Tomasz Bujlow

Cpr.nr/*Civil reg.no.*   050884-3267

har den/ has on the	24. juni 2009	Bestået/ passed

Diplomingeniør i Computer Engineering

Bachelor of Computer Engineering

og har dermed ret til at betegne sig
and has thus been awarded the title of

Bachelor of Engineering   (B.Eng.)

Odense, den 27. juni 2009

Per Michael Johansen
Dekan
Dean
Syddansk Universitet
University of Southern Denmark

Henning Andersen
Uddannelsesdirektør
Director of Studies
Syddansk Universitet
University of Southern Denmark

Kun gyldig i original med universitetets prægestempel
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Navn, *Name*
Tomasz Bujlow
Cpr.nr., *Civil reg. No.*
050884-3267

UNIVERSITY OF SOUTHERN DENMARK

	Karakter/Mark/Grade			ECTS	Vægt
	7-skala	13-skala	ECTS	Points	Credit factor

DIPLOMINGENIØR I COMPUTER ENGINEERING
BACHELOR OF COMPUTER ENGINEERING

OBLIGATORISK DEL
COMPULSORY PART

	7-skala	13-skala	ECTS	Points	Credit factor
OVERFØRT FRA SILESIAN UNIVERSITY OF TECHNOLOGY	Bestået	Bestået		90,0	
TRANSFERRED FROM SILESIAN UNIVERSITY OF TECHNOLOGY	*Passed*	*Passed*			
Meritoverført *Exempted*					

TILVALGSDEL
ELECTIVE PART

	7-skala	13-skala	ECTS	Points	Credit factor
ENGLISH LANGUAGE COURSE UNIT 1	10		B	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					
DISTRIBUTED SYSTEMS AND APPLICATIONS	10		B	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					
NETWORK SECURITY	10		B	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					
PROJECT SYSTEM INTEGRATION 1	10		B	12,0	
Rapport og mundtligt forsvar, ekstern censur *Report and oral defence, External examiner*					
PROJECT SYSTEM INTEGRATION 2	7		C	12,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					

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	Karakter/Mark/Grade			ECTS	Vægt
	7-skala	13-skala	ECTS	Points	Credit factor
PROJECT MANAGEMENT	10		B	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					
OBJECT-ORIENTED SYSTEM ANALYSIS AND DESIGN	10		B	6,0	
Mundtlig, ekstern censur *Oral exam, External examiner*					
XML, WEB SERVICE TECHNOLOGIES AND WEB SERVICES	12		A	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					
OBJECT ORIENTED PROGRAMMERING 1	10		B	6,0	
Mundtlig, intern censur *Oral exam, Internal examiner*					

AFGANGSPROJEKT
FINAL PROJECT

FINAL PROJECT	10		B	30,0	
Web-based Soap Client for Adobe Indesign Server Mundtlig, ekstern censur *Oral exam, External examiner*					

INGENIØRPRAKTIK
INDUSTRIAL ENGINEERING TRAINING

INDUSTRIAL ENGINEERING TRAINING	**Godkendt** *Approved*	Godkendt *Approved*		30,0	
Cbit, Danmark Godkendelsesprocedure, ingen censur *Approval procedure, Without second examiner*					

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Karakter/Mark/Grade			ECTS	Vægt
7-skala	13-skala	ECTS	Points	Credit factor

Studiet er normeret til 210 ECTS-point. Bemærk at den genererede sum af ECTS-points kan afvige fra den samlede sum på grund af afrunding.

The study is rated at 210 ECTS-points. Please notice that the rounded value of ECTS credits may differ from the actual value for a specific program.

Odense, den 27. juni 2009

Udskriftens rigtighed bekræftes
Registrar's Office

Navn
Tomasz Bujlow
Cpr.nr.
050884-3267

UNIVERSITY OF SOUTHERN DENMARK

Kompetenceprofil for:

Diplomingeniør i Computer Engineering

Diplomingeniøren kan selvstændigt tilegne sig og bearbejde viden på et bredt fagligt grundlag og med et anvendelsesorienteret sigte vurdere og nyttiggøre teknisk-videnskabelige forskningsresultater. Ingeniøren indgår konstruktivt og resultatorienteret på flere organisatoriske niveauer, er i stand til at løse opgaver, omfattende økonomiske, miljømæssige og etiske aspekter og har desuden forudsætninger for livslang læring inden for sit ingeniørfaglige omtåde, herunder som led i videre uddannelse.

Diplomingeniøruddannelsen i Computer Engineering

It-ingeniørens kernekompetencer ligger indenfor programmering og systemudvikling, og han behersker alle faser af et udviklingsforløb: foranalyse, analyse, design, objektorienteret programmering, test og deployment. Software engineering på et videregående niveau er således en del af hans kompetencer.

It-ingeniøren er vant til at arbejde i projekter og har stor erfaring i afrapportering af projektforløb og formidling af resultater. Han har desuden erfaring med samarbejde med "rigtige" brugere i længere udviklingsforløb.

It-ingeniørens øvrige faglige kompetencer: intranet, elektronisk formidling, maskinarkitektur, operativsystemer, signalbehandling, databaser, investeringskalkuler, grundlæggende netværk og automation, økonomi, organisation, arbejdsmiljø, iværksætteri og videnskabsteori.

Desuden har han specialisering i enten tele/data kommunikation (netværksprotokoller, routede netværk, routingssoftware, routingsprotokoller, netværkssikkerhed, kryptering, sikkerhedspolitik) eller automation (udvælgelse af komponenter og teknologier, processtyring, -overvågning og –regulering).

Odense, den 27. juni 2009

Udskriftens rigtighed bekræftes

Kun gyldig i original med universitetets prægestempel

Name
Tomasz Bujlow
Civil reg. No.
050884-3267

Qualification profile for:

Bachelor of Computer Engineering

The B.Eng. can independently acquire and analyse knowledge on a broad academic basis and assess and utilise technical and scientific research results with an application-oriented approach. The engineer participates constructively and results-oriented on several organisational levels, is able to solve tasks involving extensive financial, environmental and ethic aspects, and is qualified for lifelong learning in his or her field of engineering.

Bachelor of Engineering in Computer Engineering

The core competences of the B.Eng. in IT are in programming and system development. He or she masters all stages of a development process: pre-analysis, analysis, design, object-oriented programming, test and deployment. Thus, Software Engineering at an advanced level is part of the competences.

The B.Eng. in IT is familiar with project work and is very experienced in the reporting of project progress and communication of results as well as in cooperation with 'real' users in lengthy development processes.

Other academic competences: intranet, electronic communication, computer architecture, operating systems, signal processing, databases, investment calculations, basic networking and automation, economics, organisation, work environment, entrepreneurship and theory of science.

In addition, the B.Eng. in IT is specialised in either tele/data communication (network protocols, routed networks, routing software, routing protocols, network security, encryption, security policies) or in automation (selection of components and technologies and process management, supervision and adjustment).

Odense, den 27. juni 2009

Registrar's Office

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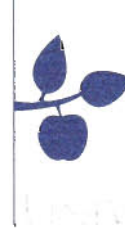
Diploma Supplement

This Diploma Supplement follows the model 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.

1. Holder of Qualification

1.1 Family name(s):   Bujlow

1.2 Given name(s):   Tomasz

1.3 Date of birth: 05 August 1984

1.4 Civil registration number   050884-3267

2. Qualification

2.1 Name of qualification and title conferred

BSc (Bachelor of Science)

2.2 Main fields of study

Natural science, system engineering, software design, informatics, informationprocessing, business, economics, management and logistics. Specialisation in automation or •telecommunication.

2.3 Name and status of awarding institution

Syddansk Universitet/University of Southern Denmark. The University of Southern Denmark is a state-recognised and state-financed higher education institution, regulated according to the Ministry of Science, Technology and Innovarion University Act of May 28th 2003 plus amendments.

2.4 Name and status of institution administering the study

Not applicable.

2.5 Language(s) of instruction/examination

Danish and English

3. Level of Qualifications

3.1 Level of qualifications

A medium cycle professional HE qualification normally requiring a total of 3½ years of full-time higher education studies including 6 months' industrial engineering training in either a domestic or foreign company.

3.2 Official length of programme

3½-year B.Sc. = 210 ECTS credit points.

3.3 Access requirement

Acceptance to the Bachelor in Information and Communication Technology requires a completed upper secondary school leaving examination or comparable qualifications. In addition to this, acceptance also depends on a high level in the subjects Mathematics, Physics and Chemistry.

4. Contents and Results Gained

4.1 Mode of study

Full time study programme, equivalent of 210 ECTS credit points

4.2 Aim of programme

The programme aims to educate engineers of high quality. The graduates are able to combine research, science, technology, management and practical implementation in their career. During the first three semesters all students study basic units such as Mathematics, Communication and Project Management.In the fourth semester students begin to specialise in one of the two major areas: Automation or Telecommunication. The students spend their fifth semester in industrial engineering training. During the sixth and seventh semester, the students choose course units for final specialisation within their major area and they carry out their final dissertation.

4.3 Programme details and individual grades/marks/credits obtained

Please refer to the grade transcript in the diploma.

4.4 Grading scheme and if applicable grade distribution information

Please refer to the explanatory grading scale.

4.5 Overall classification of the qualification, i.e. honours degree, first class etc

Not applicable for Danish qualifications.

5. The applicability of the Qualification?

5.1 Access to further study

A Bachelor of Information and Communication Technology gives general access to M.Sc. studies. Specific admission is subject to approval by the institution.

5.2 Professional status

The Bachelor of Engineering qualifies the candidate for handling - nationally and internationally - industrial functions, where technical research achievements in combination with other sciences are converted to practical application by solving consultancy, development and operational problems. Apart from this, the education enables the candidates to impart technically complicated problems to persons with a different academic and cultural background, and enter into interdisciplinary collaboration with management relations.

6. Additional Information

6.1 For further information

Information in English on the University of Southern Denmark (study programmes, contents of the programmes, research, faculties and departments) is available at the University's website www.sdu.dk or from the Registrar's Office, Campusvej 55, 5230 Odense M, phone +45 65 50 10 00, e-mail: studie@sdu.dk. General information on higher education in Denmark can be obtained from The Danish Ministry of Education at www.uvm.dk, The Ministry of Science, Technology and Innovation at www.vtu.dk or from The Danish Rectors Conference at www.rks.dk.

6.2 Institutional information

University of Southern Denmark is a research-based university founded in 1998. University of Southern Denmark is a merger of the former Odense University, Southern Denmark School of Business and Engineering, the South Jutland University Centre and Odense University College of Engineering. In 2007 the university merged with HHC Business School Centre. The university now enrols more than 15000 full time students (bachelor and master programmes), more than 4500 part time students and more than 450 Ph.D. students. These figures do not include more than 1000 foreign students and exchange students. The university has a staff of approximately 2500 full-time equivalents. More than 1100 are researchers as well as part of the teaching staff. The University of Southern Denmark has five faculties - the Faculty of Humanities, the Faculty of Social Sciences, the Faculty of Health Sciences, the Faculty of Science and the Faculty of Engineering.

The university has been awarded the Diploma Supplement Label.

The University of Southern Denmark strives to be an international orientated university with a strong local commitment and is based in four local campuses in the region. The main campus is situated in Odense. The university has a long

tradition for strong research based education at bachelor and master level, but also focuses on continuing education and do offer a number of summer courses every year, presenting the latest research. In addition, the university has an extensive Open University department offering part time courses, specially designed programmes and applied courses.

At the University of Southern Denmark basic as well as applied research are given high priority. Funding comes from the Government, from Danish and international research funds and from co-operation with business corporations, local authorities and municipalities.
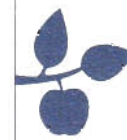
7. Certification of the Supplement

University of Southern Denmark, 27 June 2009

Registrar's Office

The Danish Higher Education System

This description has been approved by the Danish Ministry of Education, the Ministry of Science, Technology and Innovation and the Ministry of Culture.

Admission to higher education

General access to higher education in Denmark requires 12 years of education, including one of the following secondary school leaving examinations or comparable qualifications:

- *studentereksamen* (Upper Secondary School Leaving Examination);
- *højere forberedelseseksamen (hf)* (Higher Preparatory Examination);
- *højere handelseksamen (hhx)* (Higher Commercial Examination);
- *højere teknisk eksamen (htx)* (Higher Technical Examination).

Admission to many degree programmes depends also on the fulfilment of specific requirements such as subject combinations, the level of subjects taken, the grades obtained, work experience, etc. A few programmes have limited enrolment.

Admission to certain programmes requires an entrance examination or submission of a portfolio of artistic work.

Higher education institutions

Institutions can be grouped into four different types:

- Research universities (*Universitet*) offering undergraduate and postgraduate degree programmes in all academic disciplines.
- University-level institutions offering undergraduate and postgraduate degree programmes in subject fields such as architecture, design, music and fine and performing arts.
- University colleges (*CVU/Professionshøjskole*) and a few specialized colleges offering 3-4-year professionally oriented undergraduate degree programmes.
- Academies of Professional Higher Education (*Erhvervsakademi*) offering 2-year professionally oriented undergraduate degree programmes.

Accreditation

Public higher education institutions are publicly financed, and they must follow the national legislation concerning e.g. degree structures, teacher qualifications and examinations, including a system of external examiners. A nationally established – fully independent – accreditation agency assures the quality and the relevance of higher education programmes.

Private institutions can operate without any approval. However, if students at private institutions are to be eligible for state study grants, the institutions must abide by a recognition procedure.

Undergraduate qualifications (first cycle degrees)

University Bachelor's degrees

The University Bachelor's degree is awarded after completion of a 3-year undergraduate programme (180 ECTS credits), normally concentrated on one or two fields of study. The programmes are research-based and provide students with a broad academic foundation as well as specialised knowledge combined with theoretical, applied and analytical skills. Students are required to submit a final project paper. The programmes qualify students for occupational functions and for postgraduate studies e.g. for the *candidatus* degree. The Danish title is *BA* or *BSc* + field of study.

Professional Bachelor's degree

The Professional Bachelor's degree is awarded after 3 to 4 years of study (180-240 ECTS credits). The programme provides students with knowledge of theory and the application of theory to professional practice. All programmes include periods of practical training and require the submission of a final project paper.

Most programmes give access to further studies in the same field, i.e. a master's programme (adult and continuing education) or, on certain conditions, a specific *candidatus* programme.

The Danish title is *professionsbachelor i … (+ subject field)*

Bachelor degrees in architecture, design, music and fine and performing arts

The bachelor's degree is awarded after 3 to 4 years of study (180-240 ECTS credits). Most programmes are research-based and/or based on artistic professionalism and provide students with knowledge of theory, application of theory and professional practice.

The programmes qualify students for occupational functions in the arts and for postgraduate studies e.g. for the *candidatus* degree.

Academy Profession degree

The Academy Profession degree (AP degree) is normally awarded after 2 years of study (120 ECTS credits). Admission is possible on the basis of either general upper secondary education or relevant vocational education and training supplemented by adequate general upper secondary courses (e.g. maths, physics, English). The programmes qualify students to perform practical, vocational tasks on an analytical basis. Apart from theoretical subjects, the programmes involve a final project. The Danish title includes the suffix *AK*.

Postgraduate qualifications

Candidatus(a) degree (second cycle degree)

The *candidatus(a)* degree is normally awarded after 2 years of study (120 ECTS credits) following a *BA/BSc* degree. The programme is research-based and provides the student with theoretical knowledge, analytical and scientific (and/or artistic) skills combined with the ability of practical application. The programme requires the preparation of a thesis (30-60 ECTS credits), or – in certain fields – an artistic project. It qualifies students for a professional career and scientific work. The Danish title is usually abbreviated to: *Cand.* + subject field. The English title is usually MA or MSc + subject field. The *mag.art. degree* is awarded in the humanities after 3 years of research-oriented studies (180 ECTS credits) following a BA.

Doctorate (third cycle degree)

The PhD (*ph.d.*) degree is normally awarded after 3 years of higher education and research (180 ECTS credits) following a *candidatus* degree. The PhD programme includes the preparation and public defence of a thesis.

Music Academies offer a specialist degree of 2 to 4 years following the *candidatus* degree.

Adult and continuing education

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

- The VVU degree (*videregående voksenuddannelse*) is awarded after studies at Academy Profession level and gives access to diploma programmes;
- The diploma degree (*diplomuddannelse*) is awarded after studies at first cycle level and gives access to master's programmes;
- The master's degree (*masteruddannelse*) is awarded after studies at second cycle level.

The programmes normally consist of 2 years of part-time study, equivalent to 1 year of full-time study (60 ECTS credits). Certain master's 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.

Examinations and diplomas

All examinations at Danish higher education institutions are administered not only by the teacher, but also by an examiner who often is external. The examiners are responsible for assuring the same standard for all examinations and thus their quality.
After completion of a full programme, the student is awarded a diploma and a transcript.

The 7-point grading scale

The grading system used in all state-regulated education as from August/September 2007 is the 7-point grading scale. The grading scale is compatible with the ECTS grading scale.

The 7-point grading scale		The ECTS grading scale
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	A
10	For a very good performance displaying a high level of command of most aspects of the relevant material, with only minor weaknesses.	B
7	For a good performance displaying good command of the relevant material but also some weaknesses.	C
4	For a fair performance displaying some command of the relevant material but also some major weaknesses.	D
02	For a performance meeting only the minimum requirements for acceptance	E
00	For a performance which does not meet the minimum requirements for acceptance	Fx
-3	For a performance which is unacceptable in all respects	F

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

The performance of the student must be assessed according to the academic targets set for the specific subject or course (absolute grading method). The relative grading method must not be used.

Higher Education in Denmark