

Tutkintotodistukset

Sisällys

1. Filosofian tohtori, s. 2
2. Filosofian maisteri, s. 17
3. Luonnontieteiden kandidaatti, s. 29
4. Opintosuoritusote 7.9.2017, s. 41



UNIVERSITY OF
EASTERN FINLAND

TUTKINTOTODISTUS

Tutkintoa varten on suoritettu asetuksen (794/2004)
edellyttämät jatkokoulutuksen opinnot.

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*

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*

TUTKINNON KOKONAISLAAJUUS 101,0

Joensuussa, kesäkuun 15. päivänä 2017
Luonnontieteiden ja metsätieteiden tiedekunnan puolesta



JURKA 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 opinnot on opinnon alkuperäinen suorituspäivämäärä.

Allekirjoittaja

Taru Nylund
opintos sihteeri

Suoritukset tavoitetutkinnon mukaan

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.

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 <i>Differential Projective Geometry and Schwarzian Derivative,</i> <i>University of Eastern Finland, 10-20.2.2015</i>	2,00	Pass	20.02.2015	Martti Pesonen
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 <i>Conference in Complex Analysis 3.-4.12.2012 University of Eastern Finland</i>	1,00	Pass	15.01.2013	Janne Heittokangas

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

Completed Courses According to Target Degree

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

	<p>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).</p>
<p><i>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.):</i></p>	<p>See transcript of records.</p>
<p><i>4.4 Grading scheme and, if available, grade distribution guidance:</i></p>	<p>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: <i>approbatur</i>, <i>lubenter approbatur</i>, <i>non sine laude approbatur</i>, <i>cum laude approbatur</i>, <i>magna cum laude approbatur</i>, <i>eximia cum laude approbatur</i> and <i>laudatur</i>; or on the scale satisfactory, good and excellent; or on the scale pass and pass with distinction.</p>
	<p>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 valtioneuvoston asetus 481/2003).</p>
<p><i>4.5 Overall classification of the qualification:</i></p>	<p>Not applicable</p>
5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION	
<p><i>5.1 Access to further study:</i></p>	<p>Not applicable.</p>

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:



7.3 Capacity:

Taru Nyland
Administrative Officer

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 hyväksyty. Väittelijällä ei ole huomautettavaa lausunnosta. Vastaväittäjän lausunto on esityslistan liitteenä.

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

Päätös: Esityksen mukainen.

Asianmukaisesti allekirjoitetusta ja tarkastetusta pöytäkirjasta kirjoitetun otteen oikeaksi todistaa

Kuopio 16.6.2017

Anna-Leena Nylund

Anna-Leena Nylund
Pöytäkirjanpitäjä



Juha-Matti Aleksanteri Huusko

(200487-093K)

on suorittanut valtioneuvoston asetuksen 794/2004 mukaisen
filosofian maisterin tutkinnon aineenopettajan koulutuksessa.

	Opintopisteet	Arvosana
PÄÄAINE: MATEMATIIKKA		
Syventävät opinnot	72,0	Kiitettävää
SIVUAINEET		
Fysiikka		
Aineopinnot	38,0	Erinomainen
Opettajan pedagogiset opinnot	35,0	Erinomainen
MUUT OPINNOT	57,0	
TUTKINNON KOKONAISLAAJUUS	202,0	

Tutkinnon suorittanut on osoittanut
yliopistojen tutkinnoista annetun asetuksen
(794/2004) mukaisen kielitaidon aiemmin
suorittamassaan tutkinnoissa.

Pääaineen opintoihin sisältyvä pro gradu -tutkielma on hyväksytty
arvosanalla *kiitettävä*.

Joensuussa, syyskuun 20. päivänä 2013
Luonnontieteiden ja metsätieteiden
tiedekunnan puolesta



TIMO JÄÄSKELÄINEN, DEKAANI



KAISA LAITINEN, HALLINTOPÄÄLLIKKÖ



Tähän tutkintotodistukseen kuuluu kaksi liitettä. Opintosuoritusotteessa esitetään tutkintoon kuuluvat opinnot ja kansainväliseen käyttöön tarkoitettussa Diploma Supplement -liitteessä tiedot yliopistosta sekä tutkintotodistuksessa tarkoitetuista opinnoista, niiden tasosta ja asemasta koulutusjärjestelmässä.

Suoritukset tavoitetutkinnon mukaan

24.09.2013

Juha-Matti Aleksanteri Huusko
Ahovaarantie 372
88900 KUHMO

Syntymäaika 20.04.1987
Opiskelijanumero 175783
Kirjoilletulo 01.08.2007

OPINTO-OIKEUDET

Myöntäjä	Luonnontieteiden ja metsätieteiden tiedekunta
Organisaatio	Fysiikka ja matematiikka (J)
Voimassaolo	01.08.2007 - 20.09.2013
Opintojen aloitus	16.02.2013
Tutkintoasetus	Valtioneuvoston asetus yliopistojen tutkinnoista n:o 794/2004
Tavoitetutkinto	Filosofian maisteri, luonnontieteet
Pääaine	Matematiikka
Suuntautuminen	Aineenopettaja
Sivuaine	Fysiikka
	Opettajan pedagogiset opinnot
Tutkinnon suorituspäivä	20.09.2013
Opinnäyte, syventävät opinnot	Bergmanin avaruuden funktioiden nollakohdista
Arvosana	Kiitettävä
Suorituspäivä	20.09.2013

Suoritukset ajalta: 14.04.2008 - 20.09.2013

OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ	
70287	Filosofian maisteri, luonnontieteet	202,00	HYV	20.09.2013	Luonnontieteiden ja metsätieteiden tiedekunta
0510	Matematiikka	72,00 *	4/5	20.09.2013	Risto Korhonen
3319140	Matematiikka (aineenopettaja, syventävät opinnot)	72,00	4/5	20.09.2013	Risto Korhonen
3317491	Pro gradu -tutkielma (matematiikka)	30,00	4/5	20.09.2013	Luonnontieteiden ja metsätieteiden tiedekunta
3317222	Matematiikan historia	4,00	5/5	12.05.2011	Heli Silvennoinen
3317242	Matematiikan havainnollistaminen ja kerhotoiminta	6,00	HYV	23.05.2011	Martti Pesonen
3317493	Maisterin tutkinnon kypsyysnäyte		HYV	18.09.2013	Jouni Rättyä
J180501	Analyysi IV	8,00	4/5	21.04.2010	Rauno Aulaskari
J180511	Geometria	8,00	4/5	15.05.2009	Visa Latvala
J180551	Koulumatematiikan harjoituskurssi	4,00	HYV	30.04.2010	Heli Silvennoinen
J180603	Kompleksianalyysi Ia	4,00	5/5	04.11.2009	Jouni Rättyä
J180604	Kompleksianalyysi Ib	4,00	3/5	16.12.2009	Jouni Rättyä

Suoritukset tavoitetutkinnon mukaan

24.09.2013

Juha-Matti Aleksanteri Huusko

Syntymäaika

20.04.1987

Opiskelijanumero

175783

OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ	
J180721	Matematiikan tietotekniikka kouluopetuksessa	4,00	HYV	25.03.2010	Heli Silvennoinen
0520	Fysiikka	38,00 *	5/5	30.08.2013	Markku Kuittinen
3314320	Fysiikan aineopinnot opettajille, sivuaine	38,00	5/5	30.08.2013	Markku Kuittinen
3311001	Aineopintojen laboratoriotyöt I	5,00	5/5	30.08.2013	Martti Mäkinen
3312034	SciFest-työpajakokonaisuuden suunnittelu ja toteutus	5,00	HYV	21.05.2012	Pekka Hirvonen
J190202	Sähkömagnetismi	7,00	5/5	15.05.2009	Markku Saarelainen
J190206	Fotoniikka	7,00	5/5	14.12.2009	Markku Kuittinen
J190301	Kvantti- ja atomifysiikka	6,00	5/5	21.12.2009	Pasi Vahimaa
J190404	Kokeellisen koulufysiikan kurssi	5,00	5/5	27.05.2009	Ville Nivalainen
J190541	Laboratoriotyöskentelyn perusteet opettajille	3,00	Hyv	16.02.2009	Pekka Hirvonen
2008	Opettajan pedagogiset opinnot	35,00 *	5/5	17.05.2013	Pertti Väisänen
2320560	AINEENOPETTAJAN PEDAGOGISET OPINNOT (35 op) A986/1998 tarkoittamat vähintään 60 opintopisteen laajuiset opettajan pedagogiset opinnot sisältävät sekä alempaan että ylempään korkeakoulututkintoon.	35,00	5/5	17.05.2013	Pertti Väisänen
2320503	Opettajan ammatillinen vuorovaikutusosaaminen	3,00	HYV	05.12.2011	Kirsi Heikkinen-Jokilahti
2320505	Soveltava harjoittelu	4,00	HYV	07.02.2013	Kari Sormunen
2320506	Eheyttävä pedagogiikka	3,00	5/5	15.05.2013	Kari Sormunen
2510012	Perusharjoittelu	5,00	HYV	14.12.2012	Seija Jeskanen
2510022	Syventävä harjoittelu	8,00	HYV	17.05.2013	Seija Jeskanen
J312201	Pedagoginen etiikka	3,00	5/5	05.03.2010	Risto Ikonen
J313107	Ainepedagogiset perusprosessit	3,00	5/5	14.12.2010	Lenni Haapasalo
J313109	Ainepedagoginen tutkimuspraktikum (peda hum,mat, luonn, teo)	3,00	4/5	16.05.2011	Lenni Haapasalo
2510050a	Opetushallinto ja johtaminen, luennot ja kirjallisuus	2,00	HYV	31.10.2011	Petri Salo
2510050b	Opetushallinto ja johtaminen, seminaari	1,00	HYV	18.10.2011	Harjoittelukoulut Joensuussa (J)
3010500	Muut tutkintoon sisältyvät opinnot	57,00 *	HYV	28.02.2013	Luonnontiet. ja metsätiet. tdn yhteiset (J,K)
3311014	Suhteellisuusteoriaa	4,00	5/5	16.12.2010	Kai-Erik Peiponen
3315139	Maisterin tutkinnon hops	1,00	HYV	28.02.2013	Risto Korhonen
3317191	Differentiaaligeometria	8,00	3/5	11.05.2012	Samuli Piipponen
3317321	Osittaisdifferentiaaliyhtälöt	8,00	4/5	13.05.2011	Jukka Tuomela

Suoritukset tavoitetutkinnon mukaan

24.09.2013

Juha-Matti Aleksanteri Huusko

Syntymäaika

20.04.1987

Opiskelijanumero

175783

OPINNOT

		OP	ARV	PVM	HYVÄKSYJÄ
J150103	Kemian perusteet	5,00	5/5	14.04.2008	Tuure-Pekka Jauhiainen
J150306	Fysikaalinen kemia I	6,00	4/5	06.03.2009	Tapani Pakkanen
J150307	Fysikaalinen kemia II	3,00	2/5	24.04.2009	Tapani Venäläinen
J150335	Orgaaninen spektroskopia	2,00	4/5	08.05.2009	Tuure-Pekka Jauhiainen
J180206	Todennäköisyyslaskenta Ib	4,00	5/5	05.05.2009	Pekka Smolander
J180661	Lukuteoria	8,00	5/5	11.05.2010	Visa Latvala
J190207	Mekaniikan jatkokurssi	5,00	5/5	17.12.2009	Arto Passoja
J700334	Opiskelijatuutorointi	3,00	HYV	11.12.2008	Visa Latvala

Tutkintoon suoritettut opinnot

202,00

* Lasketaan yhteismäärään

** Hyväksiluettu

Allekirjoittaja



Aino Eskelinen

osastosihteeri



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 arvostelu

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.

24.09.2013

Juha-Matti Aleksanteri Huusko
Ahovaarantie 372
88900 KUHMO

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 01.08.2007 - 20.09.2013
Starting Date 16.02.2013
Decree Government Decree on University Degrees 794/2004
Scope of Studies Master of Science
Major Mathematics
Orientation Subject Teacher
Minor Physics
Subject Teacher's Pedagogical Studies
Graduation Date 20.09.2013
Thesis, Advanced Studies Bergmanin avaruuden funktioiden nollakohdista
Grade Very good
Date 20.09.2013

Courses completed: 14.04.2008 - 20.09.2013

COURSES	CREDIT POINTS	GRADE	DATE	INSTRUCTOR	
70287	Master of Science	202,00	Pass	20.09.2013	Faculty of Science and Forestry
0510	Mathematics	72,00 *	4/5	20.09.2013	Risto Korhonen
3319140	Mathematics (Subject Teacher, Advanced Studies)	72,00	4/5	20.09.2013	Risto Korhonen
3317491	Master's Thesis (Mathematics)	30,00	4/5	20.09.2013	Faculty of Science and Forestry
3317222	History of Mathematics	4,00	5/5	12.05.2011	Heli Silvennoinen
3317242	Mathematical Demonstrations and Club Activities	6,00	Pass	23.05.2011	Martti Pesonen
3317493	Master's Maturity Test		Pass	18.09.2013	Jouni Rättyä
J180501	Analysis IV	8,00	4/5	21.04.2010	Rauno Aulaskari
J180511	Geometry	8,00	4/5	15.05.2009	Visa Latvala
J180551	School Mathematics	4,00	Pass	30.04.2010	Heli Silvennoinen
J180603	Complex Analysis Ia	4,00	5/5	04.11.2009	Jouni Rättyä
J180604	Complex Analysis Ib	4,00	3/5	16.12.2009	Jouni Rättyä
J180721	Mathematical Computing in Schools	4,00	Pass	25.03.2010	Heli Silvennoinen
0520	Physics	38,00 *	5/5	30.08.2013	Markku Kuittinen

24.09.2013

Juha-Matti Aleksanteri Huusko

Date of birth

20.04.1987

Student number

175783

COURSES		CREDIT POINTS	GRADE	DATE	INSTRUCTOR
3314320	Physics, Intermediate Studies, Subject Teacher, Minor Subject	38,00	5/5	30.08.2013	Markku Kuittinen
3311001	Laboratory Practice I	5,00	5/5	30.08.2013	Martti Mäkinen
3312034	Planning and Realization of a Workshop for SciFest	5,00	Pass	21.05.2012	Pekka Hirvonen
J190202	Electromagnetism	7,00	5/5	15.05.2009	Markku Saarelainen
J190206	Optics	7,00	5/5	14.12.2009	Markku Kuittinen
J190301	Quantum and Atomic Physics	6,00	5/5	21.12.2009	Pasi Vahimaa
J190404	Experimental physics for schools	5,00	5/5	27.05.2009	Ville Nivalainen
J190541	Basic laboratory practice for teachers	3,00	Pass	16.02.2009	Pekka Hirvonen
2008	Subject Teacher's Pedagogical Studies	35,00 *	5/5	17.05.2013	Pertti Väisänen
2320560	TEACHERS PEDAGOGICAL STUDIES (35 op)	35,00	5/5	17.05.2013	Pertti Väisänen
2320503	The Teacher's Professional Competence in Interaction	3,00	Pass	05.12.2011	Kirsi Heikkinen-Jokilahti
2320505	Applied Teaching Practice	4,00	Pass	07.02.2013	Kari Sormunen
2320506	Integrating Pedagogy	3,00	5/5	15.05.2013	Kari Sormunen
2510012	Basic Teaching Practice	5,00	Pass	14.12.2012	Seija Jeskanen
2510022	Advanced Teaching Practice	8,00	Pass	17.05.2013	Seija Jeskanen
J312201	Pedagogical Ethics	3,00	5/5	05.03.2010	Risto Ikonen
J313107	Teaching and Learning Processes in Subject Pedagogy	3,00	5/5	14.12.2010	Lenni Haapasalo
J313109	Research in Subject Pedagogy	3,00	4/5	16.05.2011	Lenni Haapasalo
2510050a	Administration and Leading in Education, lectures and literature	2,00	Pass	31.10.2011	Petri Salo
2510050b	Administration and Leading in Education, seminar	1,00	Pass	18.10.2011	University Teacher Training Schools in Joensuu (J)
3010500	Other studies included in degree	57,00 *	Pass	28.02.2013	Faculty of Science and Forestry, shared activities (J,K)
3311014	Theory of relativity	4,00	5/5	16.12.2010	Kai-Erik Peiponen
3315139	Study Planning	1,00	Pass	28.02.2013	Risto Korhonen
3317191	Differential Geometry	8,00	3/5	11.05.2012	Samuli Piipponen
3317321	Partial Differential Equations	8,00	4/5	13.05.2011	Jukka Tuomela
J150103	Basic Chemistry	5,00	5/5	14.04.2008	Tuure-Pekka Jauhiainen
J150306	Physical Chemistry I	6,00	4/5	06.03.2009	Tapani Pakkanen
J150307	Physical Chemistry II	3,00	2/5	24.04.2009	Tapani Venäläinen
J150335	Organic Spectroscopy	2,00	4/5	08.05.2009	Tuure-Pekka Jauhiainen
J180206	Probability Theory Ib	4,00	5/5	05.05.2009	Pekka Smolander

24.09.2013

Juha-Matti Aleksanteri Huusko

Date of birth 20.04.1987

Student number 175783

COURSES		CREDIT POINTS	GRADE	DATE	INSTRUCTOR
J180661	Number Theory	8,00	5/5	11.05.2010	Visa Latvala
J190207	Advanced Mechanics	5,00	5/5	17.12.2009	Arto Passoja
J700334	Tutoring	3,00	Pass	11.12.2008	Visa Latvala

Studies included in the degree 202,00

* Counted in the studies included in the degree

** Completed at another institution

Signature of the Registrar

*Aino Eskelinen*Aino Eskelinen
Administrative Officer

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).

Grading of thesis and dissertation:

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 maisteri (Master of Science)
2.2 Main field(s) of study for the qualification:	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 24.3.2017).
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:	Second-cycle university degree. See 8.
3.2 Official length of programme:	The degree consists of at least 120 credits, 2 years of full-time study. Finnish credits are fully compatible with the ECTS.
3.3 Access requirement(s):	The admission requirement for the second-cycle university degree is a first-cycle degree (See 8.1.1.).

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study:	Full-time
4.2 Programme requirements:	The education shall 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



DIPLOMA SUPPLEMENT

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 education shall be based on scientific research or artistic activity and professional practices in the field.

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:

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 valtioneuvoston asetuksessa 481/2003).

4.5 Overall classification of the qualification:

Not applicable



DIPLOMA SUPPLEMENT

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

Eligible for doctoral studies.

The admissions decisions are made in the receiving higher education institution.

5.2 Professional status:

Under the Finnish legislation, a person who has taken the degree of Master of Science 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 minor or major studies in certain specified fields of study. In Finland, the teacher's profession is regulated by national legislation. The eligibility requirements for teaching posts and positions are stated in the Teaching Qualifications Decree (986/1998).

The degree (completed by Huusko, Juha-Matti Aleksanteri) is in compliance with the eligibility requirements for subject teachers. It qualifies the holder to provide subject teaching both in upper secondary education and in basic education (age group 7-19) in the following subjects: Physics, Mathematics.

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)



DIPLOMA SUPPLEMENT

7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 20.09.2013

7.2 Name and signature:



Aino Eskelinen

Aino Eskelinen
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 (ammattilinen 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.

Juha-Matti Aleksanteri Huusko

(s. 20.04.1987)

on suorittanut valtioneuvoston asetuksen 794/2004 mukaisen

luonnontieteiden kandidaatin tutkinnon aineenopettajan koulutuksen mukaisesti.

	(Opintopisteet)	(Arvosana)
PÄÄAINE: MATEMATIIKKA		
Perus- ja aineopinnot	74,0	<i>Erinomainen</i>
Pääaineen opintoihin sisältyvä kandidaatin tutkielma (10 op) on arvosteltu arvosanalla <i>erinomainen</i> .		
SIVUAINEET		
Fysiikka, perusopinnot	25,0	<i>Erinomainen</i>
Aineenopettajan pedagogiset opinnot	25,0	<i>Hyvä</i>
KIELI- JA VIESTINTÄOPINNOT	8,0	
MUUT TUTKINTOON SIS. OPINNOT (sisältää 32 op matematiikan opintoja).	48,0	
TUTKINNON KOKONAISLAAJUUS	180,0	

Tutkinnon suorittanut on saanut suomenkielisen koulusivistyksen ja kirjoittanut tutkintoon sisältyvän kypsyysnäytteen suomen kielellä.

Tutkinnon suorittanut on osoittanut julkisyhteisöjen henkilöstöltä vaadittavasta kielitaidosta annetun lain (424/2003) 6 §:n 1 momentin mukaan kaksikielisessä viranomaisessa valtion henkilöstöltä vaadittavaa toisen kielen taitoa seuraavasti: ruotsin kielen *hyvä* suullinen taito ja *hyvä* kirjallinen taito.

Hän on lisäksi osoittanut yliopistojen tutkinnoista annetun asetuksen (794/2004) 6 §:n 2 momentin mukaisen vieraan kielen taidon englannin kielessä.

Joensuussa, helmikuun 15. päivänä 2013
Luonnontieteiden ja metsätieteiden
tiedekunnan puolesta



TIMO JÄÄSKELÄINEN, DEKAANI



KAISA LAITINEN, HALLINTOPÄÄLLIKKÖ



Suoritukset tavoitetutkinnon mukaan

19.02.2013

Juha-Matti Aleksanteri Huusko
Ahovaarantie 372
88900 KUHMO

Syntymäaika 20.04.1987
Opiskelijanumero 175783
Kirjoilletulo 01.08.2007

OPINTO-OIKEUDET

Myöntäjä	Luonnontieteiden ja metsätieteiden tiedekunta
Organisaatio	Fysiikka ja matematiikka, Joensuu (J)
Voimassaolo	01.08.2007 - 15.02.2013
Opintojen aloitus	01.08.2007
Tutkintoasetus	Valtioneuvoston asetus yliopistojen tutkinnoista n:o 794/2004
Tavoitetutkinto	Luonnontieteiden kandidaatti
Pääaine	Matematiikka
Suuntautuminen	Aineenopettaja
Sivuaine	Fysiikka
	Opettajan pedagogiset opinnot
Tutkinnon suorituspäivä	15.02.2013

Suoritukset ajalta: 30.10.2007 - 15.02.2013

OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ
345 Luonnontieteiden kandidaatti	180,00	HYV	15.02.2013	Luonnontieteiden ja metsätieteiden tiedekunta
2320530 AINEENOPETTAJAN PEDAGOGISET OPINNOT (25 op)	25,00*	3/5	21.03.2012	Pertti Väisänen
2320101 Kasvatus ja sen tutkimus	5,00	3/5	21.03.2012	Pertti Väisänen
2320203 Pedagogisia näkökulmia tieto- ja viestintäteknologian opetuskäyttöön	3,00	HYV	05.01.2012	Jani Kontkanen
J312102 Opetuksen, oppimisen ja opettajuuden perusteet, yhteinen osa	2,00	5/5	18.10.2010	Lenni Haapasalo
J312103 Opetuksen, oppimisen ja opettajuuden perusteet, eriytyvä osa	3,00	HYV	19.10.2010	Lenni Haapasalo
J312225B Orientoiva harjoittelu (peda hum,mat.luonn,teo)	3,00	HYV	30.09.2010	Seija Jeskanen
J313111A Erilaisuuden kohtaaminen kasvatus- ja opetustyössä - yhteinen osa	3,00	2/5	08.12.2010	Leena Holopainen
J313111B Erilaisuuden kohtaaminen kasvatus- ja opetustyössä - eriytyvä osa	3,00	HYV	18.05.2010	Päivi-Katriina Juutilainen

Suoritukset tavoitetutkinnon mukaan

19.02.2013

Juha-Matti Aleksanteri Huusko

Syntymäaika

20.04.1987

Opiskelijanumero

175783

OPINNOT

		OP	ARV	PVM	HYVÄKSYJÄ
J312106A	Kasvatus ja kehitys elämänkulussa: luennot	2,00	4/5	11.05.2010	Marjatta Vanhalakka-Ruoho
J312106B	Kasvatus ja kehitys elämänkulussa: yksi teos	1,00	3/5	11.03.2011	Marjatta Vanhalakka-Ruoho
3010300	Kieli- ja viestintäopinnot	8,00 *	HYV	15.02.2013	Visa Latvala
J700235	Matematiikan viestintä	3,00	HYV	16.12.2009	Heli Silvennoinen
J701514a	Tieteellisen ruotsin kirjallinen taito matematiikan ja fysiikan opiskelijoille	2,00	4/5	12.03.2010	Elna Riikonen
J701514b	Tieteellisen ruotsin suullinen taito matematiikan ja fysiikan opiskelijoille	1,00	4/5	12.03.2010	Elna Riikonen
J701600	Johdatus akateemisiin opiskelutaitoihin (englanti)	1,00	HYV	23.02.2010	Meri Jäppinen
J701614	Akateemista englantia matematiikan ja fysiikan opiskelijoille	1,00	3/5	21.05.2010	Anna Krizsan
3010500	Muut tutkintoon sisältyvät opinnot sisältää 32 op Matematiikan opintoja.	48,00 *	HYV	08.03.2011	Visa Latvala
3311007	Fysiikan numeerisen laskennan alkeet	3,00	HYV	08.03.2011	Hannu Laamanen
3316321	Numeerinen analyysi	8,00	5/5	20.12.2010	Timo Erkama
J000012	Orientoituminen yliopisto-opiskeluun	2,00	HYV	30.10.2007	Visa Latvala
J180203a	Differentiaaliyhtälöt a	4,00	3/5	26.10.2009	Jukka Tuomela
J180203b	Differentiaaliyhtälöt b	4,00	4/5	10.12.2009	Jukka Tuomela
J180305	Johdatus topologiaan	4,00	5/5	11.03.2010	Jouni Rättyä
J180402	Sovellettu analyysi	8,00	5/5	28.04.2010	Timo Erkama
J180654	Dynaamiset systeemit	4,00	5/5	16.04.2010	Timo Erkama
J190107	Fysiikan matemaattiset menetelmät I	5,00	5/5	12.12.2007	Heikki Hyvärinen
J190121	Tähtitieteen perusteet	5,00	4/5	10.04.2008	Tommi Itkonen
J700165	Kandidaatin tutkinnon hops	1,00	HYV	07.04.2008	Visa Latvala
3314000	Fysiikan perusopinnot	25,00 *	5/5	11.05.2009	Pasi Vahimaa
J190101	Mekaniikka	7,00	5/5	07.12.2007	Arto Passoja
J190103	Fysiikan perustyöt	5,00	Hyv	11.05.2009	Arvo Vaittinen Hannu Laamanen
J190104	Elektroniikan perusteet	4,00	5/5	29.04.2008	Raimo Silvennoinen
J190106	Sähköopin perusteet	4,00	5/5	05.03.2008	Arto Passoja
J190204	Termofysiikka	5,00	4/5	25.11.2008	Pekka Hirvonen
3319130	Matematiikka (aineenopettaja, perus- ja aineopinnot)	74,00 *	5/5	21.11.2011	Risto Korhonen
3316492	Kandidaatintutkielma	10,00	5/5	21.11.2011	Jouni Rättyä
3316493	Kandidaatin tutkinnon kypsyysnäyte		HYV	17.11.2011	Jouni Rättyä

Suoritukset tavoitetutkinnon mukaan

19.02.2013

Juha-Matti Aleksanteri Huusko

Syntymäaika 20.04.1987

Opiskelijanumero 175783

OPINNOT

		OP	ARV	PVM	HYVÄKSYJÄ
J180111	Analyysi I	9,00	5/5	10.12.2007	Janne Heittokangas
J180112	Analyysi II	9,00	5/5	08.05.2008	Jaakko Hyvönen
J180113	Analyysi III	9,00	5/5	12.12.2008	Jaakko Hyvönen
J180202	Lineaarialgebra	9,00	5/5	11.05.2008	Martti Pesonen
J180205	Todennäköisyysslaskenta Ia	4,00	5/5	09.03.2009	Pekka Smolander
J180301	Algebra	8,00	5/5	08.12.2008	Heli Silvennoinen
J180404	Diskreetti matematiikka	8,00	5/5	19.12.2008	Martti Pesonen
J700431	Matematiikan johdantokurssi	8,00	5/5	14.12.2007	Martti Pesonen

Tutkintoon suoritettut opinnot

180,00

* Lasketaan yhteismäärään

** Hyväksiluettu

Allekirjoittaja

Anita Oinasmaa
 Anita Oinasmaa
 osastosihteeri



Opintosuoritusten arvostelu

5/5 = erinomainen
 4/5 = kiitettävä
 3/5 = hyvä
 2/5 = tyydyttävä
 1/5 = välttävä
 tai HYV = hyväksytyt

Toisen kotimaisen kielen hyväksytyt 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 arvostelu

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
 khv kiittäen hyväksytyt
 hvv hyväksytyt
 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.

19.02.2013

Juha-Matti Aleksanteri Huusko
Ahovaarantie 372
88900 KUHMO

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, Joensuu (J)
Valid 01.08.2007 - 15.02.2013
Starting Date 01.08.2007
Decree Government Decree on University Degrees 794/2004
Scope of Studies Bachelor of Science
Major Mathematics
Orientation Subject Teacher
Minor Physics
Subject Teacher's Pedagogical Studies
Graduation Date 15.02.2013

Courses completed: 30.10.2007 - 15.02.2013

COURSES	CREDIT POINTS	GRADE	DATE	INSTRUCTOR
345 Bachelor of Science	180,00	Pass	15.02.2013	Faculty of Science and Forestry
2320530 TEACHER'S PEDAGOGICAL STUDIES (25 op)	25,00*	3/5	21.03.2012	Pertti Väisänen
2320101 Education and Educational Research	5,00	3/5	21.03.2012	Pertti Väisänen
2320203 Pedagogical Perspectives of Educational Use of ICTs	3,00	Pass	05.01.2012	Jani Kontkanen
J312102 Basic Skills in Teaching, Learning and Teacherhood	2,00	5/5	18.10.2010	Lenni Haapasalo
J312103 Basic Skills in Teaching, Learning and Teacherhood	3,00	Pass	19.10.2010	Lenni Haapasalo
J312225B Orientation to Teaching Practice	3,00	Pass	30.09.2010	Seija Jeskanen
J313111A Encountering Diversity of Students	3,00	2/5	08.12.2010	Leena Holopainen
J313111B Encountering Diversity of Students	3,00	Pass	18.05.2010	Päivi-Katriina Juutilainen
J312106A Education and Development During life Course	2,00	4/5	11.05.2010	Marjatta Vanhalakka-Ruoho
J312106B Education and Development During life Course	1,00	3/5	11.03.2011	Marjatta Vanhalakka-Ruoho
3010300 Studies in language and communication	8,00*	Pass	15.02.2013	Visa Latvala
J700235 Communications in Mathematics	3,00	Pass	16.12.2009	Heli Silvennoinen

Completed Courses According to Target Degree

19.02.2013

Juha-Matti Aleksanteri Huusko

Date of birth

20.04.1987

Student number

175783

COURSES		CREDIT POINTS	GRADE	DATE	INSTRUCTOR
J701514a	Academic Written Skills in Swedish for Students of Mathematics and Physics	2,00	4/5	12.03.2010	Elna Riikonen
J701514b	Academic Oral Skills in Swedish for Students of Mathematics and Physics	1,00	4/5	12.03.2010	Elna Riikonen
J701600	Introduction to Academic Study Skills (English)	1,00	Pass	23.02.2010	Meri Jäppinen
J701614	Academic English for Students of Mathematics and Physics	1,00	3/5	21.05.2010	Anna Krizsan
3010500	Other studies included in degree includes 32 ECTS credits studies of Mathematics.	48,00*	Pass	08.03.2011	Visa Latvala
3311007	Basics of Numerical Analysis in Physics	3,00	Pass	08.03.2011	Hannu Laamanen
3316321	Numerical Analysis	8,00	5/5	20.12.2010	Timo Erkama
J000012	Orientation in Academic Studies	2,00	Pass	30.10.2007	Visa Latvala
J180203a	Differential Equations a	4,00	3/5	26.10.2009	Jukka Tuomela
J180203b	Differential Equations b	4,00	4/5	10.12.2009	Jukka Tuomela
J180305	Elementary Topology	4,00	5/5	11.03.2010	Jouni Rättyä
J180402	Applied Analysis	8,00	5/5	28.04.2010	Timo Erkama
J180654	Dynamical Systems	4,00	5/5	16.04.2010	Timo Erkama
J190107	Basic mathematical methods in physics	5,00	5/5	12.12.2007	Heikki Hyvärinen
J190121	Basic astronomy	5,00	4/5	10.04.2008	Tommi Itkonen
J700165	Study Planning	1,00	Pass	07.04.2008	Visa Latvala
3314000	Basic studies in Physics	25,00*	5/5	11.05.2009	Pasi Vahimaa
J190101	Basic Physics	7,00	5/5	07.12.2007	Arto Passoja
J190103	Basic Laboratory Practice	5,00	Pass	11.05.2009	Arvo Vaittinen Hannu Laamanen
J190104	Basic Electronics	4,00	5/5	29.04.2008	Raimo Silvennoinen
J190106	Basic electricity	4,00	5/5	05.03.2008	Arto Passoja
J190204	Thermodynamics	5,00	4/5	25.11.2008	Pekka Hirvonen
3319130	Mathematics (Subject Teacher, Basic and Intermediate Studies)	74,00*	5/5	21.11.2011	Risto Korhonen
3316492	Bachelor's Thesis	10,00	5/5	21.11.2011	Jouni Rättyä
3316493	Bachelor's Maturity Test		Pass	17.11.2011	Jouni Rättyä
J180111	Analysis I	9,00	5/5	10.12.2007	Janne Heittokangas
J180112	Analysis II	9,00	5/5	08.05.2008	Jaakko Hyvönen
J180113	Analysis III	9,00	5/5	12.12.2008	Jaakko Hyvönen
J180202	Linear Algebra	9,00	5/5	11.05.2008	Martti Pesonen
J180205	Probability Theory Ia	4,00	5/5	09.03.2009	Pekka Smolander
J180301	Algebra	8,00	5/5	08.12.2008	Heli Silvennoinen
J180404	Discrete Mathematics	8,00	5/5	19.12.2008	Martti Pesonen
J700431	Introduction to Mathematics	8,00	5/5	14.12.2007	Martti Pesonen

Completed Courses According to Target Degree

19.02.2013

Juha-Matti Aleksanteri Huusko

Date of birth

20.04.1987

Student number

175783

COURSES**CREDIT
POINTS****GRADE DATE****INSTRUCTOR**

Studies included in the degree

180,00

* Counted in the studies included in the degree

** Completed at another institution

Signature of the Registrar

Anita Oinasmaa

Anita Oinasmaa

Administrative Officer



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).

Grading of thesis and dissertation:

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):	(Bachelor of Science)
2.2 Main field(s) of study for the qualification:	Mathematics
2.3 Name (in original language) and status of awarding institution:	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 24.3.2017).
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:	First-cycle university degree. See 8.
3.2 Official length of programme:	The degree consists of at least 180 credits, 3 years of full-time study. Finnish credits are fully compatible with the ECTS.
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.



DIPLOMA SUPPLEMENT

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study:

Full-time

4.2 Programme requirements:

The bachelor's degree consists of major studies or studies in corresponding multidisciplinary entities in basic and intermediate level, minor studies, language and communication studies as well as other academic studies. At the end of the studies the student composes a bachelor's thesis.

The aim of the degree is to provide a student with knowledge of the fundamentals of the major or the corresponding multidisciplinary entity and the major subject, knowledge and skills needed for scientific thinking and the use of scientific methods as well as adequate language and communication skills.

Major studies or studies in corresponding multidisciplinary entity include foundations of theoretical and methodological studies in a major subject. Minor studies may be compulsory or may be chosen freely. With optional minor studies a student may steer the degree to his/her professional aims. Professionally oriented studies in languages and communication include courses in written and speech communication in Finnish and Swedish (the official languages in Finland) and at least one foreign language, usually English.

The studies towards the degree provide the student with facilities for administrative and planning posts. Studies leading to a lower university degree shall 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.

The education shall be based on research or artistic activity and professional practices.



DIPLOMA SUPPLEMENT

4.3 Programme details:

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

See transcript of records.

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).

Grading of thesis and dissertation:

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

Not applicable

4.5 Overall classification of the qualification:

5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

Eligible for second cycle higher education studies. The admissions decisions are made in the receiving higher education institution.

DIPLOMA SUPPLEMENT

5.2 Professional status:

Under the Finnish legislation, a person who has taken the degree of Bachelor of Science is qualified for posts or positions in the public sector for which the qualification requirement is a first cycle higher education 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 d.

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:

15.02.2013

7.2 Signature:



Anita Oinasmaa
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.

07.09.2017

Juha-Matti Aleksanteri Huusko
 Ahovaarantie 372
 88900 KUHMO

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: 01.08.2007- 15.06.2017

OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ
3318440 Väitöskirja, matematiikka	0,00 *	hyv	15.06.2017	Luonnontieteiden ja metsätieteiden tiedekunta
70487 Filosofian tohtori, luonnontieteet	101,00	HYV	15.06.2017	Luonnontieteiden ja metsätieteiden tiedekunta
3318410 Jatko-opinnot, matematiikka	93,00 *	4/5	28.04.2017	Jouni Rättyä
3317161 Topologia	8,00	5/5	28.04.2017	Janne Heittokangas
5311304 J: Yleishallinto-oikeus	5,00 *	1/5	09.12.2016	Jonna Kosonen Ulla-Maija Väättänen
5311024 J: Oikeustieteen ABC	2,00 *	HYV	10.10.2016	Jonna Kosonen
3318238 Löwnerin teoria	4,00	HYV	07.03.2016	Jouni Rättyä
3318234 Johdatus univalentteihin funktioihin	8,00	3/5	20.10.2015	Jouni Rättyä
1145014 Tohtoriohjelma	0,00	HYV	24.03.2015	Anu Kristiina Liikanen
3010600 Yleinen jatkokoulutus	8,00 *	HYV	24.03.2015	Jouni Rättyä
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
3318236 Funktioanalyysi	4,00	Hyv	01.12.2014	Jouni Rättyä
3318215 Nevanlinnan teoria	4,00	5/5	11.06.2014	Risto Korhonen
3317151 Funktioanalyysin peruskurssi	8,00	5/5	13.05.2014	Jouni Rättyä
8010053 Puheviestintää jatkokoulutettaville	2,00	HYV	02.05.2014	Sanna-Maija Niskanen
3317463 Hyperbolinen geometria	2,00	Hyv	07.04.2014	Martti Pesonen

07.09.2017

Juha-Matti Aleksanteri Huusko

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OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ	
3317333	Variaatiolaskenta	4,00	4/5	21.03.2014	Jukka Tuomela
8010060	English for Postgraduate Students	4,00	HYV	03.03.2014	Gerald Netto
3318214	Kokonaiset funktiot	8,00	3/5	31.12.2013	Jouni Rättyä
3318213	Kompleksianalyysin erikoiskurssi	8,00	3/5	30.12.2013	Jouni Rättyä
8020240	Tiedonhaun kurssi jatkokoulutettaville	2,00	HYV	17.12.2013	Jussi Hyvärinen Kaarina Meriläinen Laura Parikka Marja Aho Merja Kauppinen Riitta Holopainen Tapani Toivanen
3317311	Matriisit	8,00	4/5	17.12.2013	Maria-José Martin-Gómez
1145005	Orientaatio jatko-opintoihin	0,00	HYV	06.11.2013	Anu Kristiina Liikanen
70287	Filosofian maisteri, luonnontieteet	202,00	HYV	20.09.2013	Luonnontieteiden ja metsätieteiden tiedekunta
3319140	Matematiikka (aineenopettaja, syventävät opinnot)	72,00	4/5	20.09.2013	Risto Korhonen
3317491	Pro gradu -tutkielma (matematiikka)	30,00	4/5	20.09.2013	Luonnontieteiden ja metsätieteiden tiedekunta
0510	Matematiikka	72,00*	4/5	20.09.2013	Risto Korhonen
3317493	Maisterin tutkinnon kypsyysnäyte	0,00	HYV	18.09.2013	Jouni Rättyä
3314320	Fysiikan aineopinnot opettajille, sivuaine	38,00	5/5	30.08.2013	Markku Kuittinen
3311001	Aineopintojen laboratoriotyöt I	5,00	5/5	30.08.2013	Martti Mäkinen
0520	Fysiikka	38,00*	5/5	30.08.2013	Markku Kuittinen
2510022	Syventävä harjoittelu	8,00	HYV	17.05.2013	Seija Jeskanen
2320560	Aineenopettajan pedagogiset opinnot (35 op)	35,00	5/5	17.05.2013	Pertti Väisänen
	<i>A986/1998 tarkoittamat vähintään 60 opintopisteen laajuiset opettajan pedagogiset opinnot sisältyvät sekä alempaan että ylempään korkeakoulututkintoon.</i>				
2008	Opettajan pedagogiset opinnot	35,00*	5/5	17.05.2013	Pertti Väisänen
2320506	Ehdyttävä pedagogiikka	3,00	5/5	15.05.2013	Kari Sormunen
3318216	Riemannin kuvauslause ja Dirichlet- ongelma	8,00	4/5	15.04.2013	Jouni Rättyä
3010500	Muut tutkintoon sisältyvät opinnot	57,00*	HYV	28.02.2013	Luonnontiet. ja metsätiet. tdn yhteiset (J,K)
3315139	Maisterin tutkinnon hops	1,00	HYV	28.02.2013	Risto Korhonen
345	Luonnontieteiden kandidaatti	180,00	HYV	15.02.2013	Luonnontieteiden ja metsätieteiden tiedekunta
3010300	Kieli- ja viestintäopinnot	8,00*	HYV	15.02.2013	Visa Latvala
2320505	Soveltava harjoittelu	4,00	HYV	07.02.2013	Kari Sormunen

07.09.2017

Juha-Matti Aleksanteri Huusko

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OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ	
3318212	Jatkotutkinnon erityisopinnoita <i>Conference in Complex Analysis 3.-4.12.2012 Itä-Suomen Yliopisto</i>	1,00	Hyv	15.01.2013	Janne Heittokangas
2510012	Perusharjoittelu	5,00	HYV	14.12.2012	Seija Jeskanen
3312034	SciFest-työpajakokonaisuuden suunnittelu ja toteutus	5,00	HYV	21.05.2012	Pekka Hirvonen
3317191	Differentiaaligeometria	8,00	3/5	11.05.2012	Samuli Piipponen
2320101	Kasvatus ja sen tutkimus	5,00	3/5	21.03.2012	Pertti Väisänen
2320530	Aineenopettajan pedagogiset opinnot (25 op)	25,00*	3/5	21.03.2012	Pertti Väisänen
2320203	P: Pedagogisia näkökulmia tieto- ja viestintäteknologian opetuskäyttöön	3,00	HYV	05.01.2012	Jani Kontkanen
3317171	Kompleksianalyysi II	8,00	4/5	09.12.2011	Rauno Aulaskari
2320503	Opettajan ammatillinen vuorovaikutusosaaminen	3,00	HYV	05.12.2011	Kirsi Heikkinen-Jokilahti
3316492	Kandidaatintutkielma	10,00	5/5	21.11.2011	Jouni Rättyä
3319130	Matematiikka (aineenopettaja, perus- ja aineopinnot)	74,00*	5/5	21.11.2011	Risto Korhonen
3316493	Kandidaatin tutkinnon kypsyysnäyte	0,00	HYV	17.11.2011	Jouni Rättyä
2510050a	P: Opetushallinto ja johtaminen, luennot ja kirjallisuus	2,00	HYV	31.10.2011	Petri Salo
2510050b	P: Opetushallinto ja johtaminen, seminaari	1,00	HYV	18.10.2011	Harjoittelukoulut Joensuussa (J)
3317242	Matematiikan havainnollistaminen ja kerhotoiminta	6,00	HYV	23.05.2011	Martti Pesonen
J313109	Ainepedagoginen tutkimuspraktikum (peda hum,mat, luonn, teo)	3,00	4/5	16.05.2011	Lenni Haapasalo
3317123	Mitta- ja integroimisteoria b	4,00	4/5	13.05.2011	Risto Korhonen
3317321	Osittaisdifferentiaaliyhtälöt	8,00	4/5	13.05.2011	Jukka Tuomela
3317222	Matematiikan historia	4,00	5/5	12.05.2011	Heli Silvennoinen
3317122	Mitta- ja integroimisteoria a	4,00	5/5	14.03.2011	Risto Korhonen
J312106B	Kasvatus ja kehitys elämänkulussa: yksi teos	1,00	3/5	11.03.2011	Marjatta Vanhalakka-Ruoho
3311007	Fysiikan numeerisen laskennan alkeet	3,00	HYV	08.03.2011	Hannu Laamanen
3010500	Muut tutkintoon sisältyvät opinnot <i>sisältää 32 op Matematiikan opintoja.</i>	48,00*	HYV	08.03.2011	Visa Latvala
3316321	Numeerinen analyysi	8,00	5/5	20.12.2010	Timo Erkama
3311014	Suhteellisuusteoriaa	4,00	5/5	16.12.2010	Kai-Erik Peiponen
J313107	Ainepedagogiset perusprosessit	3,00	5/5	14.12.2010	Lenni Haapasalo
J313111A	Erilaisuuden kohtaaminen kasvatus- ja opetustyössä - yhteinen osa <i>Luennot 2, kirja 2.</i>	3,00	2/5	08.12.2010	Leena Holopainen
J312103	Opetuksen, oppimisen ja opettajuuden perusteet, eriytyvä osa	3,00	HYV	19.10.2010	Lenni Haapasalo
J312102	Opetuksen, oppimisen ja opettajuuden perusteet, yhteinen osa	2,00	5/5	18.10.2010	Lenni Haapasalo

07.09.2017

Juha-Matti Aleksanteri Huusko

Syntymäaika
Opiskelijanumero20.04.1987
175783

OPINNOT	OP	ARV	PVM	HYVÄKSYJÄ	
J312225B	Orientoiva harjoittelu (peda hum,mat.luonn,teo)	3,00	HYV	30.09.2010	Seija Jeskanen
J701614	Akateemista englantia matematiikan ja fysiikan opiskelijoille	1,00	3/5	21.05.2010	Anna Krizsan
J313111B	Erilaisuuden kohtaaminen kasvatus- ja opetustyössä - eriytyvä osa	3,00	HYV	18.05.2010	Päivi-Katriina Juutilainen
J180661	Lukuteoria	8,00	5/5	11.05.2010	Visa Latvala
J312106A	Kasvatus ja kehitys elämänkulussa: luennot	2,00	4/5	11.05.2010	Marjatta Vanhalakka-Ruoho
J180551	Koulumatematiikan harjoituskurssi	4,00	HYV	30.04.2010	Heli Silvennoinen
J180402	Sovellettu analyysi	8,00	5/5	28.04.2010	Timo Erkama
J180501	Analyysi IV	8,00	4/5	21.04.2010	Rauno Aulaskari
J180654	Dynaamiset systeemit	4,00	5/5	16.04.2010	Timo Erkama
J180721	Matematiikan tietotekniikka kouluopetuksessa	4,00	HYV	25.03.2010	Heli Silvennoinen
J701514a	Tieteellisen ruotsin kirjallinen taito matematiikan ja fysiikan opiskelijoille	2,00	4/5	12.03.2010	Elna Hänninen
J701514b	Tieteellisen ruotsin suullinen taito matematiikan ja fysiikan opiskelijoille	1,00	4/5	12.03.2010	Elna Hänninen
J180305	Johdatus topologiaan	4,00	5/5	11.03.2010	Jouni Rättyä
J312201	Pedagoginen etiikka	3,00	5/5	05.03.2010	Risto Ikonen
J701600	Johdatus akateemisiin opiskelutaitoihin (englanti)	1,00	HYV	23.02.2010	Meri Jäppinen
J190301	Kvantti- ja atomifysiikka	6,00	5/5	21.12.2009	Pasi Vahimaa
J190207	Mekaniikan jatkokurssi	5,00	5/5	17.12.2009	Arto Passoja
J700235	Matematiikan viestintä	3,00	HYV	16.12.2009	Heli Silvennoinen
J180604	Kompleksianalyysi Ib	4,00	3/5	16.12.2009	Jouni Rättyä
J190206	Fotoniikka	7,00	5/5	14.12.2009	Markku Kuittinen
J180203b	Differentiaaliyhtälöt b	4,00	4/5	10.12.2009	Jukka Tuomela
J180603	Kompleksianalyysi Ia	4,00	5/5	04.11.2009	Jouni Rättyä
J180203a	Differentiaaliyhtälöt a	4,00	3/5	26.10.2009	Jukka Tuomela
J190404	Kokeellisen koulufysiikan kurssi	5,00	5/5	27.05.2009	Ville Nivalainen
J180511	Geometria	8,00	4/5	15.05.2009	Visa Latvala
J190202	Sähkömagnetismi	7,00	5/5	15.05.2009	Markku Saarelainen
3314000	Fysiikan perusopinnot	25,00*	5/5	11.05.2009	Pasi Vahimaa
J190103	Fysiikan perustyöt	5,00	Hyv	11.05.2009	Arvo Vaittinen Hannu Laamanen
J150335	Orgaaninen spektroskopia	2,00	4/5	08.05.2009	Tuure-Pekka Jauhiainen
J180206	Todennäköisyyslaskenta Ib	4,00	5/5	05.05.2009	Pekka Smolander
J150307	Fysikaalinen kemia II	3,00	2/5	24.04.2009	Tapani Venäläinen
J180205	Todennäköisyyslaskenta Ia	4,00	5/5	09.03.2009	Pekka Smolander
J150306	Fysikaalinen kemia I	6,00	4/5	06.03.2009	Tapani Pakkanen
J190541	Laboratoriotyöskentelyn perusteet opettajille	3,00	Hyv	16.02.2009	Pekka Hirvonen
J180404	Diskreetti matematiikka	8,00	5/5	19.12.2008	Martti Pesonen

07.09.2017

Juha-Matti Aleksanteri Huusko

Syntymäaika

20.04.1987

Opiskelijanumero

175783

OPINNOT

		OP	ARV	PVM	HYVÄKSYJÄ
J180113	Analyysi III	9,00	5/5	12.12.2008	Jaakko Hyvönen
J700334	Opiskelijatuutorointi	3,00	HYV	11.12.2008	Visa Latvala
J180301	Algebra	8,00	5/5	08.12.2008	Heli Silvennoinen
J190204	Termofysiikka	5,00	4/5	25.11.2008	Pekka Hirvonen
J180202	Lineaarialgebra	9,00	5/5	11.05.2008	Martti Pesonen
J180112	Analyysi II	9,00	5/5	08.05.2008	Jaakko Hyvönen
J190104	Elektroniikan perusteet	4,00	5/5	29.04.2008	Raimo Silvennoinen
J150103	Kemian perusteet	5,00	5/5	14.04.2008	Tuure-Pekka Jauhiainen
J190121	Tähtitieteen perusteet	5,00	4/5	10.04.2008	Tommi Itkonen
J700165	Kandidaatin tutkinnon hops	1,00	HYV	07.04.2008	Visa Latvala
J190106	Sähköopin perusteet	4,00	5/5	05.03.2008	Arto Passoja
J700431	Matematiikan johdantokurssi	8,00	5/5	14.12.2007	Martti Pesonen
J190107	Fysiikan matemaattiset menetelmät I	5,00	5/5	12.12.2007	Heikki Hyvärinen
J180111	Analyysi I	9,00	5/5	10.12.2007	Janne Heittokangas
J190101	Mekaniikka	7,00	5/5	07.12.2007	Arto Passoja
J000012	Orientoituminen yliopisto- opiskeluun	2,00	HYV	30.10.2007	Visa Latvala

Aikavälin suoritettavat opinnot

490,00

Kaikki suoritettavat opinnot

490,00

* Lasketaan yhteismäärään

** Hyväksiluettu. Hyväksiluettulla opinnoilla on opinnoissa alkuperäinen suorituspäivämäärä.

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.