Diploma Supplement

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):	Alsaiedahmad
1.2	Given name(s):	Fidaa Faisal
1.3	Date of birth *(day/month/year)*:	03-09-1983
1.4	Student identification number or code:	211557

2 INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and (if applicable) title conferred (in original language):
Bachelor i ingeniørfag - Data

2.2 Main field(s) of study for the qualification:
Software Development
The 3-year bachelor's program in Computer Engineering with specialisation in Software Development or Network Management and Security consists of: 30 credits common courses consisting of basic mathematics, engineering systems thinking and introduction to engineering vocational practice and working methods. 50 credits programme courses consisting of technical subjects, natural sciences and social sciences. 70 credits technical specialisation courses providing a clear direction in his/her own engineering subject and building on programme courses and common courses. 30 credits elective courses contributing to academic specialisation, either in breadth or depth. A bachelor's thesis is compulsory for all candidates and must be a part of the technical specialisation with 20 credits.

2.3 Name and status of awarding institution (in original language):
Universitetet i Agder, a public university. The quality assurance system was evaluated and approved by the Norwegian Agency for Quality Assurance in Education in 2020.

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, 180 ECTS Credits

3.3 Access requirements:
General matriculation standard with special requirements in mathematics (R2) and physics (Fysikk 1)

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study:
Full time

4.2 Programme requirements:

The education leading to the degree "Bachelor i ingeniørfag" is a comprehensive 3 year professional training combining technical and theoretical knowledge with practical skills. The education is based on the National Curriculum Regulations for Engineering Education laid down by the Ministry of Education and Research on 3 February 2011, which defines the national framework for Norwegian engineering education. The learning outcomes descriptors of the programme are based on the approved Norwegian Qualifications Framework (NQF).

Candidates from Computer Science have the skills to develop, maintain and apply modern software systems to analyse and solve problems for industry and public sector.
Candidates from Network Management and Security have the skills necessary to manage, configure, and design modern computer infrastructure to solve today's challenges in industry and public sector.

On successful completion of the study programme, the candidate should have the following learning outcomes defined in terms of knowledge, skills and general competence:

Knowledge
- have a thorough knowledge of computing, and knowledge that provide a total system perspective of the computer field
- have basic knowledge in mathematics, science and relevant social and business subjects
- have knowledge of the technology's history, the engineer's role in society and technology and knowledge of social, environmental, ethical and economic consequences of technology, as well as relevant laws relating to the use of computer technology and software
- be familiar with the research challenges in computing, scientific methodology and ways of working within the engineering profession
- be able to independently update their knowledge

Skills
- be able to apply and adapt knowledge to solve theoretical, technical and practical problems in regard to new ideas, problem formulation, analysis, specification, solution generation, evaluation, selection and reporting
- be able to identify, plan and conduct computer technical projects, assignments, tests and experiments, both independently and in teams
- have practical skills in operating systems, digital circuits and microprocessor technology

After completing the course, students who choose computer science will:
- have practical skills in operating systems, digital circuits and microprocessor technology
- master object-oriented programming including algorithms, data structures and systems
- master the modelling, programming and transactions in modern database systems
- be able to program and model 2 - and 3-dimensional graphics
- be able to develop Internet services and Web applications
- master several relevant programming languages

After completing the course, students who choose network management and security will:
- master object-oriented programming
- have knowledge about the structure, function and application of ICT services and infrastructure, and be able to design good solutions in terms of efficiency as well as security
- be familiar with the security challenges that exist in computer networks, and be able to plan and take action if necessary to secure information
- master the operation and configuration of modern directory services and database systems
- be able to plan and conduct the introduction of new computer systems in regard to operations, organization and finances

General expertise
- be able to work independently or in groups
- be able to communicate problems and solutions, both orally and in writing, in academic and general contexts
- be aware of environmental, ethical and economic consequences of information technology products and solutions and have the ability to see them both on a local and a global life cycle perspective

4.3 Programme details:

Name: Fidaa Faisal Alsaiedahmad

Course		Semester	Credits	Grade	Grade distribution A B C D E
Compulsory courses					
IKT100	Network, Privacy and Security	2021 autumn	5	Passed	
IKT101	Fundamental Software Development	2021 autumn	7.5	B	
ING101	Technology, Environment and Sustainability	2021 autumn	5	Passed	
ORG001	Health, Safety and Environment	2021 autumn	-	Approved	
IKT103	Advanced Software Development	2022 spring	5	A	
IKT104	Microcontrollers	2022 spring	5	B	
IKT105	Datamodellering og databaser	2022 spring	7.5	D	
MA-178	Mathematics 1	2022 spring	7.5	B	
MA-179	Mathematics 2	2022 spring	7.5	D	
MA-180	Discrete Mathematics 1	2022 spring	5	Passed	
FYS129	Fysikk for IKT	2022 autumn	7.5	C	
IKT201	Internet services	2022 autumn	7.5	C	
IKT203	Algorithms and Data Structures	2022 autumn	7.5	B	
IKT204	Data communication	2023 spring	7.5	D	
IKT218	Advanced Operating Systems	2023 spring	5	D	
MA-223	Statistics	2023 spring	7.5	B	
IKT102	Operating Systems	2023 autumn	5	D	
IKT202	Software Engineering	2023 autumn	7.5	D	
IKT205	Applikasjonsutvikling	2024 spring	5	C	
IKT206	DevOps	2024 spring	5	C	
ING200	Teknologi, bærekraft og samfunn i et systemperspektiv	2024 spring	5	A	
ING201	Økonomi og innovasjon	2024 spring	5	B	
DAT304	Research Project *Monolithic Verses Microservices Architectures*	2024 autumn	20	C	
Specialization					
DAT215	ICT project	2023 autumn	10	D	
IKT211	Penetration Testing	2023 autumn	7.5	C	
IKT213	Machine Vision	2023 autumn	7.5	C	
PS-102	Psychologi	2023 autumn	7.5	B	

Total: 182.5

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
A full-time student at this university covers a syllabus corresponding to 60 credits per academic year. We use the grades A to F, where A is the highest grade and E is the lowest passing grade. PassFail is used in some subjects. Recognized means approved examination from another institution. See section 8; Credit system and grading.

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:
A Bachelor's Degree in Engineering qualifies for relevant second cycle studies.

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

6 ADDITIONAL INFORMATION

6.1 Additional information:
Not applicable.

6.2 Further information sources:
University of Agder: www.uia.no
Norwegian Agency for Quality Assurance: www.nokut.no/en

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 8 January 2025
Date of original qualification: 19 December 2024

7.2 Signature:

7.3 Capacity:

7.4 Official stamp:

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 2025-01-08 12:50

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 2005-04-01 nr 15). 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 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 framework[1]. 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 achieved[2].

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 education[3]. 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 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 with some specified courses. The Certificate of Upper Secondary Education and Training *(Vitnemål for videregående opplæring)* is based on 13 years of schooling.

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 entrance 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), 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 duration of from six months to two years. All provisions must be accredited by NOKUT.

Degrees and qualifications

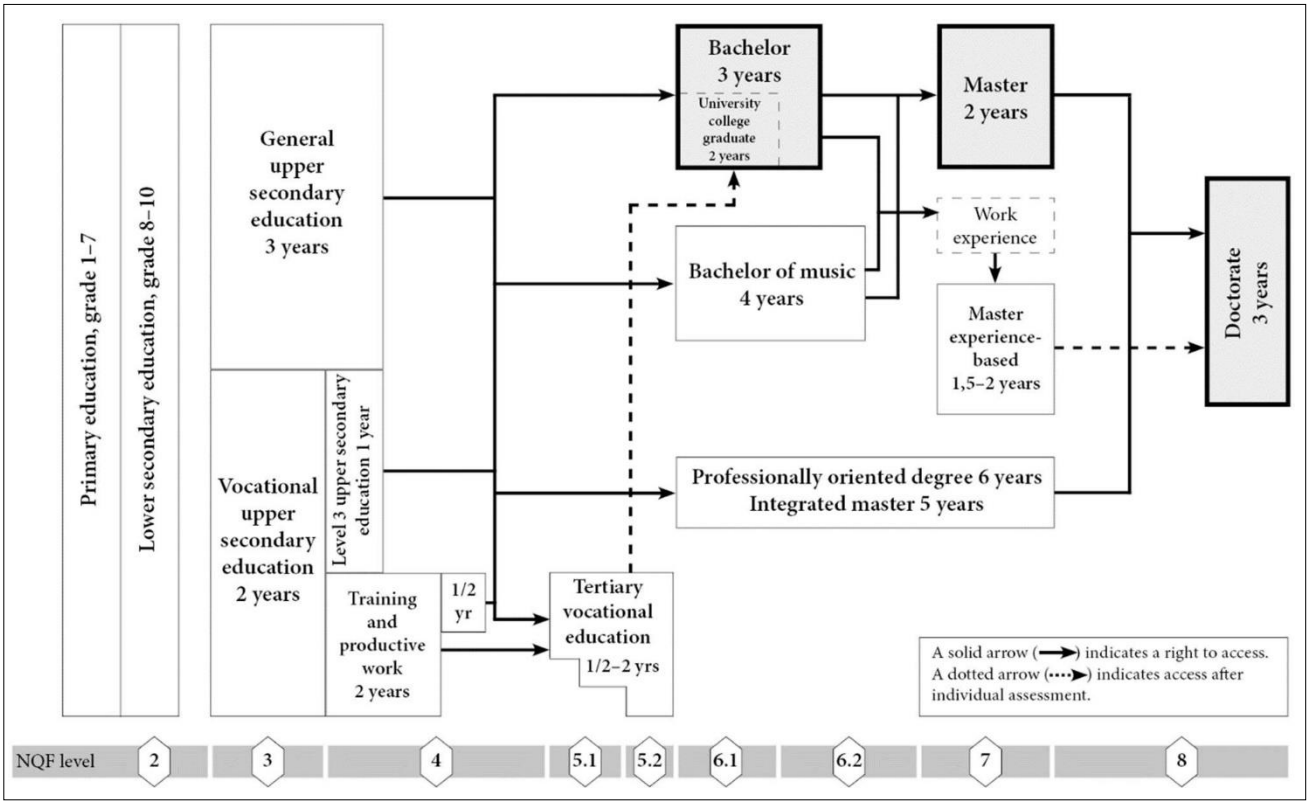
NQF (EQF) Level 6: Bachelor (1st cycle)
Bachelor's degree is awarded after three years of full-time study (180 ECTS). Some bachelor's degrees, in the field of music and performing arts, consist of four-year bachelor's programmes (240 ECTS).
Teacher education for primary and lower secondary school, years 1-7 and years 5-10 has been a four-year professional programme (240 ECTS) prior to its reform on 1 January 2017, when it became a five-year integrated master's degree.
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 between 30 and 60 ECTS.
Experience-based master's degree has a scope of 90 or 120 ECTS (including independent work 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 c*andidata/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 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



NOKUT, April 2021