



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 qualification (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): Espe
- 1.2 Given name(s): Sondre Mikael
- 1.3 Date of birth (day/month/year): 01-10-2002
- 1.4 Student identification number or code: 325638

2 INFORMATION IDENTIFYING THE QUALIFICATION

- 2.1 Name of qualification and (if applicable) title conferred (in original language):
Bachelor i naturvitenskap
The title Bachelor is protected by law in Norway.
- 2.2 Main field(s) of study for the qualification:
Informatics. Informatics, Mathematics, Economy
- 2.3 Name and status of awarding institution (in original language):
Universitetet i Bergen, a public university. The quality assurance system was evaluated and approved by the Norwegian Agency for Quality Assurance in Education in 2023.
- 2.4 Name and status of institution administering studies:
See section 2.3
- 2.5 Language(s) of instruction/examination:
Norwegian, English

3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1 Level of qualification:
First Cycle/Level 6, Norwegian Qualifications Framework for Lifelong Learning
- 3.2 Official length of the programme:
3 years in full-time mode (180 ECTS credits)
- 3.3 Access requirements:
Higher Education Entrance Qualification.
Specific entrance requirements: REALFA

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

- 4.1 Mode of study:
Full-time
- 4.2 Programme requirements:

Outcome and contents

The Bachelor's programme gives a thorough introduction to the modelling of economic problems using methods from mathematics, statistics, computer science, and economics.

Economics deals with the ways in which we should use our resources, e.g. on production equipment and labour, and the ways in which we actually use the resources. Statistics is used to quantify economic correlations using mathematical expressions and forms the basis for prognoses. In these expressions most constants are found by studying how the phenomena have developed over time. Thus, these constants are uncertain, and this uncertainty propagates to the prognoses. Statistical methods help us decide how certain these prognoses are.

Computer science deals with ways of modelling problems using computer programs. Modelling can also be expressed mathematically. In this programme of study, the emphasis is on programming and the development and implementation of efficient methods for solving problems.

Required learning outcomes

A candidate who has completed his or her qualification should have the following learning outcomes defined in terms of knowledge skills and general competence:

Knowledge

The candidate

- has a broad knowledge of computer science, statistics and economic theory.
- is able to convey basic insight from the models, in an intuitive way.

Skills

The candidate

- has sufficient mathematical, statistical and programming skills to model economic problems,
- can use a broad range of methods from statistics and computer science to analyse economic and industrial problems,
- masters classical fields of mathematics such as calculus and linear algebra, as well as basic programming,
- and is able to participate in projects in system development and programming.

General competence

The candidate is able to

- work in individual and collaborative settings,
- analyse and evaluate legal and ethical aspects of his/her own work,
- give a critical and thoughtful view of his/her own and collaborator's work,
- and to expand his/her field of knowledge on his/her own.
- is able to evaluate ethical issues related to the profession.

4.3 Programme details:

Name: Sondre Mikael Espe

Course		Semester	Credits	Grade	Grade distribution				
					A	B	C	D	E
Mandatory modules:									
EXPHIL-MNEKS	Examen Philosophicum	2026 spring	10	C					
Specialization:									
ECON116	Environmental and Natural Resource Economics	2023 autumn	10	B					
INF100	Introduction to programming	2023 autumn	10	B					
MAT101	Elementary Calculus I	2023 autumn	10	A					
ECON110	Basic Concepts of Microeconomics and Market Theory	2024 spring	10	A					
INF101	Object-oriented programming	2024 spring	10	B					
MNF130	Discrete Structures	2024 spring	10	B					
ECON210	Welfare and Economic Policies	2024 autumn	10	B					
INF102	Algorithms, Data Structures and Programming	2024 autumn	10	B					
STAT110	Basic Course in Statistics	2024 autumn	10	C					
ECON130	Macroeconomics	2025 spring	10	B					
MAT121	Linear Algebra	2025 spring	10	B					
INF140	Introduction to Cybersecurity	2025 autumn	10	B					
INF170	Modelling and Optimization	2025 autumn	10	A					
STAT200	Applied Statistics	2025 autumn	10	A					
The degree includes:									
DIGI100	Digital student - Online course in digital tools, methods and technology to enhance learning	2023 autumn	-	Passed					
INF112	Introduction to Systems Development	2026 spring	10	B					
INF115	Databases and modelling	2026 spring	10	A					
INF264	Introduction to Machine Learning	2026 spring	10	B					
Total: 180.0									

Credit system and grading

The academic year normally runs from mid-August to mid-June and lasts for 10 months. Courses are measured in "studiepoeng", considered equivalent to the European Credit Transfer System standard (ECTS credits). The full-time workload for one academic year is 1500 - 1800 hours of study / 60 "studiepoeng".

The Norwegian grading system consists of two grading scales: one scale with the grades pass or fail and one graded scale from A to E for pass and F for fail. The graded scale has the following qualitative descriptions:

A	Excellent	An excellent performance, clearly outstanding. The candidate demonstrates excellent judgement and a very high degree of independent thinking.
B	Very good	A very good performance. The candidate demonstrates sound judgement and a high degree of independent thinking.
C	Good	A good performance in most areas. The candidate demonstrates a reasonable degree of judgement and independent thinking in the most important areas.
D	Satisfactory	A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgement and independent thinking.
E	Sufficient	A performance that meets the minimum criteria, but no more. The candidate demonstrates a very limited degree of judgement and independent thinking.
F	Fail	A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgement and independent thinking.

The assessment is criterion referenced.

Grade distribution

The distribution of grades is shown by the percentage for courses using the graded scale A – F. Fail (F) is not included in the distribution. All results from the last five years are included in the calculation. The distribution is also shown for courses that have been active for less than five years. There has to be at least 10 approved results during the period.

4.4 Grading scheme and, if available, grade distribution guidance:
See section 4.3

4.5 Overall classification of the qualification (in original language):
Not applicable

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:
The bachelor's degree is at an academic level that is sufficient for application to relevant second cycle studies.

5.2 Professional status:
The award entitles the holder to practice unregulated professions requiring graduate competences.

6 ADDITIONAL INFORMATION

6.1 Additional information:
Not applicable

6.2 Further information sources:
<http://www.uib.no/>

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 23 June 2026
Date of original qualification: 19 June 2026

7.2 Signature: The document is electronically signed by Sikt - Norwegian Agency for Shared Services in Education and Research. The document is only valid in its original electronic form with the accompanying electronic signature. Time for signing document 2026-06-23 13:31

7.3 Capacity:

7.4 Official stamp:

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

Higher education in Norway: Legislature

The Ministry of Education and Research has the overall responsibility for higher education in Norway. Higher education is offered by four types of higher education institutions: university (*universitet*), specialized university institution (*vitenskapelig høyskole*), accredited university college (*akkreditert høyskole*), and university college with accredited study programmes (*høyskole med akkrediterte studier*). The differences between the types of higher education institutions are related to their self-accrediting authority.

All public and private higher education in Norway is subject to the Act Relating to Universities and University Colleges (LOV-2024-03-08-9). An institution's right to award specific degrees and the prescribed lengths of study are codified in Regulation concerning degrees and titles (FOR-2005-12-16 nr 1574). The awarding of master's degrees and requirements for admission to master's degrees is regulated by the Regulations on requirements for awarding a master's degree (FOR-2005-12-01 nr 1392).

Since 2002 Norway has adhered to the objectives of the Bologna Process in the European Higher Education Area. Most of the elements have been implemented through the reform of the Norwegian higher education system carried out in 2003. Central to the reform has been a transition from the former degree system to the bachelor's, master's and doctoral degree structure, with a few exceptions.

Norwegian higher education qualifications make up the levels from 6 to 8 of the Norwegian Qualifications Framework for Lifelong Learning (NQF) from 2011, which is the national overarching qualifications framework¹. It describes the levels of qualifications as defined by the total learning outcomes in terms of the knowledge, skills and general competence that graduates at various levels should have achieved².

NQF was referenced to the European Qualifications Framework (EQF) in 2014.

Quality assurance and accreditation of institutions and programmes

The Norwegian Agency for Quality Assurance in Education (NOKUT) is an autonomous governmental agency which provides external supervision and control of the quality of Norwegian higher education, as well as of all tertiary vocational education³.

NOKUT accredits new study programmes, controls the existing ones, and provides a cyclic evaluation of the institutions' quality assurance systems for educational provision.

An accredited higher education institution is granted the right to offer educational provision, without having to apply to NOKUT for specific programme accreditation, in accordance with the authority that its institutional category implies:

- a) Universities may, without further external accreditation, establish study programmes at all levels.
- b) Accredited university colleges have to apply for the accreditation of programmes at master and doctoral levels.
- c) In those fields where specialized university institutions and accredited university colleges have the right to award doctorates or corresponding degrees, they may themselves decide which study programmes and disciplines the institution shall provide.

University colleges without institutional accreditation must apply to NOKUT for accreditation of study programmes at all levels.

Lists of all accredited institutions, as well as of all accredited study programmes at the university colleges without institutional accreditation are available on www.nokut.no

Admission requirements

The Higher Education Entrance Qualification is the successful completion of Norwegian upper secondary education in general studies. The Certificate of Upper Secondary Education and Training (*Vitnemål for videregående opplæring*) is based on 13 years of schooling. The certificate states that the student is eligible for further studies (*generell studiekompetanse*).

Admission may also be gained by means of other qualifications recognized as being on a par with the Higher Education Entrance Qualification, such as recognition of prior learning and work experience.

Some fields of study have additional admission requirements.

Academic credit system

All Norwegian higher education institutions use a system of credits (*studiepoeng*) for measuring study activities considered equivalent to the European Credit Transfer and Accumulation System (ECTS). 60 ECTS credits (*studiepoeng*) are allocated to the workload of a full year of academic study, equivalent to 1500-1800 hours of study. 30 ECTS credits are normally allocated to one semester's full-time study. The academic year normally lasts for 10 months and runs from August to June.

¹ National generic learning outcomes descriptions' levels for the bachelor's, master's and doctoral degrees were defined by the Instructions on the Norwegian Qualifications Framework for Higher Education in 2009.

² Learning outcomes for a specific NQF level show the minimum of what each learner should know, understand and be able to do after completing a learning process.

³ Tertiary vocational education (TVE or *høyere yrkesfaglig utdanning*), level 5 in the NQF/EQF, is provided by *fagskoler*, which are considered as tertiary vocational education institutions. TVE is based on upper secondary education and training or equivalent competence. Courses have a duration from six months to two years. All provisions must be accredited by NOKUT.

Degrees and qualifications

NQF/EQF Level 6: Bachelor (1st cycle)

Bachelor's degree is awarded after three years of full-time study (180 ECTS). Some bachelor's degrees, in the field of music and performing arts, consist of four-year bachelor's programmes (240 ECTS).

University college graduate (*høyskolekandidat*) is a two-year degree (120 ECTS), a short cycle degree within the first cycle. Holders of this degree may in some cases continue their studies in a bachelor programme and thus obtain a bachelor's degree.

NQF/EQF Level 7: Master (2nd cycle)

Master's degree is normally obtained after two years of study (120 ECTS), following the completion of a bachelor's degree. A master's degree programme includes independent work (normally a thesis) of at least 30 ECTS.

Experience-based master's degree has a scope of 90 or 120 ECTS, including independent work / thesis of at least 20 ECTS.

Integrated master's degree is a five-year study programme (300 ECTS) which results in a master's degree, with no intermediate bachelor's degree. An exception is the Master of Architecture programme at the Oslo School of Architecture and Design, which has a scope of 330 ECTS.

In the fields of medicine, psychology and theology, **professionally oriented degrees/qualifications** of six years' duration (360 ECTS) are awarded; in the field of veterinary science - after 5 ½-6 years. They have retained the title/degree *candidata/candidatus* from the former degree system.

NQF/EQF Level 8: Doctoral degree (3rd cycle)

Philosophiae doctor (*ph.d.*) is awarded after three years of study, following the completion of a master's degree or a five to six-year professionally oriented degree/qualification.

Philosophiae doctor in artistic research

(*ph.d. i kunstnerisk utviklingsarbeid*) is awarded after three years of study in the field of creative and performing arts. In 2018, the degree replaced the former *Diploma, artistic development programme*, which will be phased out by 2025.

Doctor philosophiae (*dr. philos.*) is conferred on graduates who have qualified for a doctoral degree on their own, without formal research training.

Descriptions of the educational qualifications are given in the Norwegian Qualifications Framework for Lifelong Learning at www.nokut.no/nkr

The Norwegian Education System

