



UNIVERSITY of OULU
OULUN YLIOPISTO

DIPLOMA SUPPLEMENT

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of this 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 of any value-judgements; equivalence statements or suggestions about recognition. Information should be provided in all eight sections. Where information is not provided, a reason should be given.

1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family name(s)	Manninen
1.2 Given name(s)	Samuli Henrikki
1.3 Date of birth (day/month/year)	17/04/1987
1.4 Student identification number or code	1929151

2 INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of qualification and title conferred (in original language)	Diplomi-insinööri Master of Science (Technology)
2.2 Main field(s) of study for the qualification	Degree Programme in Industrial Engineering and Management
2.3 Name (in original language) and status of awarding institution	Oulun yliopisto (University of Oulu), state recognised university, Decree on Higher Education Degree Structure 464/1998 (including amendments)
2.4 Name and status of institution (if different from 2.3) administering studies	Not applicable
2.5 Language(s) of instruction/examination	Finnish

3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1 Level of qualification	See 8, second-cycle university degree.
3.2 Official length of programme	120 credits, appr. 2 years of full-time study
3.3 Access requirement(s)	The admission requirement for the second-cycle university degree is a first-cycle degree or education of a corresponding level. There is numerus clausus, i.e. restricted entry, to all fields of study.

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study	Full-time
4.2 Programme requirements	See 8.1.2., second-cycle university degree. The degree is composed of following studies: module of the option, 30/40 credits, one advanced module, 20/30 credits and one supplementary module, 20/30 credits or two supplementary modules, 20/30 credits, special module, 0/10 credits and master's thesis, 30 credits. The extent of advanced studies shall be a minimum of 60 credits.
4.3 Programme details	See transcript of records. Thesis topic as follows: Rakennusalan hukkien priorisointi ja eliminointi (Prioritisation and elimination of waste in the construction industry)
4.4 Grading scheme and, if available, grade distribution guidance	See transcript of records for grading scale.
4.5 Overall classification of the qualification	-

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study

Eligible for doctoral studies

5.2 Professional status

Under the Finnish legislation, a person who has taken the degree of "diplomi-insinööri" is qualified for posts or positions in the public sector for which the qualification requirement is a second-cycle higher education degree. In some cases, the qualification requirement also includes the completion of studies in certain specified fields of study.

The degree is also accepted as requirement for professional career.

The degree falls under the Article 11 of the Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications, level e.

6 ADDITIONAL INFORMATION

6.1 Additional information

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6.2 Further information sources

Oulun yliopisto, <http://www.oulu.fi/yliopisto/>
Ministry of Education and Culture, Finland, <http://www.minedu.fi>

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date

13/09/2012

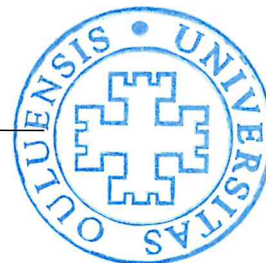
7.2 Signature



Sirpa Nelo
Chief Academic Officer

7.3 Capacity

7.4 Official stamp or seal



8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

See the enclosed attachment.

10.09.2012

Manninen Samuli Henrikki

1929151

170487-189R

Date of enrolment

01.08.2006

RIGHT OF STUDY

Decree on Degrees

Decree on Degrees 794/2004

Degree

Master of Science (Technology)

Degree Programme

Degree Programme in Industrial Engineering and Management

Area of specialization

Production Management

Major subject

Industrial Engineering and Management

Valid 01.08.2006 - 31.07.2013

Date of commencement 09.09.2011

DEGREE

		Credits	Date	Examiner
DI	Master of Science (Technology)	124,50	13.09.2012	Faculty of Tech

COMPLETED COURSES

Module of the Option		Credits	Grade	Date	Examiner
A400076	Module of the Option Industrial Engineering and Management	30,00	3	28.08.2012	Dept. of indus.
555311S	Advanced Internship	3,00	pass	23.05.2012	Lindfors
555320S	Strategic Management	5,00	4	14.02.2011	Kess
555321S	Risk Management	3,00	4	14.02.2011	Kess
555340S	Technology Management	4,00	3	15.12.2010	Haapasalo
555342S	Operations Research	5,00	2	02.05.2011	Muhos, Haapasalo
555360S	Administration, Organization and Education in Working Life	5,00	4	08.04.2011	Kisko
555380S	Quality Management	5,00	4	21.04.2010	Kujala, Kauppila

Total number of credits 30,00

Advanced Module

		Credits	Grade	Date	Examiner
A400077	Advanced Module Production Management	30,00	4	28.08.2012	Dept. of indus.
555322S	Production Management	3,00	3	13.05.2011	Haapasalo
555323S	Purchase Management	3,00	4	14.02.2011	Kess
555324S	Advanced Supply Chain Management	3,00	5	06.04.2011	Kess
555325S	Human Resources Management	3,00	5	09.01.2012	Kess
555326S	Research Project in Production Management	5,00	5	21.08.2012	Kess
555341S	Productivity and Performance Management	3,00	4	09.05.2011	Haapasalo
555346S	Advanced Course in Technology Management	5,00	4	09.08.2012	Haapasalo
555381S	Project Leadership	5,00	4	25.11.2010	Jokinen

Total number of credits 30,00

10.09.2012

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COMPLETED COURSES

		Credits	Grade	Date	Examiner
Supplementary Module					
A400078	Supplementary Module Manufacturing Technology	20,50	3	28.08.2012	Dept. of indus.
463055S	Manufacturing Technology II	5,00	2	05.02.2010	Lappalainen
463064S	Manufacturing of Electronics Products	5,00	5	12.05.2010	Lappalainen
463065A	Manufacturing of Plastics Products	3,50	2	27.04.2010	Karjalainen
463068S	Laser Processing	3,50	5	27.04.2010	Karjalainen
465095A	Sheet Metal Forming	3,50	3	25.05.2010	Larkiola

Total number of credits 20,50

Special Module

A400079	Special Module	14,00	2	28.08.2012	Dept. of indus.
721611A	Tax Law	7,00	1	12.08.2011	Pulkkinen
721614A	Labour Law	7,00	3	17.02.2010	Pulkkinen

Total number of credits 14,00


Master's Thesis and Maturity Test

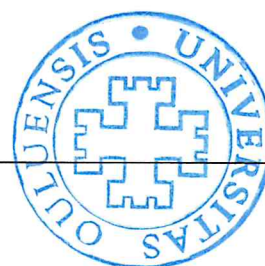
A400080	Master's Thesis and Maturity Test	30,00	pass	28.08.2012	Dept. of indus.
470099S	Master's Thesis in Industrial Engineering and Management Supervisor professor Harri Haapasalo. The Master's thesis has been analysed in the Urkund anti-plagiarism system.	30,00	3	28.08.2012	Dept. of indus.
555312S	Maturity Test / Industrial Engineering and Management	0,00	pass	07.08.2012	Haapasalo

Total number of credits 30,00

Total of study units 124,50

SIGNATURE


Sirpa Nelo
Chief Academic Officer



10.09.2012

Manninen Samuli Henriikki

1929151

170487-189R

The extent of degrees:

Bachelor's degree: 180 credits

Master's degree: 120 credits

Licentiate of Medicine: 360 credits

Licentiate of Dentistry: 300 credits

On average 1 600 hours of student work is required to achieve 60 credits annually. 1 Finnish credit equals 1 ECTS credit.

Grades used in assessment of studies are pass/failed or numeric values: 5 (excellent; ECTS A), 4 (very good; ECTS B), 3 (good; ECTS C), 2 (satisfactory; ECTS D), 1 (sufficient; ECTS E), 0 failed.

In addition to numeric values, grades used in assessment of the Master's Thesis can also be: L = laudatur (outstanding; ECTS A), E = eximia cum laude approbatur (excellent; ECTS B), M = magna cum laude approbatur (very good; ECTS B), C = cum laude approbatur (good; ECTS C), N = non sine laude approbatur (fairly good; ECTS C), B = lubenter approbatur (satisfactory; ECTS D), A = approbatur (pass; ECTS E). Grades used in assessment of the Doctoral Thesis and Licentiate Thesis can also be excellent/pass/failed.



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8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

The Finnish education system consists of basic education, general and vocational upper secondary education, higher education and adult education. The basic education consists of a 9-year compulsory school for all children from 7 to 16 years of age.

Post-compulsory education is given by general upper secondary schools and vocational institutions. The general upper secondary school provides a 3-year general education curriculum, at the end of which the pupil takes the national Matriculation examination (ylioppilastutkinto/studentexamen). Vocational institutions provide 3-year programmes, which lead to upper secondary vocational qualifications (ammattillinen perustutkinto/yrkesinriktad grundexamen).

General eligibility for higher education is given by the Matriculation examination and the upper secondary vocational qualification. These qualifications require at least 12 years of schooling. Equivalent foreign qualifications also give general eligibility for higher education.

The Finnish higher education system comprises of universities (yliopisto/universitet) and polytechnics (ammattikorkeakoulu, AMK/yrkeshögskola, YH). All universities engage in both education and research and have the right to award doctorates. The polytechnics are multi-field institutions of professional higher education. Polytechnics engage in applied research and development. The polytechnics use the terms polytechnic or university of applied sciences when referring to themselves. This higher education system description uses the term polytechnic.

Higher education studies are measured in credits (opintopiste/studiepoäng). Study courses are quantified according to the work load required. One year of studies is equivalent to 1600 hours of student work on the average and is defined as 60 credits. The credit system complies with the European Credit Transfer and Accumulation System (ECTS).

8.1. University degrees

The Government Decree on University Degrees (794/2004) defines the objectives, extent and overall structure of degrees. The universities decide on the detailed contents and structure of the degrees they award. They also decide on their curricula and forms of instruction.

8.1.1. First-cycle university degree

The first-cycle university degree consists of at least 180 credits (3 years of full-time study). The degree is called kandidaatti/kandidat in all fields of study except Law (oikeusnotaari/rättsnotarie) and Pharmacy (farmaseutti/farmaceut). The determined English translation for all these degrees is Bachelor's degree, the most common degrees being the Bachelor of Arts or Bachelor of Science.

Studies leading to the degree provide the student with: (1) knowledge of the fundamentals of the major and minor subjects or corresponding study entities or studies included in the degree programme and the prerequisites for following developments in the field; (2) knowledge and skills needed for scientific thinking and the use of scientific methods or knowledge and skills needed for artistic work; (3) knowledge and skills needed for studies leading to a higher university degree and for continuous learning; (4) a capacity for applying the acquired knowledge and skills to work; and (5) adequate language and communication skills.

Studies leading to the degree may include: basic and intermediate studies; language and communication studies; interdisciplinary programmes; other studies and work practice for professional development. The degree includes a Bachelor's thesis (6 – 10 credits).

8.1.2. The second-cycle university degree

The second-cycle university degree consists of at least 120 credits (2 years of full-time study). The extent of studies required for a programme leading to the second cycle university degree which is geared towards foreign students is a minimum of 90 credits. The degree is usually called maisteri/magister. Other second-cycle degree titles are diplomi-insinööri/diplomingenjör (Technology), proviisori/provisor (Pharmacy) and arkkitehti/arkitekt (Architecture). The determined English translation for all these degrees is Master's degree, the most common degrees being the Master of Arts or Master of Science. The second-cycle university degree title in the fields of Medicine, Veterinary Medicine and Dentistry is lisensiaatti/licentiat, the English title being Licentiate. The admission requirement for the second-cycle university degree is a first-cycle degree.

In the fields of Medicine and Dentistry the university may arrange the education leading to the second-cycle university degree without including a first-cycle university degree in the education. In Medicine the degree consists of 360 credits (6 years of full-time study) and in Dentistry the degree consists of 300 credits (5 years of full-time study).

Studies leading to the second-cycle university degree provide the student with: (1) good overall knowledge of the major subject or a corresponding entity and conversance with the fundamentals of the minor subject or good knowledge of the advanced studies included in the degree programme; (2) knowledge and skills needed to apply scientific knowledge and scientific methods or knowledge and skills needed for independent and demanding artistic work; (3) knowledge and skills



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needed for independently operating as an expert and developer of the field; (4) knowledge and skills needed for scientific or artistic postgraduate education; and (5) good language and communication skills.

The studies leading to the second-cycle university degree may include: basic and intermediate studies and advanced studies; language and communication studies; interdisciplinary study programmes; other studies; and internship improving expertise. The degree includes a Master's thesis (20 – 40 credits).

8.2. Doctoral degrees

Students can apply for doctoral studies after the completion of a relevant second-cycle degree. The aim of doctoral studies is to provide student with an in-depth knowledge of their field of research and capabilities to produce novel scientific knowledge independently.

A pre-doctoral degree of *lisensiaatti/licentiat* (Licentiate) may be taken before the Doctor's degree and in general it takes 2 years of full-time study to complete.

The Doctor's degree takes approximately 4 years to complete after the second-cycle degree or 2 further years following the pre-doctoral degree. A student who has been admitted to complete the Doctor's degree must complete a given amount of studies, show independent and critical thinking in the field of research and write a Doctor's dissertation and defend it in public.

8.3. Polytechnic degrees

The government decree on polytechnics (352/2003 including amendments) defines the objectives, extent and overall structure of polytechnic degrees. The Ministry of Education confirms the degree programmes of polytechnics, and within the framework of these regulations, the polytechnics decide on the content and structure of their degrees in more detail. The polytechnics also decide on their annual curricula and forms of instruction.

8.3.1. First-cycle polytechnic degrees

The first-cycle polytechnic degree consists of 180, 210 or 240 credits (3 to 4 years of full-time study) depending on the study field. For specific reasons, the Ministry of Education may confirm the scope of the degree to exceed 240 credits. The first-cycle polytechnic degree is called *ammattikorkeakoulututkinto/yrkeshögskoleexamen*. The determined English translation for the degree is Bachelor's degree. The degree titles indicate the field of study, e.g. Bachelor of Engineering or Bachelor of Health Care.

Studies leading to the degree provide the student with (1) broad overall knowledge and skills with relevant theoretical background for working as expert of the field; (2) knowledge and skills needed for following and advancing developments in the field; (3) knowledge and skills needed for continuous learning; (4) adequate language and communication skills; and (5) knowledge and skills required in the field internationally.

The first-cycle polytechnic degree comprises basic and professional studies, elective studies, a practical training period and a Bachelor's thesis or a final project.

8.3.2. The second-cycle polytechnic degrees

The second-cycle polytechnic degree consists of 60 or 90 credits (1 or 1.5 years of full-time study). The degree is called *ylempi ammattikorkeakoulututkinto/högre yrkeshögskoleexamen*. The determined English translation for the second-cycle polytechnic degree is Master's degree. The degree titles indicate the field of study, e.g. Master of Culture and Art or Master of Business Administration. Eligibility for second-cycle polytechnic degrees is given by a relevant first-cycle degree with at least 3 years of relevant work or artistic experience.

Studies leading to the degree provide the student with (1) broad and advanced knowledge and skills for developing the professional field as well as the theoretical skills for working in demanding expert and leadership positions in the field; (2) profound understanding of the field, its relation to work life and society at large as well as the knowledge and skills needed for following and analysing both theoretical and professional developments in the field; (3) capacity for life-long learning and continuous development of one's own expertise (4) good language and communication skills required in work life; and (5) knowledge and skills needed to function and communicate in the field internationally.

The second-cycle polytechnic degree comprises advanced professional studies, elective studies and a final thesis or a final project.