



EKSAMENSBEVIS

Anne Schjødt-Pedersen

Cpr-nr. 190494-1316

har den 12. januar 2022 gennemført

Kandidatuddannelsen i informationsteknologi, Softwaredesign

og har hermed ret til at betegne sig

Cand.it. i softwaredesign

jf. Bekendtgørelse om universitetsuddannelser tilrettelagt på heltid (uddannelsesbekendtgørelsen), som fastsat af Uddannelses- og Forskningsministeriet i henhold til Universitetsloven.

Udskrift af eksamensprotokol, kompetenceprofil samt engelsksproget Diploma Supplement er vedlagt.

Jens Christian Godskesen
Rektor

7. februar 2022



EKSAMENSPROTOKOL

Kandidatuddannelsen i informationsteknologi, Softwaredesign

IT-Universitetet i København bekræfter hermed, at *Anne Schjødt-Pedersen* (cpr-nr. 190494-1316) har bestået følgende studieaktiviteter:

Bedømmelses-dato	Studieaktivitet	7-trins-skala	ECTS skala	ECTS point	Eksamens-sprog ¹
Obligatorisk					
2020-06-15	Introduction to Database Design	7	C	7.50	engelsk
2020-01-22	Discrete Mathematics	7	C	7.50	engelsk
2021-01-12	Research Project: Visualisering af læringsprocessen i dybe neurale netværk	4	D	7.50	engelsk
2020-01-22	Software Engineering	10	B	7.50	engelsk
2020-09-03	Algorithms and Data Structures	02	E	7.50	engelsk
2020-01-15	Introductory Programming	4	D	15.00	engelsk
Specialisering					
2021-01-14	Applied Information Security	7	C	7.50	engelsk
2020-06-24	Mobile App Development	12	A	7.50	engelsk
2021-01-28	Technical Interaction Design	10	B	7.50	engelsk
Valgfri					
2020-06-18	Frameworks and Architectures for the Web	10	B	7.50	engelsk
2021-06-24	Designing Interactions	10	B	7.50	engelsk
Speciale					
2022-01-12	Design af en personaliseret lærings app til matematik fag i folkeskolen	12	A	30.00	engelsk

Samlet omfang af beståede studieaktiviteter: 120 ECTS-point. Hver aktivitet skal bestås for sig.

Svarende til 2 års studium på fuld tid.

Vægtet gennemsnit: 8.44, beregnet som gennemsnit af alle karaktergivne studieaktiviteter, vægtet efter ECTS point.

¹ IT-Universitetet har ikke altid oplysning om eksamenssprog ved eksaminer der er afholdt på andre universiteter.

Lene Rehder

Lene Rehder
Head of Student Affairs and Programmes
7. februar 2022



DIPLOMA

Anne Schjødt-Pedersen

Civil reg. no. 190494-1316

has on 12 January 2022 completed the programme

Master of Science (MSc) in IT, Software Design

and has obtained the right to use the title

Master of Science (MSc) in IT, Software Design

The degree has been awarded pursuant to the Ministerial Order on Bachelor's and Master's Degree Programmes at the Universities, as laid down by the Danish Ministry of Higher Education and Science pursuant to the Danish Act on Universities.

A transcript of the graduate's academic record is enclosed together with a Competence Profile and a Diploma Supplement.

A handwritten signature in blue ink, appearing to read 'Jens Christian Godskesen', is positioned above a horizontal line.

Jens Christian Godskesen
Vice Chancellor

7 February 2022



TRANSCRIPT OF ACADEMIC RECORD

Master of Science (MSc) in IT, Software Design

The IT University of Copenhagen hereby confirms that *Anne Schjødt-Pedersen* (civil. reg. no. 190494-1316) has successfully completed the following study activities:

Examination Date	Study Activity	7-point-scale	ECTS scale	ECTS credits	Examination Language ¹
Mandatory					
2020-06-15	Introduction to Database Design	7	C	7.50	English
2020-01-22	Discrete Mathematics	7	C	7.50	English
2021-01-12	Research Project: Visualization of Learning by Deep Neural Networks	4	D	7.50	English
2020-01-22	Software Engineering	10	B	7.50	English
2020-09-03	Algorithms and Data Structures	02	E	7.50	English
2020-01-15	Introductory Programming	4	D	15.00	English
Specialisation					
2021-01-14	Applied Information Security	7	C	7.50	English
2020-06-24	Mobile App Development	12	A	7.50	English
2021-01-28	Technical Interaction Design	10	B	7.50	English
Electives					
2020-06-18	Frameworks and Architectures for the Web	10	B	7.50	English
2021-06-24	Designing Interactions	10	B	7.50	English
Thesis					
2022-01-12	Designing a personalized learning app for math courses in elementary school	12	A	30.00	English

Total number of credits earned: 120 ECTS-points. Each activity must be passed separately.

Corresponding to 2 years of full time studies.

Weighted average: 8.44, calculated as the average of all marks awarded for passed study activities weighted by ECTS credits.

¹ The IT University does not always have information on the examination language for examinations passed at other universities.

A handwritten signature in blue ink that reads "Lene Rehder".

Lene Rehder
Head of Student Affairs and Programmes
7 February 2022



KOMPETENCEPROFIL

Kompetenceprofil for: *Anne Schjødt-Pedersen, f. 19. april 1994.*
Uddannelse: Kandidatuddannelsen i informationsteknologi, Softwaredesign

Viden og forståelse

The graduate will develop research based knowledge and understanding of, and will be able to reflect on:

- general concepts of programming languages
- analysis of software performance in theory and practice
- principles of software design, modelling and software architecture

Each graduate obtains specialised knowledge and understanding at international research level in the selected specialisation area.

Færdigheder

The graduate will develop the following research based skills:

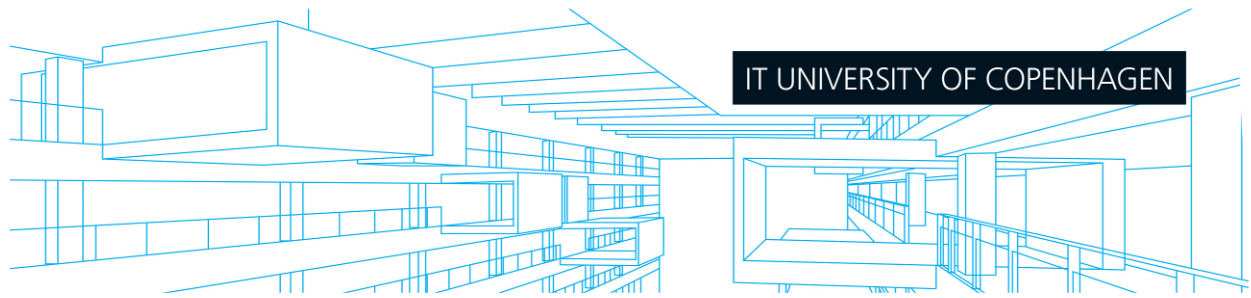
- The graduate can master a modern programming platform to implement software
- The graduate can use, assess and develop fundamental processes and practices of software development, such as requirements analysis, architecting, implementing, tuning, validating and documenting software
- The graduate is able to communicate and discuss the acquired knowledge with both academic peers and non-specialists

Kompetencer

The graduate will develop the following research based competences:

- The graduate can independently initiate and implement collaboration with others in complex, inter-disciplinary and changing contexts, for example, in international and industrial projects.
- The graduate can independently take responsibility for own professional development and specialisation.
- The graduate can exploit his or her non-software domain knowledge (obtained in the undergraduate studies) with newly obtained software development expertise to design domain-specific application software.
- The graduate can work with customers, end-users and other business stakeholders on designing and developing software solutions meeting the business requirements.

Each graduate obtains specialised competences at international research level in the selected specialisation area.



COMPETENCE PROFILE

Competence profile for: *Anne Schjødt-Pedersen*, b. 19 April 1994
Programme: Master of Science (MSc) in IT, Software Design

Knowledge and Understanding

The graduate will develop research based knowledge and understanding of, and will be able to reflect on:

- general concepts of programming languages
- analysis of software performance in theory and practice
- principles of software design, modelling and software architecture

Each graduate obtains specialised knowledge and understanding at international research level in the selected specialisation area

Skills

The graduate will develop the following research based skills:

- The graduate can master a modern programming platform to implement software
- The graduate can use, assess and develop fundamental processes and practices of software development, such as requirements analysis, architecting, implementing, tuning, validating and documenting software
- The graduate is able to communicate and discuss the acquired knowledge with both academic peers and non-specialists

Competences

The graduate will develop the following research based competences:

- The graduate can independently initiate and implement collaboration with others in complex, inter-disciplinary and changing contexts, for example, in international and industrial projects.
- The graduate can independently take responsibility for own professional development and specialisation.
- The graduate can exploit his or her non-software domain knowledge (obtained in the undergraduate studies) with newly obtained software development expertise to design domain-specific application software.
- The graduate can work with customers, end-users and other business stakeholders on designing and developing software solutions meeting the business requirements.

Each graduate obtains specialised competences at international research level in the selected specialisation area.



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.). The supplement 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.

1. Holder of the Qualification

Family name(s): Schjødt-Pedersen
Given name(s): Anne
Date of birth: 19 April 1994
Civil registration number: 190494-1316

2. The Qualification

Name of the qualification and title conferred

In Danish Cand.it. i softwaredesign
In English Master of Science (MSc) in IT, Software Design
Date of award: 12 January 2022

2.1. Main fields of study

The mandatory backbone of the MSc study programme in Software Design comprises four modules corresponding to 52.5 ECTS points within the first three terms. The Programming Module (22.5 ECTS) focuses on introductory programming concepts and practical experience, including imperative object-oriented programming and/or functional programming, and introductory database design. The Foundations Module (15 ECTS) focuses on the foundations of software development, such as algorithms, data structures and discrete mathematics. The Software Engineering Module (7.5 ECTS) focuses on software development methods for assuring quality. The Research Module (7.5 ECTS) focuses on establishing research background and methodology in preparation for the subsequent thesis module.

2.2. Name and status of awarding institution

In Danish IT-Universitetet i København
In English IT University of Copenhagen

The IT University of Copenhagen is a state-recognised and state-financed higher education institution, which is regulated according to the Danish Act on Universities No. 754 of 17 June 2010.

2.3. Language(s) of instruction/examination

The MSc in Software Design study programme is conducted in English.



3. Level of the Qualification

3.1. Level of qualification

A long-cycle research-based qualification, normally requiring a total of 5 years of full-time higher education studies: a 3-year Bachelor of Arts or Bachelor of Science degree from a higher education institution before entering the 2-year Master of Science programme at the IT University of Copenhagen.

3.2. Official duration of programme in credits

2 years = 120 ECTS credits (after a 3 year Bachelor of Arts or Bachelor of Science degree = 180 ECTS credits, i.e. a total of 300 ECTS credits). One term in a Master of Science degree corresponds to 30 ECTS credits.

The European Credit Transfer System (ECTS) is designed to help students and institutions in the European Union and other countries to compare degrees and study activities at universities and other higher education institutions. The workload per full academic year corresponds to 60 ECTS credits.

3.3. Access requirements

Admittance to the Master of Science in Information Technology programme requires a completed BA/BSc degree or equivalent higher education.

Qualifying programme: Humanistisk/teologisk bachelor

4. Contents and Results Gained

4.1. Mode of study

Full-time graduate programme equivalent of 120 ECTS credits (= 2 years).

4.2. Programme learning outcomes

The MSc study programme Software Design has as its objective that the student achieves the following competences and is able to:

- use a modern programming platform to implement software
- follow good practice in quality assurance to create reliable and secure software
- write well-documented software that meets given requirements
- plan and participate in basic processes and practices of software development
- collaborate with others in complex and changing contexts, including in international and industrial projects, using processes and tools that support such collaboration to design and develop high-quality software
- combine domain knowledge with software development expertise to design domain specific software
- apply all of the above skills specifically in the context of the candidate's bachelor area

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

Please refer to the enclosed transcript of the graduate's academic record. The IT University of Copenhagen uses the ECTS credit point system to directly relate our study activities to those at international universities. A study activity is either a course, a project or a master's thesis. A course of 7.5 ECTS credits typically stretches over 12 weeks and demands a weekly workload of 15 hours. A project of 7.5 ECTS credits has typically been prepared in a group of 2-5 students during a 4-week project period of full-time study. The master's thesis is a large project of 30 ECTS credits and corresponds to a workload of 6 months full-time study.

4.4. Grading scheme and (if applicable) grade distribution information

Please refer to the explanation of the grading scale on the final page.



4.5. Overall classification of the qualification

Not applicable for Danish qualifications.

5. Function of the Qualification

5.1. Access to further study

A completed Master of Science degree in Information Technology gives general access to PhD studies. Specific admission is subject to institutional approval.

5.2. Access to regulated profession

The Master of Science programme in Software Development and Technology qualifies the graduate for research and development within Software Development and Technology.

6. Additional Information

6.1. Additional information

The degree has been awarded pursuant to the Ministerial order on bachelor- and master's programmes at the universities, as laid down by the Danish Ministry of Higher Education and Science pursuant to the Danish Act on Universities, and to the Curriculum for the Master of Science Programme in Information Technology at the IT University of Copenhagen of 19 August 2015.

6.2. Institutional information

The IT University of Copenhagen is a teaching and research-based tertiary institution established in 1999 concerned with information technology (IT) and the opportunities it offers. It is funded to undertake both theoretical and applied research into the interaction and growing importance of information technology to society. The mission of the IT University of Copenhagen is to deliver internationally leading teaching and research which will enable Denmark to become exceptionally good at creating value with IT.

The IT University of Copenhagen conducts research in the fields of digital aesthetics and communication, theoretical computer science, innovation, and design and use of information technology. The IT University of Copenhagen offers PhD, Master of Science, Bachelor of Science, Master and Diploma programmes in the fields of Business, Digital Communication, Games and Software Development.

The teaching methods at the IT University of Copenhagen are varied and require a high degree of student activity. The teaching methods include lectures and projects - often in cooperation with private or public organisations - which in addition to developing the student's academic skills also develop the student's interpersonal skills.

6.3. Further information sources

Information in English about the IT University of Copenhagen (study programmes, course descriptions, number of students, research, organisation etc.) can be obtained from the IT University's homepage www.itu.dk, or from the Student Counsellors Office (e-mail: studentadvisors@itu.dk). General information about higher education in Denmark can be obtained from the following two homepages: Danish Ministry of Higher Education and Science (www.fivu.dk), and Danish Ministry of Children and Education (www.uvm.dk).



7. Certification of this Supplement

7 February 2022

Lene Rehder

Date

Lene Rehder, Head of Student Affairs and Programmes

Official stamp:

Student Affairs and Programmes

The IT University of Copenhagen
Rued Langgaards Vej 7
2300 Copenhagen S
Denmark
Phone +45 7218 5205
www.itu.dk

8. Information on the Danish Higher Education System

Cf. **enclosure** The Danish Higher Education System (April 2016)

The Danish Higher Education System

April 2016

Public higher education institutions in Denmark are regulated by national legislation concerning degree structures, teacher qualifications and examinations. Accreditation in higher education is undergoing transition from programme-based accreditation to institutional accreditation. Programmes and institutions are accredited by national, independent accreditation agencies and the Accreditation Council.

Higher education institutions

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

1. Business academies (Erhvervsakademi) offering professionally oriented short cycle and first cycle degree programmes.
2. University Colleges (Professionshøjskole) offering professionally oriented first cycle degree programmes.
3. Maritime Education and Training Institutions offering professionally oriented short cycle and first cycle degree programmes.
4. General and specialised research universities (Universitet) offering first, second and third cycle degree programmes in academic disciplines.
5. 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 higher education institutions are regulated by the Ministry of Higher Education and Science (type 1-5). The Ministry of Culture regulates a number of higher education institutions offering programmes within fine and performing arts (type 5).

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 (VU) degree)	Short cycle	Level 5
Bachelor's level	Professional Bachelor's degree (180-270 ECTS)*	Diploma degree (60 ECTS)	First cycle	Level 6
	Bachelor's degree (within the arts) (180 ECTS)			
	Bachelor's degree (180 ECTS)			
Master's level	Master's degree (within the arts) (120-180 ECTS)	Master degree (60-90 ECTS)	Second cycle	Level 7
	Master's degree (120 ECTS)**			
PhD level	PhD degree (180 ECTS)		Third cycle	Level 8

* Can be obtained through a full regular bachelor's programme (180-270 ECTS) or a top up bachelor's programme following an Academy Profession degree. ** A few Master's programmes are up to 180 ECTS.

Higher education institutions measure study activities in ECTS credits. 60 ECTS correspond to one year 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) correspond 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. Holders of an 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 180-270 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 3-4 years of study (180-240 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 www.nqf.dk. 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.

Adult and continuing education is available at levels corresponding to qualifications of the ordinary higher education system.

- The Further Adult Education degree (videregående voksenuddannelse/akademiuddannelse) 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.