills as a staff employee in strategy development projects.
- Must be able to independently contribute constructively and professionally in strategy investigation and development with other professionals.
- Must on the basis of the acquired identify their own needs for further learning and to implement the appropriate organization hereof.

UNDERVISNINGSFORM

Lectures supplemented with workshops, presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 5 ECTS which is corresponding to 150 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Strategi og performance measurements
Prøveform	Skriftlig eller mundtlig Individual oral or written examination. The exam form is determined at the beginning of the semester.
ECTS	5
Bedømmelsesform	7-trins-skala
Censur	Intern prøve

Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Strategy and Performance Measurements
Modulkode	B-BLI-K3-5
Modultype	Kursus
Varighed	1 semester
Semester	Forår
ECTS	5
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

KANDIDATSPECIALE

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in 1st – 3rd semester in the programme or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

The module will give the student the opportunity to demonstrate knowledge, skills and competence at a master level.

The student him/herself formulates the problem addressed, but the problem formulation must be approved by the supervisor and study director before the project begins.

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

- Must have knowledge and be able to understand the specialization subjects at the highest international level.
- Must be able to critically assess knowledge and identify emerging scientific issues within the specialization area.
- Must be able to understand the terms of specialization of the research area including research ethics.

FÆRDIGHEDER

- Must be able to independently explain the choice of scientific theoretical and / or experimental methods.
- Must via the project and at the end of it be able to provide an independent and critical assessment of the chosen theories and methods as well as of the analyzes, results and conclusions.
- Must be able to use a broad spectrum of engineering methods for research and development in the specialization area.
- Must be able to communicate relevant scientific and engineering professional aspects of the project work in a clear and systematic way to both peers and to the public.

KOMPETENCER

- Must independently be able to problem formulate, implement, document, reflect on and communicate results of a project that deals with a complex work and development situation in the central topics of the Master's programme.
- Must be able to evaluate, select and translate academic knowledge, skills and scientific theories, methods and tools on a scientific basis to develop relevant new analytical approaches and justify its choice.
- Must be able to provide solid time and work plans for their own project, independently and critically assess progress, and to select and incorporate relevant literature, experiments or relevant data in order to maintain the scientific basis.
- Must be able to handle complex and unpredictable work situations and be able to develop new solutions.
- Must independently and with professional and scientific approach engage in dialogue with peers and professional stakeholders in relation to the Master's programme.
- Must be able to communicate the results obtained from the project work in a project report.
- Must be able to work around the project of the problem field and make a joint presentation of the project results.

UNDERVISNINGSFORM

Project work with teacher feedback and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 30 ECTS which is corresponding to 900 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Kandidatspeciale
Prøveform	Speciale/afgangsprojekt Oral examination based on the presentation seminar and project report.
ECTS	30
Bedømmelsesform	7-trins-skala
Censur	Ekstern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Master's Thesis
Modulkode	B-BLI-K4-1
Modultype	Projekt
Varighed	1 semester
Semester	Efterår
ECTS	30
Undervisningssprog	Dansk og engelsk
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt
Censornorm	D

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

LEDELSESSYSTEMER I BYGGERIETS VIRKSOMHEDER

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in 2nd semester or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

Students who complete the module must have acquired the following knowledge, skills and competencies:

LÆRINGSMÅL

VIDEN

The students must have knowledge of the theories that describe the following areas:

- Must have knowledge of management of construction, both technical, economic, social and organizational.
- Must have knowledge of the theoretical and practical basis for the company's longer-term development.
- Must have knowledge of coherent business systems and development plans at different management levels.

FÆRDIGHEDER

- Must be able to understand the structure of different management of construction for businesses.
- Must be able to analyze business management of constructions for the improvement of companies' operating systems.
- Must be able to understand the structure of support systems for the decision makers of the company.
- Must be able to identify business needs for strategic change and develop strategic plans for this transformation.
- Must be able to identify and assess a company's need for information for budgeting and dissemination of results.

KOMPETENCER

- Must be able to be part of the management team in a construction project and in a company in the building and construction sector.
- Must be able to argue for specific strategic development initiatives and how they are implemented in practice.
- Must be able to communicate the results obtained from the project work in a project report
- Must be able to work around the project of the problem field and make a joint presentation of the project results.

UNDERVISNINGSFORM

Project work with teacher feedback supplemented with lectures, workshops presentation seminars and more.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 15 ECTS which is corresponding to 450 hours of study.

EKSAMEN

PRØVER

Prøvens navn	Ledelsessystemer i byggeriets virksomheder
Prøveform	Mundtlig pba. projekt Oral examination based on the presentation seminar and project report.

ECTS	15
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	Management of Construction Industry Companies
Modulkode	B-BLI-K3-1
Modultype	Projekt
Varighed	1 semester
Semester	Forår
ECTS	15
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet

IKT-STØTTET SAMARBEJDE OG BRUGERINDDRAGELSE I BYGGEPROCESEN

2018/2019

FORUDSÆTNINGER/ANBEFALEDE FORUDSÆTNINGER FOR AT DELTAGE I MODULET

The module is based upon knowledge obtained in 2nd semester or equivalent.

MODULETS INDHOLD, FORLØB OG PÆDAGOGIK

The project should provide the theoretical and practical background for the student to participate actively in the specification, development and testing of ICT-supported user environments for collaboration and communication.

LÆRINGSMÅL

VIDEN

The students should have knowledge within the following areas:

- Methods for user involvement in creative and innovative design of buildings within and between enterprises
- Methods for user involvement in system development
- Evaluation paradigms in system development
- Augmented, Virtual and Mixed Reality environments

FÆRDIGHEDER

The student should be able to:

- Perform specification, development and testing of ICT-supported user environments for collaboration and communication
- Identify user needs and perform system evaluation
- Use the conceptual modeling methods and system development procedures as e.g. Contextual Design
- Facilitate user-driven innovation in the construction process
- Demonstrate knowledge of the structure and properties of augmented, virtual and mixed reality systems
- Apply theories and methods for specifying user needs and system requirements
- Apply theories and methods for system evaluating
- Explain how end-users can be involved in system development

KOMPETENCER

The course provides the students with a capability to:

- Participate actively in the planning and implementation of processes, which include specification, development and testing of ICT-supported user environments and workflows for cooperation and communication between different actors.

UNDERVISNINGSFORM

Project work with supervision supplemented with workshops, presentation seminars and other forms of active learning.

OMFANG OG FORVENTET ARBEJDSINDSATS

The module is 15 ECTS which is corresponding to 450 hours of study.

EKSAMEN

PRØVER

Prøvens navn	IKT-støttet samarbejde og brugerinddragelse i byggeprocesen
Prøveform	Mundtlig pba. projekt Oral exam based on a presentation and project report.
ECTS	15
Bedømmelsesform	7-trins-skala
Censur	Intern prøve
Vurderingskriterier	As stated in the Joint Programme Regulations. http://www.engineering.aau.dk/digitalAssets/332/332984_faellesbestemmelser_230617.pdf

FAKTA OM MODULET

Engelsk titel	ICT Supported Collaboration and User Involvement in the Building Process
Modulkode	B-BLI-K3-2
Modultype	Projekt
Varighed	1 semester
Semester	Forår
ECTS	15
Undervisningssprog	Engelsk
Tomplads	Ja
Undervisningssted	Campus Aalborg
Modulansvarlig	Lene Faber Ussing, Kjeld Svidt

ORGANISATION

Studienævn	Studienævnet for Byggeri og Anlæg
Institut	Institut for Byggeri og Anlæg
Fakultet	Det Ingeniør- og Naturvidenskabelige Fakultet