

## Student information

First names Juha-Matti Kalevi  
Last name Tilli  
Student number 53001M  
Date of birth 22 Jan 1987

## Study rights leading to a degree

### AALTO DOCTORAL PROGRAMME IN ELECTRICAL ENGINEERING, LICENTIATE

Education type Licentiate  
Valid 19 Nov 2015-30 Jan 2023  
Start date 1 Aug 2015  
Completed degrees Licentiate of Science (Technology), 30 Jan 2023  
Study right status Graduated

Degree programme Aalto Doctoral Programme in Electrical Engineering

### AALTO DOCTORAL PROGRAMME IN ELECTRICAL ENGINEERING

Education type Doctor  
Valid 19 Nov 2015-  
Start date 1 Aug 2015  
Study right status Active  
Academic year registrations Autumn 2023, attending  
Spring 2024, attending

Degree programme Aalto Doctoral Programme in Electrical Engineering  
Research field Networking Technology

## DEGREE PROGRAMME IN ELECTRONICS AND ELECTRICAL ENGINEERING

Education type	Bachelor's and Master's Degree
Valid	1 Aug 2006-9 Feb 2015
Start date	1 Aug 2006
Completed degrees	Bachelor of Science (Technology), 10 Feb 2014 Master of Science (Technology), 9 Feb 2015
Study right status	Graduated
Active phase	-
Degree programme	Degree Programme in Electronics and Electrical Engineering

## Open university studies

### OPEN UNIVERSITY STUDIES

Education type	Open University studies
Courses	Fundamentals of Network Media, 1 Jan 2005- Separately specified courses (Open University), 1 Jan 2005-
Study right status	Expired

### OPEN UNIVERSITY STUDIES

Education type	Open University studies
Courses	Basic Course in Programming Y1, 7 Jan 2004- Separately specified courses (Open University), 7 Jan 2004-
Study right status	Expired

## Degrees

Course name and code	Scope	Lang	Grade	Date
AALTO DOCTORAL PROGRAMME IN ELECTRICAL ENGINEERING (DPL-ELEC)	40 cr		Pass	30 Jan 2023
GENERAL RESEARCH STUDIES (ELEC901-Y)	5 cr		Pass	19 Dec 2016
History of Science D (MS-E1011)	5 cr	fi	Pass	19 Dec 2016
Research field studies				
NETWORKING TECHNOLOGY (S041Z)	35 cr		PassD	29 May 2017
Network service provisioning D (ELEC-E7420)	5 cr	en	2	19 Dec 2016
Operator Business D (ELEC-E7820)	5 cr	en	4	28 Oct 2016
Internet Forum V D (ELEC-A7901)	5 cr	en	3	9 Jan 2017
Modelling and Simulation D (ELEC-E7460)	5 cr	en	5	22 Dec 2016
Coding Methods D (ELEC-E7240)	5 cr	en	5	15 Feb 2017
Radio Resource and Spectrum Management D (ELEC-E7220)	5 cr	en	5	29 May 2017
Performance Analysis D (ELEC-E7450)	5 cr	en	5	24 May 2017
LICENTIATE THESIS (DP-ELEC-LICT)	0 cr		Pass	27 Jan 2023
Licentiate Thesis (S041Z.lict)		en	Pass	27 Jan 2023
DEGREE PROGRAMME IN ELECTRONICS AND ELECTRICAL ENGINEERING (EST2)	120.5 cr		PassHons	9 Feb 2015
ELECTIVE STUDIES (EST) (S901-W)	20.5 cr		5	15 Dec 2014
Grade average 4,66				
Fundamentals of Network Media (T-110.250)	4.5 cr	fi	5	31 May 2005
Photonics and Integrated Optics (S-104.3410)	5 cr	en	5	27 Oct 2009
Optical Communications (S-108.3110)	5 cr	en	4	17 Dec 2009
Searching for Scientific Information (Eri-0.5014)	2 cr	en	Pass	15 Dec 2014
Training (higher university degree) (Harj-0.1002)	4 cr	fi	Pass	11 Nov 2014
MASTER'S THESIS (EST) (S901-D)	30 cr		5	20 Oct 2014
Grade average 5				

Course name and code	Scope	Lang	Grade	Date
Master's Thesis (S-104.D)	30 cr	fi	5	20 Oct 2014
Maturity Test (S-104.K)	0 cr	fi	Pass	17 Apr 2014
MICRO- AND NANOTECHNOLOGY (S3010)	20 cr		5	15 May 2014
Grade average 4,75				
MICRO- AND NANOSCIENCES (S345-3)	20 cr		5	15 May 2014
Grade average 4,75				
Optoelectronics (S-104.3310)	5 cr	en	5	22 May 2013
Semiconductor Technology, laboratory course (S-69.3116)	5 cr	fi	4	15 May 2014
Nanotechnology (S-104.3610)	5 cr	en	5	12 Dec 2013
Microfabrication (S-69.3123)	5 cr	en	5	11 Dec 2013
SOFTWARE TECHNOLOGY (T3001)	40 cr		5	10 Dec 2014
Grade average 5				
BASIC MODULE IN COMPUTER SCIENCE (T204-1)	20 cr		5	6 Jun 2014
Grade average 5				
Data Structures and Algorithms Y (T-106.1223)	5 cr	fi	5	3 Jun 2008
Introduction to Software Engineering (T-76.3601)	5 cr	en	5	19 May 2014
Introduction to Datacommunications and Multimedia Technology (T-110.1100)	5 cr	fi	5	6 Jun 2014
Databases (CSE-A1200)	5 cr	fi	5	20 May 2014
INTERMEDIATE MODULE IN SOFTWARE TECHNOLOGY (T220-2)	20 cr		5	10 Dec 2014
Grade average 5				
Operating Systems (T-106.4155)	5 cr	fi	5	25 Oct 2013
Introduction to Compiling (T-106.4200)	5 cr	fi	5	8 Dec 2013
Web Software Development (CSE-C3210)	5 cr	en	5	7 Apr 2014
UNIX Application Programming (S-38.3600)	5 cr	en	5	10 Dec 2014
METHODOLOGICAL PRINCIPLES (EST) (S901-M)	10 cr		5	6 May 2014
Grade average 4,5				

Course name and code	Scope	Lang	Grade	Date
Design of Experiments and Statistical Models (Mat-2.2103)	5 cr	fi	5	3 Mar 2014
Introduction to Statistical Inference (MS-C2104)	5 cr	fi	4	6 May 2014
DEGREE PROGRAMME IN ELECTRONICS AND ELECTRICAL ENGINEERING (EST1)	<b>182.5 cr</b>		<b>PassHons</b>	<b>10 Feb 2014</b>
BACHELOR'S THESIS AND SEMINAR (EST) (S901-K)	<b>10 cr</b>		<b>PassD</b>	<b>12 Dec 2007</b>
Maturity Test (EST.kyps)	0 cr	fi	Pass	12 Dec 2007
Bachelor's Thesis and Seminar (EST.kand)   Puolijohderakenteiden röntgendiffraktion sovitusanalyysi	10 cr	fi	PassD	12 Dec 2007
GENERAL STUDIES WITH EXTENDED CURRICULUM IN SCIENCE (EST) (S951-P)   <b>Grade average 4,97</b>	<b>82.5 cr</b>		<b>5</b>	<b>24 Nov 2009</b>
Basic Course in Programming Y1 (T-106.216)	7.5 cr	fi	5	24 May 2004
Computer as a Tool (T-106.1001)	2 cr	fi	4	23 Oct 2006
National Language Requirement (Swedish) Oral Test (Kie-98.5002)	1 cr	fi	SAT	20 Sep 2006
National Language Requirement (Swedish) Writing Test (Kie-98.5001)	1 cr	fi	SAT	20 Sep 2006
Digital Technology, basic course (S-88.1110)	3 cr	fi	5	27 Oct 2006
Circuit Analysis 1 (S-55.1210)	5 cr	fi	5	20 Dec 2006
Basic Course in Mathematics L1 (Mat-1.1010)	10 cr	fi	5	19 Dec 2006
Physics I (AS, Bio, Est, Tlt) (S-104.1010)	6 cr	fi	5	21 Dec 2006
Basic Course in Mathematics L2 (Mat-1.1020)	10 cr	fi	5	7 May 2007
Concise physics laboratory experiments (Tfy-3.1530)	2 cr	fi	5	14 May 2007
Basic Course in C programming (AS-0.1101)	4 cr	fi	5	5 Jun 2007
Physics II (AS, Bio, Est, Tlt) (S-104.1020)	6 cr	fi	5	14 May 2007
Orientation Course for Studies in Electronics and Electrical Engineering (S-26.1100)	1 cr	fi	Pass	31 May 2007
English Reading/Writing Test (Kie-98.1600)	1 cr	en	Pass	7 Oct 2008
Basic Course in Mathematics L3 (Mat-1.1030)	10 cr	fi	5	16 Dec 2008

Course name and code	Scope	Lang	Grade	Date
Applied Probability A (Mat-1.2600)	5 cr	fi	5	22 Dec 2008
Physics III (Est) (S-114.1327)	6 cr	fi	5	14 May 2009
English Oral Skills Test (Kie-98.1601)	2 cr	en	Pass	24 Nov 2009
<b>PROGRAMME STUDIES (EST) (S901-O)</b>	<b>20 cr</b>		<b>5</b>	<b>18 Dec 2008</b>
Grade average 5				
Circuit Analysis 2 (S-55.1220)	5 cr	fi	5	16 May 2007
Digital Signal Processing and Filtering (T-61.3010)	6 cr	fi	5	7 May 2007
Fundamentals of Measurements A (S-108.1010)	4 cr	fi	5	17 Dec 2008
Signals and Systems (S-72.1110)	5 cr	fi	5	18 Dec 2008
<b>COMPREHENSIVE COURSE IN BASIC SCIENCES (F3011)</b>	<b>20 cr</b>		<b>4</b>	<b>26 May 2008</b>
Grade average 4,4				
<b>BASIC MODULE IN BASIC SCIENCES (EST) (S951-1)</b>	<b>20 cr</b>		<b>4</b>	<b>26 May 2008</b>
Grade average 4,4				
Additional Course in Physics 1 (SFT) (S-104.1310)	2 cr	fi	5	20 Dec 2006
Additional Course in Physics 2 (SFT) (S-104.1320)	2 cr	fi	5	15 May 2007
C/C++ programming (AS-0.1102)	4 cr	fi	5	7 Jan 2008
Basic Course in Mathematics L4 (Mat-1.1040)	10 cr	fi	4	7 May 2008
Modern Physics: Computational Virtual Laboratory (Sf) (S-114.1427)	2 cr	fi	4	26 May 2008
<b>ELECTROPHYSICS (S3025)</b>	<b>40 cr</b>		<b>5</b>	<b>13 Dec 2013</b>
Grade average 4,58				
<b>BASIC MODULE IN ELECTRONICS AND ELECTRICAL ENGINEERING (S110-1)</b>	<b>20 cr</b>		<b>5</b>	<b>15 Jun 2009</b>
Grade average 4,67				
Laboratory Course in Electronics (S-87.1030)	2 cr	fi	Pass	13 Apr 2007
Static Field Theory (S-96.1111)	5 cr	fi	5	30 Oct 2007
Dynamic Field Theory (S-96.1121)	5 cr	fi	5	20 Dec 2007
Electronics I (S-87.1010)	5 cr	fi	5	31 Jan 2008
Analogue Control (AS-74.2111)	3 cr	fi	3	15 Jun 2009

Course name and code	Scope	Lang	Grade	Date
INTERMEDIATE MODULE IN ELECTROPHYSICS (S112-2)	20 cr		5	13 Dec 2013
‡ Grade average 4,5				
Optics (S-108.2110)	5 cr	fi	5	12 Jan 2009
Basic Course on Semiconductor Technology (S-69.2101)	5 cr	fi	5	8 Jan 2010
Computational Science (S-114.1100)	5 cr	fi	3	16 Dec 2010
Fundamentals of Radio Engineering (S-26.2110)	5 cr	en	5	13 Dec 2013
ELECTIVE STUDIES (EST) (S901-V)	10 cr		5	13 May 2009
‡ Grade average 4,5				
Introduction to Economics (TU-91.1001)	5 cr	fi	4	15 Dec 2007
Waveguides and Resonators (S-96.3211)	5 cr	fi	5	13 May 2009

## Study modules

Course name and code	Scope	Lang	Grade	Date
No completed credits				

## Courses

Course name and code	Scope	Lang	Grade	Date
Individual Studies in Physics V D (PHYS-E0544)	1 cr	en	Pass	11 Oct 2019
‡ GPU computing in Practice				
Writing Doctoral Research (w) D (LC-1340)	3 cr	en	Pass	1 Jun 2018
Risk Analysis D (Mat-2.3117)	5 cr	fi	4	9 Apr 2014
Studies completed at another university (FINU-ELEC) *	3 cr	fi	Pass	29 Aug 2013
‡ Tampere University of Technology. Optoelektroniikan kesäkoulu				

## Partially completed courses

Course name and code	Scope	Lang	Grade	Date
No completed credits				

Grade average 4,73

Total course credits 355 cr

The degree includes studies completed elsewhere with a total of 3 cr

### GRADING SCALES AND DESCRIPTIONS FOR COMPLETED STUDIES

The scope of studies is measured in ECTS credits (cr). The average workload of 1 600 hours needed to complete one academic year of studies corresponds to 60 credits.

The average grade of study attainments is calculated from courses which have been graded on a scale from 0 to 5 (fail–excellent) and which the student has passed. The average grade is weighted according to the courses’ scopes in credits. The average grade of a study module is only displayed if at least half of the scope of the study module has been graded using the scale from 0 to 5.

#### \* Studies completed elsewhere

##### Language of study

Finnish 266 cr  
Swedish 0 cr  
English 89 cr

Language of study: fi (Finnish), sv (Swedish), en (English).  
The language of study is not defined for all completed studies.

##### Grading scale for completed studies

5 (excellent), 4 (very good), 3 (good), 2 (satisfactory), 1 (passable), 0 (fail)

Pass (Pass), Fail (Fail)

##### Grading scale for the second national language

G (Good), SAT (Satisfactory), Fail (Fail)

**Grading scales for theses**

5 (excellent), 4 (very good), 3 (good), 2 (satisfactory), 1 (passable), 0 (fail)

Pass (Pass), Fail (Fail)

PassD (Pass with Distinction), Pass (Pass), Fail (Fail)

This document has been electronically signed. Detailed instructions on verifying the authenticity of a document: <https://www.aalto.fi/en/applications-instructions-and-guidelines/transcript-of-records-and-certificate-of-student-status>