School of Technology and Business Bachelor Programme in Engineering in Civil Engineering, Horsens.

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

# DIPLOMA SUPPLEMENT

## Bachelor degree in Civil Engineering

Diplomingeniør, Bygningsingeniør

Bachelor of Engineering in Civil Engineering

#### School of Technology and Business

## Bachelor Programme in Engineering in Civil Engineering, Horsens.

### 1. Holder of the Qualification

1.1: Family name: <Name>
1.2: Given name: <Given name>
1.3: Date of birth: <day, month, year>
1.4: Danish reg.no. <CPR-number>

#### 2. The Qualification

#### 2.1 Name of qualification and title conferred

In Danish: Professionsbachelor i ingeniørvirksomhed,

Diplomingeniør, Bygningsingeniør

In English: Bachelor of Engineering in Civil Engineering

#### 2.2 Main fields of study

Civil Engineering students will work with subjects in construction, calculations – extensive - of structures, services, organizing the construction phase and more. The program also includes urban area design with calculations about e.g. traffic systems, development plans etc.:

The following specializations are possible through VIA University:

- Geotechnical Engineering and Construction Work
- Structures
- Energy
- Environmental Engineering
- City and Infrastructure

#### 2.3 Name and status of awarding institution

VIA University College (officially abbreviated VIA) is a publicly recognized and state-financed higher education institution regulated by the Danish Ministry of Science, Innovation and Higher Education. All programmes offered by recognised higher education institutions in Denmark are subject to independent accreditation. VIA University College, Bachelor Programme in Civil Engineering was accredited 2004 by the Danish Accreditation Institution, ACE Denmark with satisfactory result.

## 2.4 Name and status of institution administering the studies

Not Applicable

### 2.5 Language(s) of instruction/examination

English

## 3. Level of the Qualification

#### 3.1 Level of qualification

Professional Bachelor's degree at NQF/EQF Level 6 referring to First Cycle in the Bologna QF.

#### 3.2 Official length of programme

3.5 years = 210 ECTS credits including practical placement equivalent to 30 ECTS credits.

#### 3.3 Access requirements

Acceptance to the Bachelor degree in Civil Engineering requires at least 12 years of completed education including one of the following upper secondary educations: Upper Secondary School Leaving Examination, Higher Preparatory Examination, Higher Technical Examination or Foundation Course.

Furthermore, mathematics at advanced level (corresponding to a Danish A-level), physics at intermediate level (corresponding to a Danish B-level) and chemistry at basic level (corresponding to a Danish C-level) is required.

#### 4. Contents and Results Gained

#### 4.1 Mode of study

Full-time study programme equivalent to a total of 210 ECTS credits including practical placement equivalent to 30 ECTS credits.

#### 4.2 Programme requirements

The Bachelor Programme in Civil Engineering has the purpose of qualifying the students to handle national and international occupations, in which they are to:

- translate technical research results as well as scientific and technical knowledge into practical usage in connection with development tasks and by the solution of technical problems
- critically acquire new knowledge in relevant engineering areas
- independently solve occurring engineering jobs
- plan, realize and manage technical and technological constructions, including being able to include social, economic, environmental and work environmental consequences in the solution of technical problems
- be part of co operational and managerial functions and contexts at a qualified level along with people of different educational, linguistic and cultural backgrounds.

The purpose of the civil engineering study programme is that the graduates are qualified to describe, express and communicate problems and results in a scientific context as well as being able to apply scientific method.

Furthermore they must be able to employ the results of national and international research, experimental and development work.

#### $\textbf{Basic section}, \, \text{incl. project work (31 ECTS):} \\$

- Basic Courses	11 ECTS
- Building Design	9 ECTS
- Installations, including Energy and Environment	20 ECTS
- Load Carrying Structures and Materials Science	38 ECTS
- Geology and Geo-technics	14 ECTS
- Road Construction and Surveying	14 ECTS
- Construction Technology and Economy	14 ECTS

#### Practical Placement 30 ECTS

#### Specialization

-	Construction Technology and Economy (compulsory)	4 ECTS
_	Flective courses	28 FCTS

within one of five specializations:

- Geotechnical Engineering and Construction Work
- Structures
- Energy
- Environmental Engineering
- City and Infrastructure

#### Interdisciplinary Project (compulsory)

within the field of the chosen specialization 10 ECTS

#### Bachelor Project (compulsory)

within the field of the chosen specialization 18 ECTS

**TOTAL 210 ECTS** 

#### School of Technology and Business

## Bachelor Programme in Engineering in Civil Engineering, Horsens.

#### 4.3 Programme details and individual grades/marks/ credits obtained

Please see enclosed transcript of records.

## 4.4 Grading scheme and if applicable grade distribution information

Please see the explanation in the appendix: The Danish Higher Education System.

#### 4.5 Overall classification of the qualification

Not applicable for Danish qualifications.

#### 5. The Function of the Qualification

#### 5.1 Access to further study

A completed Bachelor Degree in Civil Engineering at NQF/EQF Level 6 referring to First Cycle in the Bologna QF gives access to further studies at NQF/EQF level 7 referring to Second cycle of the Bologna QF, e.g. Master in European Construction Engineering.

#### 5.2 Professional status

As a Professional Civil Engineer, the engineer is designing, planning, programming and managing all kinds of projects within the building and construction trade in Denmark as well as abroad. Typical work fields for the Professional Civil Engineer are design, consulting, construction, supervision and surveying etc. The engineer works with solving technical problems within energy and water supply, wastewater treatment and environmental issues. Furthermore the Engineer is also designing and implementing various subjects in the fields of urban planning and infrastructure. Graduates of Civil Engineering are dedicated to the entire building and construction trade, with the following main category of employers:

- Contractors, both within the fields of building and infrastructure
- Consulting Engineering companies within super structures, services, installations, infrastructure, environment and energy.
- Developing companies generic within the building trade
- State, regions and municipalities
- Exporting companies within the trade, both consulting, construction and production.

#### 6. Additional information

#### 6.1 Institutional information

Alongside the ordinary higher educations, VIA also offers Advanced Adult Education and Diploma Programmes.

School of Technology and Business, Department of Civil Engineering, Horsens (Teknisk Merkantil Højskole, Bygningsingeniøruddannelsen, Horsens) is part of VIA University College and have approximately 250 full-time Bachelor students. It has a staff of 35, including 33 academics.

School of Technology and Business, Department of Civil Engineering, Horsens, VIA University College provides the Bachelor Degree in Civil Engineering based on research and development and cooperates with the Research and Development Centres in VIA University College and with national and international universities. Emphasis is placed on creating a pre-registration programme with interdisciplinary elements with other engineering programmes and on expanding the international dimension.

#### 6.2 Further information sources

Information in English on the programme in Civil Engineering can be obtained at the following address and website:

School of Technology and Business,

Department of Civil Engineering, Horsens

VIA University College

Address: Chr. M. Oestergaards Vej 4, DK-8700 Horsens

Phone: +45 8755 4000
E-Mail: horsens@viauc.dk
Website: www.viauc.com/civil

Danish: www.viauc.dk/bygningsingenioer

General information on higher education in Denmark can be obtained from the following homepages:

 The Danish Ministry of Science, Innovation and Higher Education: www.fivu.dk

### 7. Certification of the supplement

Date: <day, month, year>

Lotte Thøgersen / Head of Programme

Official stamp or seal of the institution

Public higher education institutions in Denmark are regulated by national legislation concerning degree structures, teacher qualifications and examinations. All programmes are accredited by national, independent accreditation agencies and the Accreditation Council.

#### **Higher education institutions**

Higher education is offered by four types of higher education institutions:

- Academies of Professional Higher Education (*Erhvervsakademi*) offering professionally oriented first cycle degree programmes.
- 2. University Colleges (Professionshøjskole) offering professionally oriented first cycle degree programmes.
- 3. Research universities (*Universitet*) offering first, second and third cycle degree programmes in all academic disciplines.
- 4. University level institutions offering first, second and third cycle degree programmes in subject fields such as architecture, design, music and fine and performing arts.

Most of the higher education institutions are regulated by the Ministry of Science, Innovation and Higher Education (types 1-4). The Ministry of Culture regulates a small number of higher education institutions offering first, second and third cycle degree programmes in fine and performing arts (type 4).

#### 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 degree (90-150 ECTS)	Further Adult Education (VVU) degree (60 ECTS)	Short cycle	Level 5
Bachelor's level	Professional Bachelor's degree (180-240 ECTS)*  Bachelor's degree (within the arts) (180 ECTS)  Bachelor's degree (180 ECTS)	Diploma degree (60 ECTS)	First cycle	Level 6
Master's level	Master's degree (within the arts) (120-180 ECTS)  Master's degree (120 ECTS)**	Master degree (60-90 ECTS)	Second cycle	Level 7
PhD level	PhD degree (180 ECTS)		Third cycle	Level 8

<sup>\*</sup> Can be obtained through a full regular bachelor's programme (180-240 ECTS) or a top up bachelor's programme following an Academy Profession degree.

Danish higher education institutions use ECTS credits for measuring study activities. 60 ECTS correspond to one year's full-time study.

#### **Qualifications framework**

The qualification levels form the basis for the Danish National Qualifications Framework for Higher Education, which is certified in accordance with the overarching Bologna Framework according to the principles adopted by the European Ministers of Higher Education. Danish higher education qualifications at levels 5-8 of the Danish Qualifications Framework for Lifelong Learning (NQF) are also compatible with levels 5-8 of the European Qualifications Framework (EQF).

#### **Admission and progression**

General access to higher education in Denmark requires an Upper Secondary School Leaving Certificate or comparable qualifications. Admission to some particular programmes requires entrance examination or submission of a portfolio of artistic work.

<sup>\*\*</sup> A few Master's programmes are up to 180 ECTS.

Completion of a short-cycle degree qualifies students for admission to a first cycle programme. Holders of a the Academy Profession degree can obtain a Professional Bachelor's degree within the same field of study through a top-up programme. Completion of a first cycle degree qualifies students for admission to the second cycle.

#### **Ordinary Higher Education degrees**

**The Academy Profession degree** is awarded after 90-150 ECTS and includes a period of work placement of at least 15 ECTS. The programmes are development-based and combine theoretical studies with a practical approach. Programmes are, among others, offered within Marketing Management, Computer Science and Chemical and Biotechnical Science. The Danish title is field of study followed by the abbreviation *AK* and the English title is *AP Graduate in* [field of study].

**The Professional Bachelor's degree** is awarded after 180-240 ECTS and includes a period of work placement of at least 30 ECTS. The programmes are applied programmes. They are development-based and combine theoretical studies with a practical approach. Examples of professional bachelor's degree holders are nurses, primary and lower secondary school teachers and certain types of engineers. The Danish title is *Professionsbachelor i* [field of study] and the English title is *Bachelor of* [field of study].

**The Bachelor's degree** from a university is awarded after 180 ECTS. The programmes are research-based and are offered in all scientific fields. The Danish title is *Bachelor (BA) i* [field of study] or *Bachelor (BSc) i* [field of study] and the English title is *Bachelor of Arts (BA) in* [field of study] or *Bachelor (BSc) of Science in* [field of study].

**The Bachelor's degree (within the arts)** is awarded after 180 ECTS. The programmes are based on research and artistic research. Programmes are offered within the fine arts. The Danish title is *Bachelor (BA) i* [field of study], *Bachelor i musik (BMus)* [field of study] or *Bachelor i billedkunst (BFA)* [field of study] and the English title is *Bachelor of Arts (BA) in* [field of study], *Bachelor of Music (BMus)* [field of study] or *Bachelor of Fine Arts (BFA) in* [field of study]. A higher education degree within theatre or filmmaking is awarded after 4 years of study (240 ECTS).

**The Master's degree** is awarded after 120 ECTS. The programmes are research-based and are offered in all scientific fields. The Danish title is abbreviated to *Cand*.[latin abbreviation of academic area] *i* [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 Master's degree (within the arts)** is awarded after 120-180 ECTS. The programmes are based on research and artistic research. 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], *Master of Music (MMus)* [field of study] or *Master of Fine Arts (MFA) in* [field of study]. Music Academies offer a specialist degree of 2 to 4 years following the master's degree.

**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 <a href="www.nqf.dk">www.nqf.dk</a>. 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  $1\frac{1}{2}$  years of full-time study (90 ECTS credits). Admission requirements are a relevant educational qualification and at least 2 years of relevant work experience.

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

- The Further Adult Education degree (*videregående voksenuddannelse*) 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.

#### The 7 point grading scale

The grading system used in all state-regulated education programmes as of September 2007 is the 7 point grading scale. Apart from the 7 point grading scale, pass/fail assessment may also be used. 02 is the minimum grade for passing an exam

Description of grades: 12: For an excellent performance displaying a high level of command of all aspects of the relevant material, with no or only a few minor weaknesses; 10: For a very good performance displaying a high level of command of most aspects of the relevant material, with only minor weaknesses; 7: For a good performance displaying good command of the relevant material but also some weaknesses; 4: For a fair performance displaying some command of the relevant material but also some major weaknesses; 02 For a performance meeting only the minimum requirements for acceptance; 00: For a performance which does not meet the minimum requirements for acceptance; -3 For: a performance which is unacceptable in all respects.