



Aalto-yliopisto
Aalto-universitetet
Aalto University



DEGREE CERTIFICATE
MASTER OF SCIENCE (TECHNOLOGY)

Fredy Alfonso Camargo Nino

2 February 1981

has been awarded by the Aalto University School of Engineering the degree of Master of Science (Technology) as prescribed in the Government Decree on University Degrees (794/2004). The degree was completed in accordance with the Master's Degree Programme in Minerals and Environmental Engineering. The degree is a higher university degree in technology.

26 August 2014

Gary Marquis
Dean

Mikael Rinne
Director of Degree Programme

This degree certificate has been issued in two original copies, one in English and the other in Finnish.

This degree certificate includes two appendices: the transcript of records lists the studies completed for the degree, and the Diploma Supplement for international use contains information on the university as well as on the degree completed, its level and status in the Finnish education system.



Aalto-yliopisto
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Aalto University



TODISTUS
DIPLOMI-INSINÖÖRIN TUTKINTO

Fredy Alfonso Camargo Nino

2.2.1981

on suorittanut Aalto-yliopiston insinöörیتieteiden korkeakoulussa yliopistojen
tutkinnoista annetun valtioneuvoston asetuksen (794/2004) mukaisen diplomi-
insinöörin tutkinnon Master's Degree Programme in Minerals and Environmental
Engineering -maisteriohjelmassa. Tutkinto on teknillistieteellisen alan ylempi
korkeakoulututkinto.

· 26. elokuuta 2014


Gary Marquis
dekaani


Mikael Rinne
koulutusohjelman johtaja

Tämä tutkintotodistus on laadittu kahtena alkuperäisenä kappaleena, toinen suomen ja toinen englannin kielellä.

Tähän todistukseen kuuluu kaksi liitettä: opintosuoritusotteessa esitetään tutkintoon kuuluvat opinnot ja
kansainväliseen käyttöön tarkoitetussa Diploma Supplement -liitteessä esitetään tiedot yliopistosta, samoin kuin
suoritetusta tutkinnosta, sen tasosta ja asemasta Suomen koulutusjärjestelmässä.

Name:	Fredy Alfonso Camargo Nino
Date of birth:	2 February 1981
Student number:	373216
Right to study towards the degree granted on:	26 April 2013
Degree awarded:	Master of Science (Technology)
Degree programme:	Master's Degree Programme in Minerals and Environmental Engineering
Major:	European Mining Course

This transcript of records is an appendix to the degree certificate issued on 26 August 2014 for the above mentioned degree.

Master's Degree Programme in Minerals and Environmental Engineering (EMMEP) is an Erasmus Mundus Programme which the Aalto University School of Engineering and the Aalto University School of Chemical Technology together have organised in cooperation with the following universities: Delft University of Technology, the Netherlands, RWTH Aachen University, Germany, University of Exeter, United Kingdom, University of Miskolc, Hungary and Wroclaw University of Technology, Poland.

Upon completion, the graduate may receive a degree certificate based on these studies also from another joint programme university (double degree).

SUMMARY OF DEGREE

	Credits, cr	Grade
Studies in major	60.00	4
European Mining Course		
Advanced Module in EMC Mining Engineering	19.50	
Special Module in EMC Mining Economics	18.50	
Special Module in EMC Mining Environment	22.00	
Methodological principles	10.00	5
Elective studies	20.00	4
Master's thesis	30.00	4
Analysis of alternatives for primary crushing and conveying at the Siilinjärvi open pit mine		
Total credits:	120.00	
Weighted average grade:	4.07	
The degree was completed with distinction.		



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Student number:

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373216

COURSES COMPLETED

Course		Credits	Grade	Date dd.mm.yyyy	Teacher
Studies in major					
European Mining Course					
Advanced Module in EMC Mining Engineering					
JOI-ENG	Studies completed at a joint programme university University of Exeter CSMM412 Surface Excavation Design A (Prof. Hylke Glass)	7.50	5	12.04.2013	
JOI-ENG	Studies completed at a joint programme university RWTH Aachen University Open Pit Mining EMC-A/OP-05	6.00	3	08.02.2013	
Rak-32.3510	Applied Rock Mechanics for Hard Rock Mining	3.00	4	05.10.2012	Mikael Rinne
Rak-32.3520	Numerical Mine Modelling	3.00	4	19.10.2012	Mikael Rinne

Credits in module: 19.50
Weighted average grade: 4.08
Grade: 4

Special Module in EMC Mining Economics					
JOI-ENG	Studies completed at a joint programme university RWTH Aachen University Mine Ventilation EMC-A/MV-04	6.00	4	08.02.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology D/ME Mineral Economics (Ir. J.J. de Ruiter)	2.00	4	29.05.2013	
JOI-ENG	Studies completed at a joint programme university University of Exeter CSMM410 Project Management, Finance and Appraisal A (Prof. Hylke Glass)	7.50	4	12.04.2013	
Rak-32.3530	Mining Technology and Economics	3.00	3	19.09.2012	Mikael Rinne

Credits in module: 18.50
Weighted average grade: 3.84
Grade: 4

Special Module in EMC Mining Environment					
JOI-ENG	Studies completed at a joint programme university RWTH Aachen University Environmental Issues EMC-A/EI-00	3.00	3	08.02.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology D/CS Case Study (Ir. J.J. de Ruiter)	6.00	4	29.05.2013	



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Course		Credits	Grade	Date dd.mm.yyyy	Teacher
JOI-ENG	Studies completed at a joint programme university Delft University of Technology D/IM Industrial Minerals (Ir. J.J. de Ruiter)	2.00	4	29.05.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology D/AL Alluvial & Marine Mining (Ir. J.J. de Ruiter)	5.00	5	29.05.2013	
Rak-32.3540	Automation and Maintenance of Mining Equipment	3.00	4	22.10.2012	Mikael Rinne
Rak-32.3550	Mine excursion	3.00	Pass	23.10.2012	Mikael Rinne

Credits in module: 22.00
Weighted average grade: 4.11
Grade: 4

Total credits: 60.00
Weighted average grade: 4.01
Grade: 4

Methodological principles

ABR-ENG	Studies completed abroad Delft University of Technology Technical Writing (WMO201 TU-Eng.)	2.00	Pass	02.02.2014	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology CIE5741 Trenchless Technologies	4.00	5	28.01.2014	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology CIE4390 Geo Risk Management	3.00	5	29.01.2013	
LC-1116	Directed Studies in English (o / w) oral skills	1.00	Pass	14.04.2014	Laura Mendoza

Total credits: 10.00
Weighted average grade: 5.00
Grade: 5

Elective studies

JOI-ENG	Studies completed at a joint programme university Delft University of Technology CIE4780 Trending Topics in Geo-Engineering	4.00	4	22.10.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology CIE4363 Foundation and Deep Excavations	4.00	4	05.11.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology OE4626 Dredging Processes I	4.00	4	31.01.2014	



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Course		Credits	Grade	Date dd.mm.yyyy	Teacher
JOI-ENG	Studies completed at a joint programme university Delft University of Technology CIE5305 Bored and Immersed Tunneling	4.00	4	13.11.2013	
JOI-ENG	Studies completed at a joint programme university Delft University of Technology OE4606 Introduction to Offshore Engineering	3.00	4	28.10.2013	
Rak-32.Z	Postgraduate studies New Austrian Tunneling Method and Observational Method (L)	1.00	Pass	05.04.2014	Mikael Rinne

Total credits: 20.00
Weighted average grade: 4.00
Grade: 4

Master's thesis

Rak-32.D	Master's Thesis Analysis of alternatives for primary crushing and conveying at the Siilinjärvi open pit mine	30.00	4	25.08.2014	Mikael Rinne
Rak-32.K	Maturity Test		Pass	13.08.2014	Mikael Rinne

Total credits: 30.00
Grade: 4

26 August 2014



Harri Långstedt
Registrar

Aalto University
P.O.Box 11000
FI-00076 AALTO, Finland
<http://www.aalto.fi/>



Name:
Date of birth:
Student number:

Fredy Alfonso Camargo Nino
2 February 1981
373216

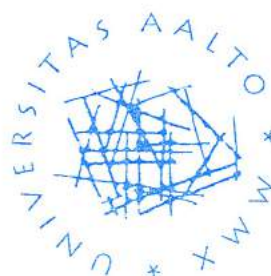
The extent of the degree is 120 credits and, on average, it takes two years of full-time study to complete the degree.

The extent of studies is measured in credits (cr). The average number of hours required in one academic year of studies, 1 600 hours, corresponds to 60 credits. The credit system complies with the European Credit Transfer and Accumulation System (ECTS).

The courses and study modules are graded either on a scale of 5 (highest), 4, 3, 2, 1 or Pass / Fail.

Those courses which are graded 5, 4, 3, 2 and 1 are included in the credit-weighted average grade. Average grade has been calculated if the group includes at least two courses graded on a scale of 1-5 or the extent of the course/s graded on a scale of 1-5 is at least half of the extent of the group. If this provision is not met, average grade is not calculated. The average grades have been rounded to two decimals.

The master's degree may be awarded with distinction if the credit-weighted average grade of the courses included in the degree, excluding the master's thesis, and the grade of the master's thesis are at least 4.0.



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): Camargo Nino
1.2 Given name(s): Fredy Alfonso
1.3 Date of birth (day/month/year): 02/02/1981
1.4 Student identification number or code: 373216

2 INFORMATION IDENTIFYING THE QUALIFICATION

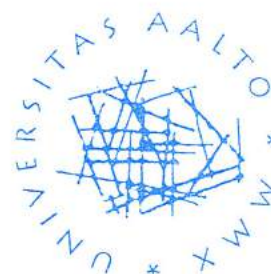
- 2.1 Name of qualification and (if applicable) title conferred (in original language): Diplomi-insinööri [Master of Science (Technology)]
2.2 Main field(s) of study for the qualification: Master's Degree Programme in Minerals and Environmental Engineering
2.3 Name and status of awarding institution (in original language): Aalto-yliopisto (Aalto University), state-recognised university
2.4 Name and status of institution (if different from 2.3) administering studies: Not applicable
2.5 Language(s) of instruction/examination: English

3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1 Level of qualification: See 8. Second-cycle university degree, Master's level
3.2 Official length of programme: The degree consists of 120 credits, two years of full-time study (in addition to a first-cycle degree of at least three years). Finnish credits are fully compatible with the ECTS.
3.3 Access requirements: See 8. The admission requirement for the second-cycle university degree (Master of Science) is a relevant first-cycle degree. There is numerus clausus, i.e. restricted entry, to all fields of study.

4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

- 4.1 Mode of study: Full-time
4.2 Programme requirements: See 8. As prescribed in the Government Decree on University Degrees 794/2004 and in the degree regulations of the Aalto University schools of technology, studies leading to a Master of Science degree shall include studies in major and minor (54-66 cr), methodological principles (9-11 cr), a master's thesis (30 cr), and elective studies so that the extent of the degree totals to 120 cr.
4.3 Programme details: See transcript of records.
4.4 Grading scheme and, if available, grade distribution guidance: See transcript of records.
Grade distribution guidance: not applicable
4.5 Overall classification of the qualification (in original language): With distinction (oivallisesti)



5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

Eligible for doctoral studies

5.2 Professional status (if applicable):

The degree of diplomi-insinööri [Master of Science (Technology)] is generally accepted as a requirement for a professional career. Under the Finnish legislation, a person who has taken the degree of diplomi-insinööri [Master of Science (Technology)] is qualified for posts or positions in the public sector for which the qualification requirement is a second-cycle university degree. In some cases, the qualification requirement also includes the completion of major or minor 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:

The quality assurance system of the university has passed the audit conducted by the Finnish Higher Education Evaluation Council.

Master's Degree Programme in Minerals and Environmental Engineering (EMMEP) is a two-year programme selected by the European Commission as an Erasmus Mundus Programme. Erasmus Mundus is a co-operation and mobility programme in the field of higher education which promotes the European Union as a centre of excellence in learning around the world.

The Helsinki School of Economics (Helsingin kauppakorkeakoulu), Helsinki University of Technology (Teknillinen korkeakoulu) and the University of Art and Design Helsinki (Taideteollinen korkeakoulu), all state-recognised universities, merged into Aalto University on 1 January 2010. The new schools were renamed the Aalto University School of Economics, School of Science and Technology and School of Art and Design.

On 1 January 2011, the Aalto University School of Science and Technology was reorganised into four schools: the Aalto University School of Chemical Technology, the Aalto University School of Electrical Engineering, the Aalto University School of Engineering and the Aalto University School of Science. On 1 January 2012, the former Aalto University School of Engineering and the Department of Architecture of the School of Engineering merged to form the Aalto University School of Arts, Design and Architecture. On 1 August 2012, the Aalto University School of Economics was renamed the Aalto University School of Business.

6.2 Further information sources:

<http://www.aalto.fi/>, Aalto University
<http://www.minedu.fi/>, Ministry of Education and Culture
<http://www.oph.fi/recognition/>, Finnish National Board of Education
<http://www.kka.fi/>, Finnish Higher Education Evaluation Council



7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date: 26/08/2014

7.2 Signature:

Harri Långstedt
Registrar

7.3 Capacity:

7.4 Official stamp or seal:



8 INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

See the enclosed attachment. The description of the higher education system has been prepared by the Finnish National Board of Education and approved by the Ministry of Education and Culture.

INFORMATION ABOUT THE UNIVERSITY

1. Background of Aalto University

Aalto University in Finland was created on 1 January 2010 through a merger of three state-recognised and highly renowned universities: the Helsinki School of Economics (Helsingin kauppakorkeakoulu), Helsinki University of Technology (Teknillinen korkeakoulu) and the University of Art and Design Helsinki (Taideteollinen korkeakoulu). After the merger, the institutes were renamed the Aalto University School of Economics, the Aalto University School of Science and Technology and the Aalto University School of Art and Design. On 1 August 2012, the Aalto University School of Economics was renamed the Aalto University School of Business.

On 1 January 2011, the Aalto University School of Science and Technology was reorganised into four schools: the Aalto University School of Chemical Technology, the Aalto University School of Electrical Engineering, the Aalto University School of Engineering and the Aalto University School of Science.

On 1 January 2012, the former Aalto University School of Art and Design and the Department of Architecture of the School of Engineering merged to form the Aalto University School of Arts, Design and Architecture.

2. Mission

Aalto University and its schools strive to change the world through top-quality interdisciplinary research, pioneering education, surpassing traditional boundaries, and renewal. Aalto University educates responsible, broad-minded experts with a comprehensive understanding of complex subjects to act as society's visionaries.

According to the Universities Act (558/2009), the mission of the universities is to promote free research and academic and artistic education, to provide higher education based on research, and to educate students to serve their country and humanity. Under the said Act, Finnish universities are independent corporations under public law or foundation universities governed by the Foundations Act (109/1930); Aalto University is a foundation university.

3. Degrees awarded

Aalto University schools award the following degrees:

First-cycle university degrees:	Bachelor of Arts (Art and Design) Bachelor of Science (Architecture) Bachelor of Science (Economics and Business Administration) Bachelor of Science (Technology)
Second-cycle university degrees:	Master of Arts (Art and Design) Master of Science (Architecture) Master of Science (Economics and Business Administration) Master of Science (Landscape Architecture) Master of Science (Technology)
Third-cycle university degrees:	Licentiate of Science (Architecture) Licentiate of Science (Economics and Business Administration) Licentiate of Science (Technology) Doctor of Arts (Art and Design) Doctor of Philosophy Doctor of Science (Architecture) Doctor of Science (Economics and Business Administration) Doctor of Science (Technology)

The main language of instruction is Finnish, but courses are also offered in English and Swedish. In addition, there are several master's programmes in English.

4. Credits

Higher education studies are measured in credits (cr). The average input of 1600 working hours needed for studies of one academic year shall correspond to 60 credits. Finnish credits are fully compatible with the European Credit Transfer System (ECTS) credits.

Updated in January 2013