

Knowledge FOr Resilient soCiEty

Presentation of DRM&FSE MPS curricula model



Technical University of Denmark (DTU), Department of Civil Engineering

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Department of Civil Engineering

 $\frac{\partial T}{\partial t} = \frac{\lambda}{\rho c_{\rho}} \frac{\partial^{2} T}{\partial x^{2}} \int_{a}^{b} \frac{\partial F}{\partial x$

DTU Byg

Institut for Byggeri og Anlæg



Presentation of

- Department of Civil Engineering (DTU Byg)
- Technical University of Denmark (DTU)
- Master in Fire Safety (part-time programme)

Department of Civil Engineering

DTU Civil Engineering Department of Civil Engineering DTU TEACHING RESEARCH INNOVATION STAFF ABOUT US NEWS PUBLICATIONS DTU Civil Engineering > About us SHARE 🎐 🛉 Strategy and action plans **Organisational Structure** Collaboration Advisory Board Getting to DTU Byg Vacant positions

About DTU Byg

The activities at DTU Civil Engineering are organised in six sections, three interdisciplinary centres and tre Development Areas. Three teams coordinate the resources of the department: The Secretariat, the IT Management and Test Facilities and Workshops.

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consultancy and innovation. The department contributes to the establishment of social and commercial values through the development of research-based constructional knowledge

Read more

RESEARCH AREAS

- Section for Arctic Engineering and Sustainable Solutions
- > Section for Building Design
- > Section for Structural Engineering
- > Section for Building Energy
- Section for Geotechnics and Geology
- Section for Indoor Climate and Building Physics
- > Arctic Technology Centre (ARTEK)
- International Centre for Indoor
 Environment and Energy (ICIEE)
- Villum Center for Advanced Structural and Material Testing (CASMaT)

Department of Civil Engineering

Research and Innovation

The sections at DTU Civil Engineering have defined a number of research topics (main research fields). The goal is to have each topic explored by department projects as well as PhD projects.

The department has defined three development areas in order to enhance activities in the area of innovation and research-based public sector consultancy. The development areas focus on the major challenges currently faced by society with sustainable development as the overall theme.

The current development areas are:

- · Danish Building Academy
- ZeroWaste Byg
- Sustainable Light Concrete Structures

Study programmes

DTU Civil Engineering contributes to the planning and management of the following educations:

- Architectural Engineering (BSc)
- Architectural Engineering (MSc)
- Arctic Technology (BEng)
- Building and Civil Engineering (BEng)
- Civil Engineering (BSc)
- Civil Engineering (MSc)
- Cold Climate Engineering (MSc)

Research Centres

Transverse coordination of projects across the Department and co-operation with partners outside DTU will take place in research and innovation centers. DTU Civil Engineering hosts the following Research and Innovation Centres:

- Arctic Technology Centre (ARTEK)
- International Centre for Indoor Environment and Energy (ICIEE)

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Department of Civil Engineering has about 175 employee



Niels-Jørgen Aagaard Head of Department



The Technical University of Denmark (DTU)

DTU was established by the discoverer of electromagnetism H. C. Ørsted in 1829 and is one of Northern Europe's largest engineering research and teaching institutions specialising in the field of engineering. DTU has more than 10.500 students participating in B Eng, BSc and MSc degree programmes. In addition, the University has more than 1.200 PhD students and a number of guest students and students at open university. The university has a total institutional staff of approximately 5.800.

The Technical University of Denmark (DTU)

- DTU is a state-recognised and state-financed higher education institution, regulated according to the Danish (Consolidation) Act on Universities (the University Act) no. 261 of March 18 2015.
- DTU was in 2014 awarded a positive Institutional accreditation by the Danish Accreditation Institution.
- The accreditation involves an assessment of the institution's overall quality assurance system and includes the way in which the system ensures the quality and relevance of all the institution's programmes.

The Technical University of Denmark (DTU)

FURTHER INFORMATION

For further information in English on study programmes, course contents etc. please consult the web site of the Technical University of Denmark at www.dtu.dk or contact: Technical University of Denmark, Anker Engelundsvej 1, Building 101A, DK-2800 Kongens Lyngby, Denmark. Tel.: (+45) 4525 2525. E-mail: dtu@adm.dtu.dk



Degrees in the Danish Higher Education System

Danish qualifications levels	Ordinary higher education degrees	Adult/Continuing higher education degrees	Qualifications Framework for the European Higher Education Area – Bologna Framework	European/National Qualifications Framework for Lifelong Learning – EQF/NQF
Academy Profession level	Academy Profession (AP) degree (90-150 ECTS)	Academy Profession (AP) degree (60 ECTS) (also known as Further Adult Education (VUU) degree)	Short cycle	Level 5
Bachelor's level	Professional Bachelor's degree (180-270 ECTS)* Bachelor's degree (within fine arts) (180 ECTS) Bachelor's degree (180 ECTS)	Diploma degree (60 ECTS)	First cycle	Level 6
Master's level	Master's degree (within fine arts) (120-180 ECTS) Master's degree (120 ECTS)**	Master degree (60-90 ECTS)	Second cycle	Level 7
PhD level	PhD degree (180 ECTS)	1	Third cycle	Level 8

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- **The Master's degree** is awarded after 120 ECTS. The programmes are researchbased and are offered in all scientific fields. The Danish title is abbreviated to *cand*.[latin abbreviation of academic area] [field of study]. The English title is *Master of Arts (MA) in* [field of study] or *Master of Science (MSc) in* [field of study].
- **The PhD degree** is awarded after 180 ECTS. PhD programmes are offered by the universities and some university level institutions offering degrees in the artistic and cultural field. Detailed descriptions of degree levels can be found in the Danish Qualifications Framework at <u>www.nqf.dk</u>. Please consult the relevant Diploma Supplement for information about the learning outcome of any specific degree.

Adult and continuing higher education

The programmes normally consist of 2 years of part-time study, equivalent to 1 year of full-time study (60 ECTS credits). Certain master programmes require 1½ years of full-time study (90 ECTS credits). Admission requirements are a relevant educational qualification and at least 2 years of relevant work experience.

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Adult and continuing higher education

Adult education qualifications are available at levels corresponding to those of the ordinary higher education system:

- The Further Adult Education degree (videregående voksenuddannelse/ akademiuddannelse), also called the Academy Profession (AP), is awarded after studies at short cycle level and gives access to diploma programmes.
- The Diploma degree (diplomuddannelse) is awarded after studies at first cycle level and gives access to master programmes.
- The Master degree (masteruddannelse) is awarded after studies at second cycle level.

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Master degree at EQF/NQF (European/National Qualifications Framework for Lifelong Learning) Level 7 referring to Second cycle in the Bologna QF (Qualifications Framework for the European Higher Education Area).

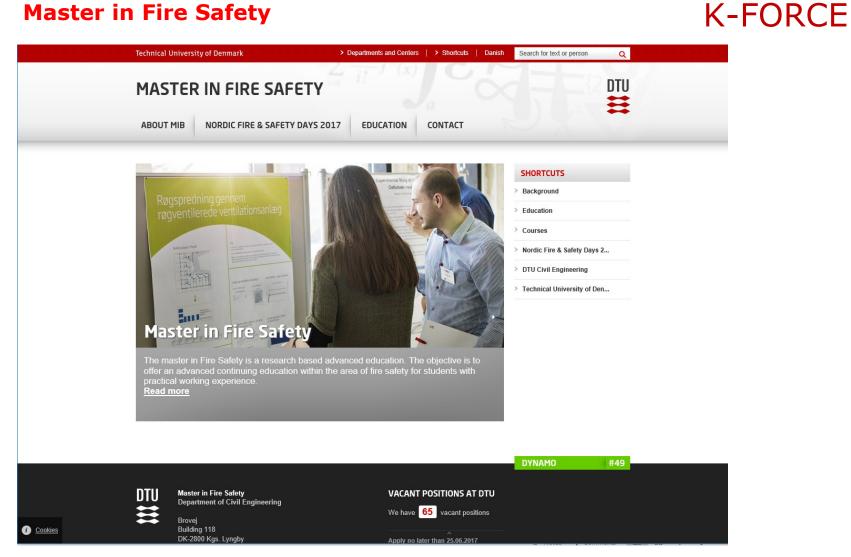
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GRADING SCHEME AND, IF AVAILABLE, GRADE DISTRIBUTION GUIDANCE The grading system used in all Danish state-regulated education programmes as of September 2007 is the 7-point grading scale. The grading scale is compatible with the ECTS grading scale.

The 7-point grading scale	12	10	7	4	02	00	<mark>-3</mark>
The ECTS grading scale	Α	B	C	D	E	Fx	E

Apart from the 7-point grading scale, pass/fail assessment may also be used. 02 is the minimum grade for passing an exam.

Master in Fire Safety



Master in Fire Safety

OFFICIAL LENGTH OF PROGRAMME

A two year part-time Master programme equivalent to 60 ECTS. One year corresponds to 30 ECTS, each credit corresponding to a total workload of 28 hours, classes, preparation, report drafting and exams included. The programme should be accomplished within 4 years of admission.

ACCESS REQUIREMENT(S)

Admission to the Master in Fire Safety programme requires a Bachelor's degree in Civil Engineering (BSc or BEng) and a minimum of two years of working experience. Building constructors can get admission to Master in Fire Safety, by passing a 10 ECTS point access course in fundamental mathematic, thermodynamic and physic.

Master in Fire Safety

MODE OF STUDY Master in Fire Safety is a two year part-time study programme equivalent to 60 ECTS. The programme consists of courses which include lectures, seminars, exercises, projects and group work.

PROGRAMME REQUIREMENTS

- The Master in Fire Safety programme is research-based and comprises different categories of courses:
- Mandatory courses (45 ECTS) within:

Building fire technology Fire dynamics Fire chemistry Structural fire safety design Industrial fires Fire modelling Fire risk assessment Fire-safety engineering Complex buildings

- Elective courses (0-10 ECTS) varies
- Master thesis (15 ECTS)



Master in Fire Safety

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The holder of a Master in Fire Safety diploma can apply scientific methods and concepts when fulfilling tasks within fire safety aspects, e.g. evaluation and solutions to theoretic and practical issues, management and development of complex work situations and independent initiation of (cross) specialist cooperation.

Master in Fire Safety

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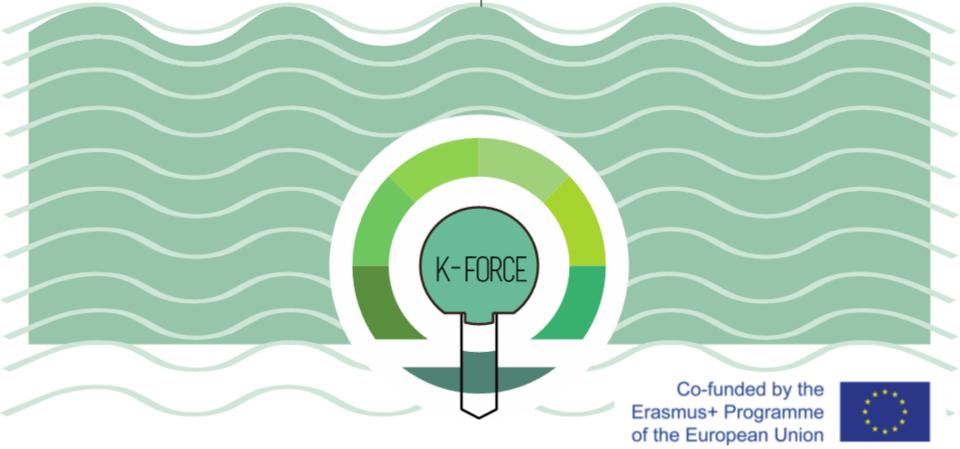
ACCESS TO FURTHER STUDY

A completed Master in Fire Safety programme at NQF/EQF Level 7 referring to Second cycle in the Bologna QF does not give access to further studies within the field at NQF/EQF Level 8 referring to Third cycle in the Bologna QF (PhD level).

PROFESSIONAL STATUS

The Master in Fire Safety is a research-based programme that enables the graduate to take on tasks within:

- Fire-safety engineering projects and counseling in engineering companies
- Management of fire construction projects with public authorities
- Product development with manufacturers of building materials (fire properties)
- Fire insurance
- Fire testing of material, products and components
- Fire inspection



Thank you for your attention

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