



Diplom

Civilingeniør

Niels Peter Kirkegaard Christensen

CPR-NR.

DATE OF BIRTH

(Skjult)

26 January 1998

AKADEMISK GRAD

DEGREE

Civilingeniør, cand.polyt.

Master of Science in Engineering

GRADEN ER TILDELT DEN

DEGREE AWARDED

10. Juli 2025

10 July 2025

RETNINGSBETEGNELSE

GENERAL ENGINEERING FIELD

Geofysik og Rumteknologi

Earth and Space Physics and Engineering

SPECIALISERING

SPECIALIZATION

Earth Observation

Earth Observation



Anders O. Bjarklev
Rektor
President



Lars D. Christoffersen
Dekan
Dean

Objectives

The Master of Science in Engineering programme has two central objectives:

- Academic cutting-edge competencies which are the result of a clear study progression and which are unique to the graduate. The academic competencies contain elements of actual research and are manifested in the final master thesis
- Polytechnic holistic competencies that, in addition to identity-creating professionalism, also include being able to gain an overview of a complex technical problem and being able to think in technical terms in sustainable, societal and economic contexts

An MSc in Engineering programme from DTU is a research-based education at the highest technological level, which qualifies the holder to take on knowledge-intensive positions in the business community and society that is distinguished by a high level of scientific development. Moreover, the MSc in Engineering qualification allows the holder to continue their education in the field of research (research-based programmes, PhD).

The holder of an MSc in Engineering has the competencies required to analyse, synthesise and evaluate theory and experiments relating to complex and complicated engineering systems, issues, and solutions for the benefit of society.

Goals for learning outcome of the MSc Eng programme

The goals for the learning outcome of the MSc Eng programme comprise the shared academic goals for the learning outcome of the entire MSc Eng programme at DTU and the programme-specific goals for the learning outcome of each MSc Eng programme.

Shared academic goals for learning outcome

Knowledge and understanding

A graduate of the MSc Eng. programme from DTU

- has a solid understanding of and a firm base of knowledge in natural sciences and technological principles, possesses comprehensive knowledge within a given subject area and is familiar with the current development trends and opportunities within the academic area
- can identify and reflect on technical scientific issues and understand the interaction between the various components of an issue
- possesses knowledge about sustainability, innovation, and entrepreneurship
- can, based on a clear academic profile, apply elements of current research at an international level to develop ideas and solve problems
- has insight into and understanding of the interaction between the various engineering domains and other competencies in connection with solving specific engineering problems

Skills

A graduate of the MSc Eng. programme from DTU

- masters technical scientific methodologies, theories, and tools, and can take a holistic view of and delimit a complex, open issue, put it into a broader academic and societal perspective and, on this basis, propose a variety of possible actions while considering sustainability

- can develop relevant models, systems, technologies and processes aimed at solving technological problems
- can communicate and mediate research-based knowledge both orally and in writing
- can discuss technological issues with various types of stakeholders
- is familiar with and can seek out leading international research within his/her specialist area

Competencies

A graduate of the MSc Eng. programme from DTU

- masters technical problem-solving at a high level through cross-disciplinary teamwork, and can work with and manage all phases of a project - including preparation of timetables, design, solution and documentation
- can work independently and reflect on own learning, academic development and specialization
- can independently combine their technological knowledge with knowledge about sustainability, business, management, organization and project work

The MSc Eng. programme qualifies the graduate to hold positions in the private and public sectors and the consulting industry or to apply for research training with a view to earning a PhD.

Programme specific goals for learning outcome

A Master of Science in Engineering (Earth and Space Physics and Engineering)

- has a thorough overview of technologies, including instrumentation, observation techniques, models, methods and surveillance systems for monitoring, mapping and investigating large-scale processes and structures in the areas of environment and climate monitoring, mapping and navigation, exploration of the Earth and exploration of space
- can formulate relevant quantitative models and use them to construct technological solutions to physical problems
- can quantify, calculate, assess and handle uncertainties in models, measurement data, results and products
- can describe the quantitative relationship between model parameters/condition variables and measurement data for at least one measurement situation, and use same to calculate the parameters on the basis of measurement data
- can analyse, select, design, develop and apply specific measurement methods, including instrumentation, observation techniques, models and data processing methods with a view to monitoring, mapping and/or investigating large-scale structures and processes
- can formulate, design, construct, assess and select specific solution proposals in the form of monitoring systems and services, or decision-support tools, by combining measurement technologies with understanding of large-scale processes and structures
- possesses a clear academic profile that comprises elements of current research at international level, and has the background for applying this knowledge to develop new ideas and solve new problems

- has the capacity to take a holistic view of and delimit a complex, open issue, place it into a broader academic and societal perspective and, on this basis, propose a variety of possible actions
- can combine his/her technological knowledge with knowledge about finance, organization and project work, and can illustrate technological solutions in a commercial and societal perspective
- can work and communicate effectively in English, and can mediate academic presentations and academic results achieved both orally and in writing
- is fully conversant with technical problem-solving at a high level through project work in project form, and has the capacity to work with all phases of a project - including preparation of timetables, design, solution and documentation
- can apply technological solutions on the basis of principles of ethics and sustainability

Diploma Supplement

This Diploma Supplement follows the model developed by the European Commission, the 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 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s)

Christensen

1.2 Given name(s)

Niels Peter Kirkegaard

1.3 Date of birth

26 January 1998

1.4 Civil registration number

(Skjult)

2 INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and title conferred

Master of Science in Engineering

2.2 Main field(s) of study for the qualification

Earth and Space Physics and Engineering (Geofysik og Rumteknologi)

2.3 Name and status of awarding institution

Technical University of Denmark (Danmarks Tekniske Universitet).

Technical University of Denmark is a state-recognised higher education institution, regulated according to the Ministry of Higher Education and Science. Technical University of Denmark is a university that has undergone external quality assurance by the Danish Accreditation Institution (in Danish: Danmarks Akkrediteringsinstitution), that is certified to follow the

European Standards and Guidelines through registration in EQAR and membership in ENQA, in Denmark.

2.4 Name and status of institution administering studies

As above.

2.5 Language(s) of instruction/examination

English.

3 INFORMATION ON THE LEVEL AND DURATION OF THE QUALIFICATION

3.1 Level of the qualification

Master's degree at NQF/EQF Level 7 referring to Second Cycle in the Bologna QF.

3.2 Official duration of programme in credits and/or years

Two years, equivalent to 120 ECTS credits.

3.3 Access requirement(s)

A completed Bachelor of Science in Engineering, Bachelor of Natural Science or Bachelor in Engineering within a relevant field of study and fulfilment of the academic prerequisites specific to the study programme.

4 INFORMATION ON THE PROGRAMME COMPLETED AND THE RESULTS OBTAINED

4.1 Mode of study

A two-year full-time study programme, equivalent to 120 ECTS credits.

4.2 Programme learning outcomes

A graduate from DTU's Master of Science in Engineering

- has a solid understanding of and a firm base of knowledge in natural sciences and technological principles, possesses comprehensive knowledge within a given subject area, and is familiar with the current development trends and opportunities within the academic area
- can identify and reflect on technical scientific issues and understand the interaction between the various components of an issue
- can, based on a clear academic profile, apply elements of current research at international level to develop ideas and solve problems
- has insight into and understanding of the internal interaction between the various engineering domains and other competencies in connection with solving specific engineering problems
- possesses knowledge about sustainability, innovation and entrepreneurship
- masters technical scientific methodologies, theories and tools, and has the capacity to take a holistic view of and delimit a complex, open issue, put it into a broader academic and societal perspective and, on this basis, propose a variety of possible actions

- can, via analysis and modelling, develop relevant models, systems and processes for solving technological problems
- can communicate and mediate research-based knowledge both orally and in writing
- can discuss technological issues with various types of stakeholder
- is familiar with and can seek out leading international research within his/her specialist area
- masters technical problem-solving at a high level through project work, and has the capacity to work with and manage all phases of a project - including preparation of timetables, design, solution and documentation
- can work independently and reflect on own learning, academic development and specialization
- can independently combine his/her technological knowledge with knowledge about business, management, organization and project work

4.3 Programme details, individual credits gained and grades/marks obtained

Please see enclosed grade transcript.

4.4 Grading system and grade distribution table

Please see section 8: Information on the Danish Higher Education System.

4.5 Overall classification of the qualification

Not applicable.

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study

A completed Master of Science in Engineering gives access to further study at NQF/EQF level 8 referring to Third Cycle in the Bologna QF (PhD degree).

5.2 Access to a regulated profession (if applicable)

The Master of Science in Engineering qualifies the holder to take on knowledge-intensive positions in private and public organisations and companies within the field of engineering.

6 ADDITIONAL INFORMATION

6.1 Additional information

For almost two centuries Technical University of Denmark (DTU) has been dedicated to fulfilling the vision of H.C. Orsted - the father of electromagnetism - who founded the university in 1829 to develop and create value using the natural sciences and the technical sciences to benefit society.

DTU is a vibrant elite technical university, recognized for its high level of international research and its sought-after graduates. Through collaboration, our staff and students reach out to the world and work across disciplines to create value, welfare, and growth by developing technologies that work in a globalized world, transcending social and cultural differences.

DTU educates the next generation of thinkers, innovators, and doers. We educate problem solvers who can lead the way and tackle the most important global challenges as described by the 17 UN Sustainable Development Goals. All our study programmes are interdisciplinary and designed to promote sustainability, innovation, and the entrepreneurial spirit. Students get hands-on access to world-class facilities and engage in project-based assignments with industry partners where they can apply their theoretical knowledge to solving real-life problems.

6.2 Further information can be found at the following sources

Further information can be found at the following sources:

- Information on Technical University of Denmark: <https://www.dtu.dk/english>.
- Information on DTU's Master of Science in Engineering: <https://www.dtu.dk/english/Education/msc>.
- Programme specifications for DTU's Master of Science in Engineering: <https://studieinformation.dtu.dk/english/Master-of-Science-in-Engineering>.
- Information on The Ministry of Higher Education and Science: <https://ufm.dk/>.
- Information on The National Academic Recognition Information Centres and the European National Information Centre on Academic Recognition and Mobility (ENIC/NARIC): <https://www.enic-naric.net/>.

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date

4 Sep 2025

7.2 Signature



Emil Sebastian Christensen

7.3 Capacity

8 INFORMATION ON 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 (Erhvervsakadem1) offering professionally oriented short cycle and first cycle degree programmes.
2. University Colleges (Professionshejskole) 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 (180-240 ECTS)*	Diploma degree (60 ECTS)	First cycle	Level 6
	Bachelor's degree (within fine arts) (180 ECTS)			
	Bachelor's degree (180 ECTS)			
Master's level	Master's degree (within fine 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 (180-240 ECTS) or a top up bachelor's programme (90 ECTS) following an Academy Profession degree. A few Professional Bachelor programmes are 270ECTS.

** 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.

Admission and progression

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 (videregaende 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.