



UNIVERSITY OF
EASTERN FINLAND

TUTKINTOTODISTUS

Juha-Matti Aleksanteri Huusko

(200487-093K)

on suorittanut valtioneuvoston asetuksen 794/2004 mukaisen
filosofian tohtorin tutkinnon Luonnontieteiden, teknologian ja laskennan tohtoriohjelmassa.

(Opintopisteet) (Arvosana)

PÄÄAINE: MATEMATIIKKA

Jatkokoulutusopinnot	93,0	Kiitettävä
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Matematiikan alan väitöskirja

Methods for Complex ODEs Based on Localization, Integration and Operator Theory

on julkisen tarkastuksen jälkeen hyväksytty tiedekuntaneuvostossa arvosanalla
hyväksytty.

MUUT OPINNOT

Yleinen jatkokoulutus	8,0	Hyväksytty
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TUTKINNON KOKONAISLAAJUUS	101,0
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Joensuussa, kesäkuun 15. päivänä 2017
Luonnontieteiden ja metsätieteiden tiedekunnan puolesta


JUKKA JURVELIN, DEKAANI


ARJA HIRVONEN, JOHTAVA HALLINTOPÄÄLLIKKÖ



Suoritukset tavoitetutkinnon mukaan

16.06.2017

Juha-Matti Aleksanteri Huusko

Syntymäaika 20.04.1987

Opiskelijanumero 175783

Kirjoilletulo 01.08.2007

OPINTO-OIKEUDET

Myöntäjä	Luonnontieteiden ja metsätieteiden tiedekunta
Organisaatio	Fysiikka ja matematiikka (J)
Voimassaolo	28.11.2013 - 15.06.2017
Opintojen aloitus	01.08.2013
Tutkintoasetus	Valtioneuvoston asetus yliopistojen tutkinnoista n:o 794/2004
Tavoitetutkinto	Filosofian tohtori, luonnontieteet
Koulutus	Luonnontieteen, teknologian ja laskennan tohtoriohjelma
Pääaine	Matematiikka
Tutkinnon suorituspäivä	15.06.2017
Väitöskirja	Methods for Complex ODEs Based on Localization, Integration and Operator Theory
Arvosana	Hyväksytty
Suorituspäivä	15.06.2017

Suoritukset ajalta: 14.03.2011 - 15.06.2017

OPINNOT		OP	ARV	PVM	HYVÄKSYJÄ
70487	Filosofian tohtori, luonnontieteet	101,00	HYV	15.06.2017	Luonnontieteiden ja metsätieteiden tiedekunta
3318440	Väitöskirja, matematiikka		* hyv	15.06.2017	Luonnontieteiden ja metsätieteiden tiedekunta
3010600	Yleinen jatkokoulutus	8,00	* HYV	24.03.2015	Jouni Rättyä
1145005	Orientaatio jatko-opintoihin		HYV	06.11.2013	Anu Kristiina Liikanen
1145014	Tohtoriorientaatio		HYV	24.03.2015	Anu Kristiina Liikanen
8010053	Puheviestintää jatkokoulutettaville	2,00	HYV	02.05.2014	Sanna-Maija Niskanen
8010060	English for Postgraduate Students	4,00	HYV	03.03.2014	Gerald Netto
8020240	Tiedonhaun kurssi jatkokoulutettaville	2,00	HYV	17.12.2013	Jussi Hyvärinen Kaarina Meriläinen Laura Parikka Marja Aho Merja Kauppinen Riitta Holopainen Tapani Toivanen
3318410	Jatko-opinnot, matematiikka	93,00	* 4/5	28.04.2017	Jouni Rättyä
3317122	Mitta- ja integroimisteoria a	4,00	5/5	14.03.2011	Risto Korhonen
3317123	Mitta- ja integroimisteoria b	4,00	4/5	13.05.2011	Risto Korhonen
3317151	Funktionaalianalyysin peruskurssi	8,00	5/5	13.05.2014	Jouni Rättyä

Suoritukset tavoitetutkinnon mukaan

16.06.2017

Juha-Matti Aleksanteri Huusko

Syntymäaika

20.04.1987

Opiskelijanumero

175783

OPINNOT

OP ARV PVM HYVÄKSYJÄ

3317161	Topologia	8,00	5/5	28.04.2017	Janne Heittokangas
3317171	Kompleksianalyysi II	8,00	4/5	09.12.2011	Rauno Aulaskari
3317311	Matriisit	8,00	4/5	17.12.2013	Maria-José Martin-Gómez
3317333	Variaatiolaskenta	4,00	4/5	21.03.2014	Jukka Tuomela
3317463	Hyperbolinen geometria	2,00	Hyv	07.04.2014	Martti Pesonen
3317467	Syventäviä erityisopintoja <i>Differential Projective Geometry and Schwarzian Derivative, Itä-Suomen yliopisto, 10-20.2.2015</i>	2,00	Hyv	20.02.2015	Martti Pesonen
3318213	Kompleksianalyysin erikoiskurssi	8,00	3/5	30.12.2013	Jouni Rättyä
3318214	Kokonaiset funktiot	8,00	3/5	31.12.2013	Jouni Rättyä
3318215	Nevanlinnan teoria	4,00	5/5	11.06.2014	Risto Korhonen
3318216	Riemannin kuvauslause ja Dirichlet-ongelma	8,00	4/5	15.04.2013	Jouni Rättyä
3318234	Johdatus univalentteihin funktioihin	8,00	3/5	20.10.2015	Jouni Rättyä
3318236	Funktionaalianalyysi	4,00	Hyv	01.12.2014	Jouni Rättyä
3318238	Löwnerin teoria	4,00	HYV	07.03.2016	Jouni Rättyä
3318212	Jatkotutkinnon erityisopintoja <i>Conference in Complex Analysis 3.-4.12.2012 Itä-Suomen Yliopisto</i>	1,00	Hyv	15.01.2013	Janne Heittokangas

Tutkintoon suoritettut opinnot

101,00

* Lasketaan yhteismäärään

** Hyväksiluettu. Hyväksiluettulla opinnolla on opinnon alkuperäinen suorituspäivämäärä.

Allekirjoittaja

Taru Nylund
opintos sihteeri

16.06.2017

Juha-Matti Aleksanteri Huusko

Syntymäaika 20.04.1987

Opiskelijanumero 175783

Opintosuoritusten arvostelu

5/5 = erinomainen

4/5 = kiitettävä

3/5 = hyvä

2/5 = tyydyttävä

1/5 = välttävä

tai HYV = hyväksytty

Toisen kotimaisen kielen hyväksytty taito arvostellaan asteikolla tyydyttävä taito (T) tai hyvä taito (H). Toisen kotimaisen kielen numeerinen arvostelu sijoittuu asteikolla seuraavasti: 1-3 = tyydyttävä taito (T), 4-5 = hyvä taito (H).

Tutkielmien ja väitöskirjan arvostelussa käytetään myös asteikoita

L = laudatur

ECL = eximia cum laude approbatur

MCL = magna cum laude approbatur

CL = cum laude approbatur

NSA = non sine laude approbatur

LA = lubenter approbatur

A = approbatur

tai

khyv kiittäen hyväksytty

hyv hyväksytty

tai

K/E kiitettävä/erinomainen

H hyvä

T tyydyttävä

V välttävä

Opintojen mitoituksen peruste on opintopiste. Yhden lukuvuoden opintojen suorittamiseen keskimäärin vaadittava 1 600 tunnin työpanos vastaa 60 opintopistettä.

Perusopintojen laajuus on vähintään 25 opintopistettä. Aineopintojen laajuus on yhdessä perusopintojen kanssa vähintään 60 opintopistettä. Syventävien opintojen laajuus on vähintään 60 opintopistettä.

Completed Courses According to Target Degree

16.06.2017

Juha-Matti Aleksanteri Huusko

Date of birth 20.04.1987

Student number 175783

Registered 01.08.2007

STUDY RIGHTS

Admitted by	Faculty of Science and Forestry
Organisation	Physics and Mathematics(J)
Valid	28.11.2013 - 15.06.2017
Starting Date	01.08.2013
Decree	Government Decree on University Degrees 794/2004
Scope of Studies	Doctor of Philosophy
Programme	Doctoral Programme in Science, Technology and Computing
Major	Mathematics
Graduation Date	15.06.2017
Doctoral Thesis	Methods for Complex ODEs Based on Localization, Integration and Operator Theory
Grade	Approved
Date	15.06.2017

Courses completed: 14.03.2011 - 15.06.2017

COURSES		CREDIT POINTS	GRADE	DATE	INSTRUCTOR
70487	Doctor of Philosophy	101,00	Pass	15.06.2017	Faculty of Science and Forestry
3318440	Doctoral Thesis	*	App	15.06.2017	Faculty of Science and Forestry
3010600	General postgraduate education	8,00	* Pass	24.03.2015	Jouni Rättyä
1145005	Orientation to Postgraduate Studies		Pass	06.11.2013	Anu Kristiina Liikanen
1145014	Orientation for Doctoral Candidates		Pass	24.03.2015	Anu Kristiina Liikanen
8010053	Speech Communication for Post-Graduate Students	2,00	Pass	02.05.2014	Sanna-Maija Niskanen
8010060	English for Postgraduate Students	4,00	Pass	03.03.2014	Gerald Netto
8020240	Information skills for postgraduate students	2,00	Pass	17.12.2013	Jussi Hyvärinen Kaarina Meriläinen Laura Parikka Marja Aho Merja Kauppinen Riitta Holopainen Tapani Toivanen
3318410	Postgraduate Studies, Mathematics	93,00	* 4/5	28.04.2017	Jouni Rättyä
3317122	Measure and Integration Theory a	4,00	5/5	14.03.2011	Risto Korhonen
3317123	Measure and Integration Theory b	4,00	4/5	13.05.2011	Risto Korhonen

16.06.2017

Juha-Matti Aleksanteri Huusko

Date of birth

20.04.1987

Student number

175783

COURSES		CREDIT POINTS	GRADE DATE		INSTRUCTOR
3317151	Functional Analysis	8,00	5/5	13.05.2014	Jouni Rättyä
3317161	Topology	8,00	5/5	28.04.2017	Janne Heittokangas
3317171	Complex Analysis II	8,00	4/5	09.12.2011	Rauno Aulaskari
3317311	Matrices	8,00	4/5	17.12.2013	Maria-José Martin-Gómez
3317333	Calculus of Variations	4,00	4/5	21.03.2014	Jukka Tuomela
3317463	Hyperbolic Geometry	2,00	Pass	07.04.2014	Martti Pesonen
3317467	Special Undergraduate Studies	2,00	Pass	20.02.2015	Martti Pesonen
	<i>Differential Projective Geometry and Schwarzian Derivative, Univeristy of Eastern Finland, 10-20.2.2015</i>				
3318213	Special Course on Complex Analysis	8,00	3/5	30.12.2013	Jouni Rättyä
3318214	Entire Functions	8,00	3/5	31.12.2013	Jouni Rättyä
3318215	Nevanlinna Theory	4,00	5/5	11.06.2014	Risto Korhonen
3318216	Rieman Mapping Theorem and the Dirichlet Problem	8,00	4/5	15.04.2013	Jouni Rättyä
3318234	Introduction to Univalent Functions	8,00	3/5	20.10.2015	Jouni Rättyä
3318236	Functional Analysis	4,00	Pass	01.12.2014	Jouni Rättyä
3318238	Löwner theory	4,00	Pass	07.03.2016	Jouni Rättyä
3318212	Special Postgraduate Studies	1,00	Pass	15.01.2013	Janne Heittokangas
	<i>Conference in Complex Analysis 3.-4.12.2012 University of Easter Finland</i>				

Studies included in the degree

101,00

* Counted in the studies included in the degree

** Completed at another institution

Signature of the Registrar

Taru Nylund
opintosihteeri

16.06.2017

Juha-Matti Aleksanteri Huusko

Date of birth 20.04.1987

Student number 175783

Explanation of Transcript Grading Systems:

5/5 Excellent
4/5 Very good
3/5 Good
2/5 Satisfactory
1/5 Sufficient
Pass Course completed successfully

Approved courses in the Second Domestic Language (Swedish or Finnish) are graded with the scale satisfactory (T) - good (H). The numerical grading scale of the Second Domestic Language is the following: 1-3 = satisfactory (T), 4-5 = good (H).

In grading of thesis and dissertations, also the following scales are used

L laudatur
ECL eximia cum laude approbatur
MCL magna cum laude approbatur
CL cum laude approbatur
NSA non sine laude approbatur
LA lubenter approbatur
A approbatur
or
AppD Approved with Distinction
App Approved
or
K/E Excellent
H Good
T Satisfactory
V Sufficient

The measure for the extent of studies shall be a credit point. The average input of 1600 working hours needed for studies of one academic year shall correspond to 60 credits.

The combined extent of basic and intermediate studies shall be a minimum of 60 credits.



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): | Huusko |
| 1.2 Given name(s): | Juha-Matti Aleksanteri |
| 1.3 Date of birth (day/month/year): | 20.04.1987 |
| 1.4 Student identification number or code: | 175783 |

2 INFORMATION IDENTIFYING THE QUALIFICATION

- | | |
|---|--|
| 2.1 Name of qualification and title conferred (in original language): | Filosofian tohtori
(Doctor of Philosophy) |
| 2.2 Main field(s) of study for the qualification: | Doctoral Programme in Science, Technology and Computing
Mathematics |
| 2.3 Name and status of awarding institution (in original language): | Itä-Suomen yliopisto / Luonnontieteiden ja metsätieteiden tiedekunta
(University of Eastern Finland / Faculty of Science and Forestry),
state recognised university, Decree on Higher Education Degree Structure 464/1998.
The quality assurance system of the university has passed the audit conducted by the Finnish Higher Education Evaluation Council. The auditing certificate is valid for six years (until 21.4.2023). |
| 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: | Doctoral degree. See 8. |
| 3.2 Official length of programme: | The degree consists of at least 240 credits, 4 years of full-time study. Finnish credits are fully compatible with the ECTS. |

DIPLOMA SUPPLEMENT

3.3 Access requirement(s):

The Finnish Matriculation Examination gives general eligibility for higher education. General eligibility is also given by Finnish upper secondary vocational qualifications. These qualifications require at least 12 years of schooling. Equivalent foreign qualifications also give general eligibility for higher education.

There is numerus clausus, i.e. restricted entry, to all fields of study. See 8.

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study:

Full-time

4.2 Programme requirements:

In Finland, postgraduate education and doctoral degrees come under the provisions of the Government Decree on University Degrees (794/2004).

In accordance with Section 21 of the above mentioned Decree, the aim of postgraduate education is

- 1) that the student becomes well-versed in his/her own field of research and its social significance and gains knowledge and skills needed to apply scientific research methods independently and critically and to produce new scientific knowledge within his/her field of research;
- 2) becomes conversant with the development, basic problems and research methods of his/her own field of research; and
- 3) gains such knowledge of the general theory of science and of other disciplines relating to his/her own field of research as enables him/her to follow developments in them.

In accordance with Section 22 of the above mentioned Decree, to be awarded a doctorate, the student must:

- 1) complete the required postgraduate studies;
- 2) demonstrate independent and critical thinking in the field of research; and
- 3) write a doctoral dissertation and defend it in public.

The University of Eastern Finland accepts monographs and article-based dissertations as



DIPLOMA SUPPLEMENT

4.3 Programme details (e.g., modules or units studied), and the individual grades/marks/credits obtained (if this information is available on an official transcript this should be used here.):

4.4 Grading scheme and, if available, grade distribution guidance:

4.5 Overall classification of the qualification:

doctoral dissertations. A monograph is a scholarly work written on a specific topic by the doctoral candidate alone. An article-based dissertation includes a sufficient number, as deemed by the university, of scientific publications or manuscripts accepted for publication on the same set of problems and a paper summarising the findings, or some other work which meets corresponding scientific criteria. The publications may include co-authored publications if the doctoral candidate's independent contribution to them can be demonstrated (Government Decree on University Degrees 794/2004, Section 22).

See transcript of records.

Study attainments are assessed on the scale pass-fail. Passed study attainments can also be assessed on the following grading scale: sufficient (1), satisfactory (2), good (3), very good (4), and excellent (5). Furthermore, theses completed in advanced studies, licentiate theses and doctoral dissertations can be graded on the following seven-stage scale: *approbatur*, *lubenter approbatur*, *non sine laude approbatur*, *cum laude approbatur*, *magna cum laude approbatur*, *eximia cum laude approbatur* and *laudatur*; or on the scale satisfactory, good and excellent; or on the scale pass and pass with distinction.

The assessment of language skills in the second domestic language uses the scale satisfactory-good; as laid down in the Act on the Knowledge of Languages Required of Personnel in Public Bodies (Laki julkisyhteisöjen henkilöstöltä vaadittavasta kielitaidosta 424/2003) and the Government Decree on the Demonstration of Language Skills in the Finnish and Swedish Languages in State Administration (Valtioneuvoston asetus suomen ja ruotsin kielen taidon osoittamisesta valtioneuvostossa 481/2003).

Not applicable

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

Not applicable.

DIPLOMA SUPPLEMENT

5.2 Professional status:

Under the Finnish legislation, a person who has taken the degree of Doctor of Philosophy is qualified for posts or positions in the public sector for which the qualification requirement is a doctoral degree. In some cases, the qualification requirement also includes the completion of minor or major studies in certain specified fields of study. 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:

Joensuun yliopisto (University of Joensuu) and Kuopion yliopisto (University of Kuopio) have merged into Itä-Suomen yliopisto (University of Eastern Finland), as of 1.1.2010. Both Joensuun yliopisto and Kuopion yliopisto were state recognised universities.

6.2 Further information sources:

www.uef.fi (University of Eastern Finland)
www.minedu.fi (Ministry of Education and Culture)
www.oph.fi (Finnish National Board of Education)

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date:

15.06.2017

7.2 Name and signature:



Taru Nyland
Administrative Officer

7.3 Capacity:

7.4 Official stamp or seal:



8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

See next page.



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 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 and Culture 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 and Culture 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.

FM Juha-Matti Huuskon väitöskirjan Methods for Complex ODEs Based on Localization, Integration and Operator Theory hyväksyminen

Vastaväittäjä, professori Shamil Makhmutov (Department of Mathematics & Statistics, Sultan Qaboos University, Muscat, Oman), puoltaa väitöskirjan hyväksymistä opinnäytteenä filosofian tohtorin tutkintoa varten ja esittää arvosanaksi hyväksytty. Väittelijällä ei ole huomautettavaa lausunnosta. Vastaväittäjän lausunto on esityslistan liitteenä.

Esitys: Tiedekuntaneuvosto päättää FM Juha-Matti Huuskon väitöskirjan hyväksymisestä ja arvostelee sen arvosanalla hyväksytty.

Päätös: Esityksen mukainen.

Asianmukaisesti allekirjoitetusta ja tarkastetusta pöytäkirjasta kirjoitetun otteen oikeaksi todistaa

Kuopio 16.6.2017

Anna-Leena Nylund

Anna-Leena Nylund
Pöytäkirjanpitäjä

