Education guide

Master's program Electrical Engineering

2021–2022

Adopted by the Faculty Board of the Department of Electrical Engineering on Sep. 29, 2021.

Contents

This education guide provides valuable information about the Electrical Engineering master's degree program. This document is part of the student statute. The student statute contains the mutual rights and obligations of TU/e and its students. According to law TU/e is obliged to have a student statute and to provide this to its students. The student statute consists of two parts: an institutional section (which applies to the entire TU/e) and a program section (which varies from program to program). This education guide, derived from the online education guide, is the Electrical Engineering master's degree program section of the TU/e student statute.

This education guide contains information about the structure and organization of the master's degree program in Electrical Engineering as well as all kinds of practical study information.

In addition to the information provided here, students are strongly urged to consult the online education guide. Contrary to this education guide, the online education guide is updated regularly during the academic year. And contrary to this education guide, the online education guide is also updated when needed with information, procedures and regulations concerning the corona-crisis (COVID-19 crisis) during the academic year of 2021-2022.

Additionally, all students are added to the CANVAS page 5EE-INFO-STUDENT. This is the communication channel for all students of the educational programs of the Department of Electrical Engineering. Via announcements you receive important information, messages and updates about our education. To make sure you don't miss any announcements, it's important that you turn on the notifications for the announcements and that you make sure you subscribe to one or more of the sub channels to receive the information that is applicable to you.

1. Master's program Electrical Engineering 2021-2022

Electrical Engineering is about many things that are essential parts of people's lives. It involves power generation, communication, healthcare and the environment, and electrical engineers solve a wide range of problems related to these topics. The department's research focuses on smart, innovative electrical components and on the design of electrical systems, which may become very complex. We cooperate closely with the regional high-tech industry and with other partners all over the world.

The Electrical Engineering discipline is constantly changing. As a graduate of the Electrical Engineering Master's program you will find yourself equipped for researching, discovering and exploring new boundaries and for leading others along that way.

The purpose of the master's program of Electrical Engineering is to teach students to work independently on complex research and design projects with the ability to rethink existing concepts and develop new ones. In the final phase of the program students will be able to present the results of their work to an international community. The curriculum of the Electrical Engineering master's program comprises core courses, specialization courses, electives, professional development courses, an internship and finally a graduation project in which the student demonstrates his/her engineering ability to a high standard.

These pages describe the current master's program of Electrical Engineering. There are three related special master's tracks: Connected World Technologies, Care & Cure, and Artificial Intelligence Engineering Systems. Note that these special master's tracks are in essence the master's program of

Electrical Engineering with specializations focused on telecommunication, health care, and artificial intelligence domains.

Please note the several opportunities for students of the master's program of Electrical Engineering to enjoy an international experience.

2. Curriculum

An overview of the complete curriculum for the master Electrical Engineering for the academic year of 2021-2022 can be found here.

An overview of the alterations in the curriculum for the master Electrical Engineering for the academic year of 2021-2022 can be found here. This overview also includes the alterations in the bachelor curriculum of the majors EE & AT.

Program overview

		EC
First year	Core courses	15
	Specialization path	10
	Elective courses	30
	Professional development	5
Second year	Internship	15
	Graduation project	45

As of 2018-2019, the graduation project is 45 EC and only applies to master students who started in 2018-2019 and later. For students who started in 2015-2016, 2016-2017 and 2017-2018, the graduation project remains 40 EC.

The study load of the master's degree program is 120 EC. All examinations may be taken and completed in any order desired, except for the graduation project.

Check the Checklist Master EE to determine what must be done before the start and during the first quarter of the first year.

Safety training

A mandatory 5EE01 Safety and health, 1st year instruction training takes place online during Q1. The training consists of an online video. You will gain practical information about the TU/e campus and buildings, and learn how to avoid hazards and risks, and how to act in case of emergency. It's important to watch the video carefully, not only for your own safety during your studies, but also for the safety of your fellow students and the EE staff. The training is mandatory for all new students to TU/e.

2.1 Core Courses

Students choose three core courses in the 1st quarter (Q1) from the table below. The choice is free, but research groups require specific core courses for their specialization, see the table below.

Code	Name	EC	Q
2DME10	Discrete Mathematics	5	1
2DME20	Non-linear Optimization	5	1
2DME30	Complex Analysis	5	1
5CCA0	Semiconductor physics and materials	5	1
5CHA0	Classical and modern physics	5	1
5CPA0	Numerical methods in electrical engineering	5	1
5CSA0	Modeling dynamics	5	1
5CTA0	Statistical signal processing	5	1
5SSD0*	Bayesian machine learning and information processing	5	2

*5SSD0 is only a core course for the special master's track Artificial Intelligence Engineering Systems. More information about the core courses of the special master's track AIES can be found here.

	2DME30	2DME10	2DME20	5CCA0	5CTA0	5CHA0	5CPA0	5CSA0
	Complex analysis	Discrete mathematics	Non-linear optimization	Semi-conductor physics and materials	Statistical signal processing	Classical and modern physics	Numerical methods in EE	Modelling dynamics
CS	X		X		X		X	●
ECO	X			●	●	X/●	X/●	X
PHI	X			●	X	●	X	X
EES-1*		X	X		X			X
EES-2*				X		X	X	
EPE-1	X		X			●	●	●
EPE-2		X	X	●	X	●	X	●
EM**	X		X	X		X	●	
ES		●	X	X	X		X	X
IC-1				●	●		●	
IC-2				●	●		●	
SPS***		X	●		●		X	

● = Must have
X = Nice to have

***EES-1 & EES-2: students are allowed to deviate from the indicated courses**
****EM: choose 2 out of 4, where it is recommended to choose 2DME20 & 2DME30 if you want to pursue a specialization in modelling techniques**
*****SPS: students of the ICT lab choose 2DME10 as the 3rd course. Students of all other labs choose 5CPA0 as the 3rd course.**

The courses 5XPB0 Nano devices and integration and 5CCA0 overlap. Therefore, these courses cannot be chosen both (as determined in the OER). Students who have already passed the exam of 5XPB0 in the bachelor are strongly advised to avoid choosing 5CCA0 as a core course in the master. They can choose another core course instead. See the 5CCA0 course information for more details.

2.2 Specialization electives

A specialization path is a set of two courses preparing for specialization in a specific area of Electrical Engineering.

If in specific situations a specialization path from the specialization path table is not an optimal specialization preparation, a different choice of specialization path may be made, which must be approved by the graduation supervisor.

Abbreviation	Group
CS	Control Systems
ECO	Electro-Optical Communication (including THZ (Terahertz Photonic Systems))
EES	Electrical Energy Systems
EM	Electromagnetics
EPE	Electromechanics and Power Electronics
ES	Electronic Systems
IC	Integrated Circuits
PhI	Photonic Integration
SPS	Signal Processing Systems (including VCA (Video Coding and Architecture))

The paths and their courses are listed below. In this table, research groups and track abbreviations are used as specified in the table above.

Path	Code	Name	EC	Q
CS	5SMC0	Control principles for engineered systems	5	2
	5SMB0	System identification	5	3
ECO	5SHA0	Photonic integrated devices	5	2
	5STA0	Optical fibre communication technology	5	3
EES-1	5SEB0	Decentral power generation and active networks	5	2
	5SEC0	Planning and operation of power systems	5	2-3
EES-2	5SVA0	High voltage technology	5	2
	5SVB0	Electromagnetic compatibility	5	3
EM	5SPB0	Microwave engineering and antennas	5	2
	5SPD0	Electromagnetic modeling techniques	5	3
EPE-1	5SWA0	Rotary permanent magnet machines	5	2
	5SWB0	Advanced power electronics	5	3
EPE-2	5SWC0	Linear and planar motors for high-precision systems	5	2
	5SWB0	Advanced power electronics	5	3
ES	5SIA0	Embedded computer architecture	5	2
	5SIB0	Electronic design automation	5	3
IC-1*	5SFA0	Data converters 1: fundamentals	5	2
	5SFD0	Data converters 2: design	5	3
IC-2*	5SFB0	RF transceivers 1: fundamentals	5	2
	5SFE0	RF transceivers 2: design	5	3
PhI	5SHA0	Photonic integrated devices	5	2
	5SHB0	Photonic integration: technology and characterization	5	3

SPS	5SSD0	Bayesian Machine Learning and Information Processing	5	2
	5SSC0	Adaptive Array Signal Processing	5	3

*It is highly recommended that the course Advanced CMOS design (5SFC0) is taken in line with these specialization paths.

2.3 Elective courses

An overview of the free electives within the master program Electrical Engineering in the academic year of 2021-2022 can be found here (page 2 & 3).

Elective courses are all master courses from Electrical Engineering, master courses from all other TU/e study programs and from programs from other universities.

It is possible, but not preferred, to include a maximum of 15 credits of bachelor courses at level 3. Use this option for homologation purposes only.

Core courses and specialization courses are also valid electives.

Language courses (Dutch and English) are permitted at C level but no more than a total of 5 credits.

The Examination Committee EE decides if a course is admissible as an elective.

A student needs an advice of his/her mentor on the whole program of examinations.

Excluded master electives

The following courses are not allowed as master electives:

- All level 1 and level 2 bachelor courses.
- 5LIU0 Premaster linear systems, signals & control. This course is on pre-master level.
- 5SC26 Systems & control integration project. This course is only accessible for students of the master Systems & control.

Overlapping master electives

The courses on the left in the table below overlap with the courses on the right. Therefore, these courses cannot be chosen both.

Code	Course name	Code	Course name
5XPB0	Nano devices and integration	5CCA0	Semiconductor physics and materials
5LIS0	Computer architecture and c programming	5EIA0	Computation I
5LFK0	Circuit analysis	5ECA0	Circuits
5LIQ0	Linear systems, signals and control	5LIU0	Premaster linear systems, signals & control
5LIR0	Linear systems, signals and control DBL	5LIU0	Premaster linear systems, signals & control
4WM10	Career development	5CKG0	Career development
8GM00	Career development BMT	5CKG0	Career development

Elective courses (via Master Marketplace)

2.4 Professional Development

Professional development contains 5 credits in total and consists of the courses listed in the table below. 5CKF0 is mandatory for all students; and additionally all students choose either 5CKB0 or 5CKG0. The professional skills academic writing and presenting scientific information are integrated in the internship and graduation project assessment.

Code	Course name	EC	Q
5CKF0	Research set-up	2.5	1 & 3
5CKB0	Tutoring & coaching	2.5	2 & 4
	or		
5CKG0	Career development	2.5	2, 3 & 4

2.5 Internship

The internship

The internship is a 15 credits research or design project on a topic related to Electrical Engineering, supervised by a staff member of the department of Electrical Engineering. The internship is the ideal opportunity for an international and/or industrial experience.

An internship of 15 credits (5I015) takes 420 hours. You can extend your internship with an additional 5 credits from the elective space (5I005), resulting in 140 hours additional time. Before the start of the internship your choice of extension has to be arranged and approved.

You choose an internship within one of the nine research groups of the Department of Electrical Engineering. It is encouraged to do your internship in another research group than you have chosen for your specialization. To broaden your horizon, it is also encouraged to do your internship in another research group than you will choose for your graduation project. If you do choose to work on your internship and graduation project within one research group or even within one project, please note that you have to complete your internship before you can start your graduation project and that the contents of the internship project should differ from the contents of the graduation project.

Internship supervision

You have to find a supervisor for your internship. Your internship is supervised by an EE assistant, associate or full/part-time professor, or anyone explicitly appointed by the EC EE. It may be carried out within the department (internal), outside the department (external), or as a combination. For a (partially) external internship, an external supervisor is also needed for daily supervision. The EE staff member, however, remains formally responsible for the internship.

Internship for HBO graduates

HBO-graduates do an internship of 10 credits (5I010). HBO-graduates must do the internship internally within a research group; these students are not allowed to go outside the department or abroad. Furthermore, HBO-graduates are not allowed to extend the internship.

Internship registration

In order to start your internship, you need to register yourself for the internship (5I015) and the optional internship extension (5I005) in OSIRIS. For HBO-graduates the internship registration code is 5I010.

Next to the registration in OSIRIS, you have to fill in the internship registration webform. Make sure to discuss all the details of your internship with your supervisor before filling out and submitting the webform. The submitted webform will be sent to your internship supervisor, the secretary of the research group and the CSA EE for further approval and archiving.

Students who do their internship at ASML can find important information about the framework agreement between TU/e and ASML and the contract they need to sign additionally here.

For non-EU/EEA-students doing an external internship in the Netherlands, an additional internship agreement (the NUFFIC training agreement) is mandatory. Dutch law requires that copies of the agreement are kept by both the internship provider and TU/e. You can find more information at the Study in Holland-website. The NUFFIC training agreement should be signed by mrs. Jolie van Wevelingen, managing director of the Department of Electrical Engineering. Please hand in a digital or printed version of your NUFFIC training agreement to Annemieke van de Goor via International Office EE or at Flux 0.124/0.125. A signed version of the agreement will be returned to you as soon as possible.

Finding an internship

To find an appropriate internship, check the Master Marketplace, an online platform where you can browse through available internship projects of the EE research groups, or address one of the EE staff members, e.g. from the table below, to discuss what you would like to do. The better you know your preferences, the more likely it is that one of our staff members may be able to find the right project for you. Check the research groups websites to find out more about their research activities. If you want to intern in a specific company, ask the company for existing research contacts within the EE department and contact these. If you wish to go to a specific country, contact the International Office EE.

Finalizing the internship

After you finish your internship, it is mandatory for you to hand in an internship report at the secretary of the research group (and if applicable to your organization/company) and to give a presentation and defense on your topic. Your internship supervisor assesses and grades your internship. For the assessment an internship assessment form is used on the categories: specialization, research and design, execution, report, presentation and defense. The Professional Skills academic writing and presenting scientific information are also integrated in the internship assessment. In case of insufficient results extra training by means of SkillsLab workshops or trainings on Academic Writing and/or Presenting can be advised.

You pass the internship if your final grade is 6.0 or higher and if each category (sub-grade) is completed with a minimum of 5.0. The executional part of your internship is a not retakeable component and will be regarded as a special case for which the assessment can only be taken once.

Internship staff contacts

Group	Contact
CS	Secretariaat CS

ECO	J.M.H. Hakkens-Jansen
EES	dr. H.P. Nguyen
EM	F.C.J. Kuijlaars
EPE Electromechanics	dr.ir. D.C.J. Krop
EPE Power electronics	dr.ir. H. Huisman
ES	Secretariaat ES
IC	prof.dr.ir. E. Cantatore
PHI	Secretariaat PHI
SPS	dr. A.E. Alvarado
SPS ICTLab	dr. A.E. Alvarado
SPS-BM/d	prof.dr.ir. M. Mischi
SPS-VCA	prof.dr.ir. P.H.N. de With

2.6 Graduation project

Please note, if you started your graduation project before August 31, 2021, the graduation procedure of the Regulations of the Examination Committee of Electrical Engineering of 2020-2021 applies.

The graduation project is a research project on a topic related to Electrical Engineering, supervised by a staff member of the department of Electrical Engineering. It can be carried out within the EE department, within another TU/e department, within a company, at another university, or abroad as long as this is agreed upon by the student and supervisor. A graduation project may be preceded by lab training in order to be able to safely handle equipment and emergency situations.

2.6.1 Finding a graduation project

You can find a graduation project in the Master Marketplace, an online platform where you can browse through all available graduation projects of our research groups. Graduation projects are continuously updated throughout the year.

2.6.2 Starting criteria and registration for the graduation project

Starting criteria

You are allowed to start your graduation project if:

1. a maximum of 10 EC of your electives is open
2. your study program has been approved by the Examination Committee EE (see below), and
3. the remainder of your study program is completed.

Bear in mind that, before starting your graduation project you need to have your study program approved by the Examination Committee EE (via the Master Marketplace):

- Use the course planner of the Master Marketplace to plan all your courses.
- Use the 'Download Filled Approval Form'-button to generate an Excel (EE Approval Study Program form) with all the courses filled in, and complete it further manually (where applicable).
- Send the completed form to the Examination Committee EE via the Examination Committee EE portal for official approval. Make sure to put your student ID in the subject for quick reference.

Please note, if you are following the AIES-track, it is not possible to use the 'Download Filled Approval Form' button to download the AIES-related courses in an Excel. Instead, use the Approval study package Master track AIES file, which you can download from the Curriculum page or the AIES-track page. Some mandatory courses have already been filled in, but you have to add your specific AIES-courses to the Excel yourself. After completing the Excel, send it to the Examination Committee EE via the Examination Committee EE portal before the deadline.

Please note, if you are obtaining an internal double diploma, please follow this procedure.

Registration

You have to find a supervisor for your graduation project yourself. A graduation project can be supervised by an EE assistant professor, associate professor or full/part-time professor, or anyone explicitly appointed by the EC EE. You need to register for your graduation project with the consent of your supervisor so make sure you discuss all the details of your graduation project with your supervisor before filling out and submitting the webform.

You must register yourself for the graduation project in OSIRIS.

- For SENSE students the graduation project registration code is 5G030.
- For students of generation 2017 and older the graduation project registration code is 5G040.
- For students of generation 2018 and younger the graduation project registration code is 5G045.
- For PIXNET students the graduation project registration code is also 5G045.
- For students of an internal double diploma the graduation project registration code is 5G060.

You must also register yourself for the graduation project through the graduation project registration webform. Your submitted graduation project registration webform will be sent to your supervisor, the secretary of the research group and the CSA EE for further approval and archiving.

2.6.3 Duration of the graduation project

For students from generations 2017 and older, the duration of the graduation project is 28 weeks fulltime without breaks. This corresponds to 40 EC.

For students from generations 2018 and younger, the duration of the graduation project is 32 weeks fulltime without breaks. This corresponds to 45 EC.

For SENSE students the weight of the graduation project is 30 EC. For PIXNET students the weight of the graduation project is 45 EC.

For student of an internal double diploma with a combined graduation project the weight of the graduation project is 60 credits.

On the graduation project registration webform you should clearly specify the start date and end date of your graduation project. In case breaks are included in the duration you have to mention the periods in the webform. Make sure to discuss these dates with your supervisor before submitting the webform.

If you wish to request an extension of the end date of your graduation project, you should hand in your request in writing to the Examination Committee EE with a motivation given by your supervisor. You

need to do this at least one month before your planned end date as stated in the graduation project registration webform. The Examination Committee EE can allow extensions to a maximum of two months.

2.6.4 Graduation committee

The graduation committee assesses and grades your graduation project.

Prior to your halfway presentation, your supervisor must submit a proposal for the composition of your graduation committee to the Examination Committee EE, using this form. The Examination Committee EE needs to approve the proposal and informs your supervisor on the validity of the composition of your graduation committee.

A graduation committee consists of at least three voting members and one or two non-voting (advisory) members. At least one voting member comes from a different research group than the group of your supervisor. The Regulations of the Examination Committee EE (see Appendix 9b) stipulate strict rules regarding the setup of a graduation committee.

2.6.5 Halfway presentation

When you fill out the graduation project registration webform you need to state a date for your halfway presentation.

The halfway presentation is a non-public event during which you present the status of your graduation project to your graduation committee by means of a presentation and a preliminary report. You receive feedback on the status of your project from the members of your graduation committee (e.g. by means of the optional feedback form halfway presentation graduation project EE).

2.6.6 Final assessment

The final assessment is done by the same graduation committee as the halfway presentation. The graduation committee assesses and grades your graduation project (see assessment form graduation project EE). The assessment takes place after an event in which you present your graduation work in a public presentation to at least the graduation committee and in which you defend your work against questions of the graduation committee. Additionally, at least 10 working days before your final presentation and defense takes place you hand in your graduation report (see below) to your graduation committee and to the CSA EE.

Your graduation committee assesses your graduation project (see assessment guidelines for master projects EE). The assessment involves 5 categories that are equally weighted in the assessment:

1. specialization
2. research and design
3. execution
4. report
5. presentation and defense

The final grade of the graduation project is rounded to the nearest half grade on a scale of 0 to 10. The graduation project is considered successfully completed if it is assessed with a final grade of 6.0 or more.

The final grade is only calculated if each category is completed with a minimum of 5.0 otherwise it shall be marked as NMR 'not met requirements' (NVD, 'niet voldaan').

After the final assessment the chair of your graduation committee sends the assessment form to CSA EE.

2.6.7 Graduation report and title page

The graduation project is concluded by writing a graduation report between 8 to 12 pages (conform IEEE publications format), which describes the project and its results, and is ready to be submitted as a regular contribution to a periodical and complies to the quality standards of scientific journals or peer-reviewed conference papers.

You send your graduation report to your supervisor and CSA EE at the same time in same email. Make sure to include in the email a signed declaration concerning the TU/e Code of Scientific Conduct for the Master's thesis and, if applicable, a declaration of confidentiality (see the Regulations of the Examination Committee EE, appendix 9b). This must be completed at least 10 working before your final presentation and defense.

Your supervisor will test your graduation report for fraud.

Please use this title page for your paper.

3. Curriculum Master track AIES

Below you can find a detailed description of the EE master track Artificial Intelligence Engineering Systems. The track involves the CS, ES and SPS research groups.

Program setup

		EC
First year	Core courses	15
	Specialization electives	10
	Elective courses	25
	Free elective course	5
	Professional development	5
Second year	Internship	15
	Graduation project	45

Core courses

Students of the master track AIES must follow three core courses in the 1st year:

- 5SSD0 Bayesian machine learning and information processing in Q2;
- Choose between 2DME30 Complex analysis in Q1, 2DME10 Discrete mathematics in Q1 and 5CTA0 Statistical signal processing in Q1;
- Choose between 2DME20 Non-linear optimization in Q1 and 5CSA0 Modeling dynamics in Q1.

Specialization electives

Students of the master track AIES choose two specialization electives:

- Choose between 5SMC0 Control principles for engineered systems in Q2 and 5LIL0 Intelligent architectures in Q3;
- 5LSL0 Machine learning for signal processing in Q4.

Elective courses

Students of the master track AIES choose 25 EC of elective courses:

- 5ARA0 Programming for Artificial Engineering Systems in Q3 (this is a compulsory study component unless the student can prove sufficient programming skills: the student will then have to choose 10 EC of free elective courses instead);
- 1 study component in 'Human aspects of AI' (see table 7);
- 2 study components in 'AI & engineering systems' (see table 8);
- 5 EC of disciplinary deepening course(s) on request of graduation supervisor (see table 9).

Free elective

Students of the master track AIES can choose 5EC of free electives courses. Suggestions for free elective courses can be found here.

Professional development

Students of the master track AIES follow two professional development courses. For more information on professional development please visit this webpage.

Internship

Students of the master track AIES do an internship of 15 EC in the field of AIES. For more information on the internship please visit this webpage.

Graduation project

Students of the master track AIES do a graduation project of 45 EC in the field of AIES. For more information on the graduation project please visit this webpage.

AIES certificate

Students who meet the abovementioned criteria receive the Artificial Intelligence Engineering Systems certificate.

Admission & entry requirements

Students with a BSc Electrical Engineering degree are directly admitted to the AIES master track. Students with a major Automotive technology are recommended to register for the 5ESC0 DSP Fundamentals (signals II) in Q1.

Students with a BSc Applied Physics degree or a BSc Computer Science & Engineering degree will be admitted selectively to the AIES track with the requirement of following two homologation courses, namely 5ESD0 Control systems in Q1 and 5ESC0 DSP Fundamentals (signals II) in Q1.

Students who have completed the pre-Master's program Electrical Engineering for HBO Bachelors must additionally complete course 5ESC0 DSP Fundamentals (signals II) in order to be admitted into the AIES track.

4. Curriculum master track Care & Cure

General information

Electrical Engineering is about many things that are essential parts of people's lives. Health care is an application area of electrical engineering which has seen a rapid development over the last decade. The purpose of the Care & Cure track is to teach students to work independently on complex health-care related research and design projects with the ability to rethink existing concepts and develop new ones. In the final phase of the program students will be able to present the results of their work to an international community.

Program setup

		EC
First year	Core courses	15
	Specialization electives	10
	Specialization electives	10
	Free elective courses	20
	Professional development	5
Second year	Internship	15
	Graduation project	45

Core courses

Students of the master track C&C must follow three core courses in the 1st year. More information about the core courses can be found here.

Specialization electives

Students of the master track C&C choose two specialization electives from one of the research groups belonging to the C&C master track: EM, IC or SPS. More information about the specialization electives can be found here.

Specialization electives

Students of the master track C&C choose two additional specialization electives from the remaining two research groups belonging to the C&C master track. Choose either one specialization path course from each research group, or choose two specialization path courses from one research group. More information about the specialization electives can be found here.

Free electives

Students of the master track C&C choose 20 EC of free elective courses. More information about free elective courses can be found here. See below for the special requirements for the free electives if you want to obtain a Care & cure sub track certificate

Professional development

Students of the master track C&C follow two professional development courses, worth 5 EC in total. For more information on professional development please visit this webpage.

Internship

Students of the master track C&C do an internship of 15 EC. For more information on the internship please visit this webpage.

Graduation project

Students of the master track C&C do a graduation project of 45 EC in the field of Care & Cure. For more information on the graduation project please visit this webpage.

Care & Cure certificate

Students who meet the abovementioned criteria receive the Care & Cure certificate.

Care & Cure sub track certificate

Within the Care and Cure track there are four sub tracks: Neuro engineering, Oncology, Cardiology and Perinatology (see below). In order to qualify for a certificate in one of the four sub tracks you need to meet the abovementioned criteria and choose three study components (within your free elective courses) from a Care & Cure sub track. The study components for each track can be found here. Please note that bachelor courses completed in the bachelor also count towards the sub track certificate.

Neuro engineering

Neuro-engineering aims to understand, repair, replace, enhance, monitor, or otherwise exploit the properties of neural systems. Within the Electrical Engineering department, one of the research lines focusses on cognitive and neurological problems in epilepsy and sleep medicine, exploits advanced neuroimaging such as fMRI to find related brain network abnormalities, and investigates (electrical) neurostimulation as treatment option. Furthermore, research is performed into real-time seizure detection and prediction using EEG, heart rate (variability) and various other types of physiological data. Also (ultra)low-power electronics are being developed for ambulatory monitoring of brain function, and research is performed into brain-inspired machine learning and pattern recognition.

Oncology

Oncology focuses on the localization and treatment of cancer. For a successful treatment, timely diagnosis is essential. This requires a combination of applicator hardware design, advanced imaging, and smart integration of relevant information on complementary cancer features (mechanical, hemodynamic, and molecular). Image fusion and registration can then be used to plan and guide minimally invasive targeted treatment, making use of hyperthermia and several forms of tissue ablation. To this end, multidisciplinary knowledge is provided, ranging from imaging, to signal analysis and classification, up to focal (heat) treatments by e.g. electromagnetic fields or ultrasound.

Cardiology

Cardiology deals with dysfunctions of the cardiovascular system. The heart is an extraordinary electromechanical pump, the assessment of which requires investigating both electrical activation and mechanical performance. Depending on the diagnostic objectives, either long-term ambulatory monitoring or advanced imaging is necessary. Ambitious goals are therefore set, ranging from the realization of noise-robust non-obtrusive (low-power) sensing up to the implementation of accurate, ultrafast dynamic imaging. In combination with blood flow, blood oxygenation is also essential for our cellular metabolism and can be measured by photoplethysmography. Implanted devices to re-establish and maintain a regular cardiac function are also considered.

Perinatology

Even before pregnancy, research is being carried out to support state-of-the-art assisted reproductive technology by assessment of the uterine condition. Pregnancy is the most dangerous period in a person's

life. Monitoring and early warning is therefore crucial to enable timely intervention and decision making. This can be achieved by advanced multimodal sensing, possibly enabling unobtrusive home monitoring of the fetal condition and uterine activity. Also, after birth, early warning is vital and can be achieved by monitoring of brain and cardiorespiratory activity for a complete assessment of the newborn condition. Unobtrusiveness is especially relevant and can be obtained by means of contactless sensors and cameras. Monitoring can then be combined with advanced assistive technology, maintaining the main vital functions and permitting treatment and recovery.

5. Curriculum master track Connected World Technologies

General information

Electrical Engineering is about many things that are essential parts of people's lives. Telecommunication technology is a specialization based in Electrical Engineering. Telecommunication is a key enabler for today's information society. The rapidly increasing demand for speed and capacity together with the increasing need for mobility, makes it a field with strong dynamics and frequent introductions of new technologies in the network. The purpose of the Connected World Technologies (CWT) track is to teach students to work independently on complex research and design projects in the area of telecommunication, with the ability to rethink existing concepts and develop new ones. In the final phase of the program students will be able to present the results of their work to an international community.

Program setup

		EC
First year	Core courses	15
	Specialization electives	10
	Specialization electives	10
	Free elective courses	20
	Professional development	5
Second year	Internship	15
	Graduation project	45

Core courses

Students of the master track CWT must follow three core courses in the 1st year. More information about the core courses can be found here.

Specialization electives

Students of the master track CWT choose two specialization electives from one of the research groups belonging to the CWT master track: ECO, EM, IC, PHI and SPS. More information about the specialization electives can be found here.

Specialization electives

Students of the master track CWT choose two additional specialization electives from the remaining research groups belonging to the CWT master track. Choose either one specialization path course from two different research groups, or choose two specialization path courses from one research group. More information about the specialization electives can be found here.

Free electives

Students of the master track CWT choose 20 EC of free electives courses. More information about free elective courses can be found here.

Professional development

Students of the master track CWT follow two professional development courses, worth 5 EC in total. For more information on professional development please visit this webpage.

Internship

Students of the master track CWT do an internship of 15 EC. For more information on the internship please visit this webpage.

Graduation project

Students of the master track CWT do a graduation project of 45 EC in the field of Connected World Technologies. For more information on the graduation project please visit this webpage.

Connected World Technologies certificate

Students who meet the abovementioned criteria receive the Connected World Technologies certificate.

6. Curriculum Master's degree program for HBO Bachelors

After completion of the pre-Master's program, the student is admitted to the Master's program for HBO Bachelors.

Check the step-by-step plan for internal progress to a Master's degree program for pre-Master's students.

The Master's program for HBO Bachelors officially starts in September, but it is possible to register for master courses in the fourth quarter, see below.

The program contains the same elements as the regular Master's program of Electrical Engineering except for:

- the internship of 10 credits (instead of 15)
- 20 credits of electives (instead of 30)
- 3 deficiency resolving courses (homologation courses, in total 15 credits)

The Master's degree program Electrical Engineering for HBO Bachelors is:

		EC
First year	Core courses	15
	Specialization path	10
	Elective courses	20
	Homologation courses	15
Second year	Professional development	5
	Internship	10
	Graduation project	45

Homologation courses

Code	Name	EC	Planning
5ESC0	DSP fundamentals (Signals II)	5	1 (1,2)
5EPA0	Electromagnetics I	5	1 (1,2)
5ECC0	Electronic circuits II	5	2 (2,3)

Planning in the right column indicates the quarter in which the course will be offered, and in between brackets the quarters in which the course examinations will be scheduled.

Internship

HBO Bachelors complete an internship (worth 10 credits) as a preparation for the graduation project. The internship is a small research project under the supervision of one of the EE staff members and is carried out in an EE lab. The most important goal of the internship is to learn to handle a scientific and usually rather vague project assignment, which involves integrating knowledge from multiple areas of the field of electrical engineering. Additionally, the internship is an opportunity to practice reporting in English. For these reasons, the internship cannot take place in a company and must be done within the EE Department. Furthermore, the internship cannot be extended.

Electives

HBO Bachelors choose 20 credits of elective courses. A student needs advice of his/her mentor for the electives. The same rules about choosing electives apply as for the regular Master's program of Electrical Engineering. HBO Bachelors are not allowed to use an elective to extend their internship.

Registering for master courses in Q4

If you finish the pre-Master's program in Q3 and you want to continue with the Master's program for HBO Bachelors in Q4, you can register for Q4 master courses, provided you meet the requirements as stated in the Program and examinations regulations. Even if you cannot finish the pre-Master's program in Q3 because of missing courses (either from Q2 or Q3 with re-sits in Q3 and Q4), you still can register for Q4 master courses provided you meet these requirements. Note that in the latter case, even though it is allowed to follow master courses, you still have to finish the pre-Master's program, so the focus should be on passing the pre-Master courses. If you meet the requirements and want to register for Q4 master courses, send a request to the Examination Committee EE for permission and if allowed, register in time for these master courses. Check the online education guide for more information about the registration deadlines.

7. Coaching and Professional Skills

Information about coaching and professional skills can be found here.

8. Mentoring

All master students of Electrical Engineering have a mentor no later than three months after the degree program has commenced. The mentor is a lecturer who belongs to the scientific staff. The mentor guides the student from the start of his/her Master's degree program until the student begins with the internship and graduation project. The mentor supervising the student belongs to the research (capacity) group of the specialization direction chosen by the student. The Examination Committee EE is

responsible for the course package; the graduation committee bears the final responsibility for the graduation assessment.

Before you make an appointment with your mentor, you must:

- Sign the TU/e code of scientific conduct for master students: send a signed, digital copy to CSA EE;
- Setup a Personal Development Plan (PDP);
- Decide on your specialization/research group of preference;
- Choose your specialization electives and free electives.

With your mentor you must:

- Discuss your Personal Development Plan (PDP) on how to (further) develop your professional skills;
- Discuss your study program including your choice of specialization electives and free electives;
- If you have not included a minimum of 15 credits worth of international experience in your program of examinations, discuss this with your mentor.

You have to make an appointment with your mentor to discuss the abovementioned items. The appointment must take place two weeks before the registration deadline of Q2.

The table below shows the mentors for each research group.

Group	Mentor
CS	Siep Weiland / Paul van den Hof / Roland Toth / Mircea Lazar
ECO	Oded Raz
EES	Nikos Paterakis
EM	Bas de Hon
EPE	Naila Nasibulina
ES	Marc Geilen
IC	Eugenio Cantatore
PHI	Erwin Bente
SPS	Sveta Zinger/Alex Alvarado

9. Academic advisor

The academic advisor of the master EE advises students (either on request or on the advisor's own initiative) on all the aspects of the degree program, and ensures, partly based on the student's study progress and whenever necessary, adequate referral to the competent bodies of TU/e, e.g. to student advisors of ESA or TU/e confidential counselors. The academic advisor informs students who fall behind in their studies of the opportunities to receive extra support or measures that may need to be taken to minimize further delay. The academic advisor for the master students of Electrical Engineering is Harald van den Meerendonk.

You can make an appointment with the academic advisor here.

10. TU/e Honors Academy

Do you like challenges? Is delivering excellent results what you aim for? Would you like to do scientific research or solve societal problems? Would you like to make a giant leap forward in your professional as well as personal development? Do you love working under pressure, with the strictest of deadlines? Would you like to build a professional network?

Then joining the TU/e Honors Academy might be just the thing for you.

The TU/e Honors Academy offers a varied choice of excellence tracks for bachelor and master students. The overall goal is to prepare you for personal leadership as well as scientific, societal and/or industrial leadership in a society that is affected exponentially by changes and developments.

11. International Experience

Due to the corona crisis special policies apply to all international experiences. The latest information can be found here.

Incoming students

Incoming international students can find information on how to apply for an exchange program at TU/e here and on services for exchange students here.

Incoming students can participate in two international programs: SENSE and PIXNET.

Outgoing students

If you wish to study abroad, you have plenty of opportunities.

Internship & graduation project abroad

You can do your internship and/or graduation project outside of the Netherlands. A good starting point for arranging this at a great many of universities, research institutions and companies abroad is the network of the EE staff and EE research groups. Many of our staff have excellent connections with researchers and companies abroad. If you are interested in going abroad for your internship and/or graduation project talk to your graduation supervisor about the possibilities.

Please visit this website to learn more about the application process (via Mobility Online) for an outgoing internship and/or project.

It is very important that whenever you receive a contract for an international internship or graduation, to send the contract to the International Office EE before signing the contract. The International Office EE will help you with checking the (legal) contents and will make sure the contract is signed by the right persons within the EE department.

Courses abroad

You can also go abroad for elective courses, although this requires special attention as only 15 EC of your electives are completely free to choose. A way to deal with this is to combine the internship at a

university with a couple of elective courses at this same university. If you are interested in going abroad for courses talk to your mentor about the possibilities.

Please visit this website to learn more about the application process (via Mobility Online) for outgoing courses.

International partners

There are many bilateral agreements with ERASMUS partners in Europe (in countries such as Austria, Belgium, Bulgaria, Denmark, France, Germany, Greece, Italy, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Turkey and the UK).

The TU/e also has an agreement with the National University of Singapore to exchange some 10-12 students per year. For the EE department one student is eligible for this exchange in the 2nd semester.

Language

Wherever you go, speaking the local language enhances your international experience. Take the time to work on this. The Language Center (CLIC) at the TU/e has many facilities to help you with this.

How to organize this?

Contact the International Office EE, Exchange.EE@tue.nl, +31 (0)40 2478524. It is important to allow enough time to prepare your international experience. There are many sources of information: this page is a great place to start.

12. Examination schedules

Exam schedules for all courses can be found in My Timetable.

13. Graduation procedure

Registering for the Examination Committee meeting

In order to graduate you need to register through OSIRIS for the final Examination Committee EE meeting (in OSIRIS, on the Progress Tab, click Qualification Request). The closing date for registration is four weeks before the Examination Committee EE meeting. For exact dates, see below. Registration always refers to the first upcoming meeting of the Examination Committee EE. You are not present at the meeting.

All program parts must be registered in OSIRIS

All grades of your study program need to be registered in OSIRIS at least 10 working days before the next Examination Committee EE meeting, see below for dates. Also, the TU/e code of scientific conduct for the master's thesis needs to be handed in to CSA EE.

After the Examination Committee EE has decided that you have graduated, you will receive an e-mail from the Examination Committee EE. You can also check your graduation status in OSIRIS.

Terminating your enrollment from TU/e

When all results of the curriculum are registered and you have registered for the Examination Committee EE meeting, you can terminate your enrollment from TU/e. Your enrollment will not be terminated automatically during the academic year. In order to terminate your enrollment before August 31 and receive a refund of your tuition fee, you must submit a request to that effect. The refund does not apply to the months of July and August. You can find all information regarding the termination of enrollment procedure here.

Graduation ceremony

Approximately two weeks before the graduation ceremony, you receive an invitation via e-mail from CSA EE to the graduation ceremony. You can find the dates of all master graduation ceremonies Electrical Engineering below. During the ceremony, you (as well as your fellow master graduates) receive your diploma from your graduation supervisor. After the ceremony, you and your invitees are invited for drinks. If you want, you can also engrave your name and graduation year in the glass windows of our TU/e Alumni Avenue before the ceremony.

Date	Time	Location
19 Oct. 2021	14.00 & 16.00h	Luna Corona
10 Dec. 2021	14.00 & 16.00h	Luna Corona
15 Mar. 2022	14.00 & 16.00h	Luna Corona
17 May 2022	14.00 & 16.00h	Luna Corona
19 Jul. 2022	14.00 & 16.00h	Luna Corona

Graduation deadlines

Examination Committee meeting	Deadline to subscribe for EC meeting	Deadline all credits registered
25 Aug. 2021	28 Jul. 2021	11 Aug. 2021
29 Sep. 2021	1 Sep. 2021	15 Sep. 2021
27 Oct. 2021	29 Sep. 2021	13 Oct. 2021
24 Nov. 2021	27 Oct. 2021	10 Nov. 2021
22 Dec. 2021	24 Nov. 2021	8 Dec. 2021
26 Jan. 2022	29 Dec. 2021	12 Jan. 2022
23 Feb. 2022	26 Jan. 2022	9 Feb. 2022
30 Mar. 2022	2 Mar. 2022	16 Mar. 2022
20 Apr. 2022	23 Mar. 2022	6 Apr. 2022
25 May 2022	27 Apr. 2022	11 May 2022
29 Jun. 2022	1 Jun. 2022	15 Jun. 2022
No meeting in July		
31 Aug. 2022	3 Aug. 2022	17 Aug. 2022

After the graduation

After graduating, non-EU/EEA-graduates can apply for an orientation year, or “search year”. With the residence permit that comes with it the graduate is allowed to stay in The Netherlands for a maximum of 1 year to find a job. You hand in the application at IND yourself. You can find more information regarding the “search year” via the NUFFIC website. The following websites will provide you with more detailed information about the search year residence permit:

- https://www.hollandalumni.nl/orientationyear/
- https://ind.nl/en/work/working_in_the_Netherlands/Pages/Looking-for-a-job-after-study-promotion-or-research.aspx

14. Examination committee EE

The Board of Examiners is the authority to safeguard the standard of the degree program, including matters such as the appointment of examiners, testing and fraud, and all other aspects that are necessary to ensure that students who are awarded a degree have attained the outcomes for the relevant programs. All regulations can be found in the Regulations of the Examination Committee EE.

One of the tasks of the Board of Examiners is granting exemptions and the approval of study programs.

Visit the website of the Examination Committee EE for more information.

Student requests

The Examination Committee EE works with a digital form for handling student requests instead of via email. Requests submitted in any other way are not accepted. Do you want to submit a request to the Examination Committee EE? Go to the portal of the Examination Committees and click on the Examination Committee EE to submit a request.

Double diploma programs

If you want to submit a request for an internal double diploma, please follow this procedure. Do not submit requests for an internal double diploma via the portal.

Appeals

You may lodge an appeal against the decision made by the Examination Committee EE or the examiners. Your appeal should be submitted to the relevant department via this website.

Downloads
TU/e Fraud policy
TU/e Exam framework
TU/e Central examination regulations
Assessment policy EE
MSc EE OER 2021-2022
Regulations of the Examination Committee EE 2021-2022

15. Program committee EE

In the Program Committee EE student members and staff members discuss the quality of the Bachelor's and Master's program within the department of Electrical Engineering and the way in which these programs are organized. The Program Committee consists of an equal number of student members and staff members, and is assisted by several student and staff advisors.

The task of the Program Committee EE is to guard and enhance the quality of the educational programs offered within the department of Electrical Engineering.

In this context, the Program Committee issues solicited and unsolicited advice on the design of the curricula, quality assurance, student evaluations and policymaking to the program director, the departmental board, and teaching staff.

Furthermore, the Program Committee has the right of consent and the right of advice regarding program specific sections of the Education and Examination Regulations (OER), the task to assess the implementation of these regulations annually, and the task to advice on these regulations.

Lastly, the Program Committee has the right of consent regarding the quality assurance plan of the department.

The Program Committee actively contributes to educational innovation and enhancement within and outside its own department. Four members have been appointed representatives to the TU/e Joint Program Committee.

Program Committee meetings take place once every month. Visit the website of the Program Committee of the department of Electrical Engineering for more information.

16. Admission

Direct access

The following Bachelor's degree certificates provide direct access to the Master's program:

- Bachelor of Science in Electrical Engineering Eindhoven University of Technology (TU/e)
- Bachelor of Science in Electrical Engineering University of Twente (UT)
- Bachelor of Science in Electrical Engineering Delft University of Technology (TUD).

Visit the TU/e Admission and Enrollment website for more information about admission and other requirements

Other TU/e Bachelor's degrees

Students with a TU/e Bachelor's degree in Psychology and Technology (domain Robotics), a TU/e Bachelor's degree Applied Physics, a TU/e Bachelor's degree Biomedical Engineering or a TU/e Bachelor's degree Mechanical Engineering have to follow a pre-Master's program first. Upon completion of this pre-Master's program, they are admitted to the Master's program of Electrical Engineering.

For more information about the pre-Master's program, please visit the Pre-Master Electrical Engineering website.

Please note, admission to the master track AIES EE differs from admission to the master Electrical Engineering.

Other Dutch university Bachelor's degrees

Students with a Bachelor of Science from another Dutch university, please visit the TU/e Admission and Enrollment website for more information about admission and other requirements.

University of Applied Science Bachelor's degrees

Students with a Bachelor of Science Electrical Engineering from a Dutch University of Applied Science (HBO) have to do the standard pre-Master's program Electrical Engineering first. Upon completion of this pre-Master's program within one academic year, they are admitted to the Master's program of Electrical Engineering for hbo Bachelors. Visit the TU/e Admission and Enrollment website for more information about admission and other requirements. For more information about the pre-Master's program, please visit the pre-Master Electrical Engineering website.

International Bachelor's degrees

Students with an international Bachelor degree Electrical Engineering, please visit the TU/e Admission and Enrollment website for more information about admission and other requirements.

17. Regulations

IMPORTANT UPDATE ADDENDA OER

Due to the measures taken against the corona virus, there have been several changes in education and examination. This applies to the academic years of 2019-2020 and 2020-2021, and for the academic year of 2021-202. Several decisions have been made to allow for these adjustments. On the basis of these decisions, a number of regulations have been or will be (temporarily) amended. Addenda to the arrangements have been made for this. Addenda to the regulations have been made for this. You can find the addenda here.

17.1 OER & RE

The Program and Examination Regulations (OER) for a program contains clear and sufficient information about the program, making it the basic document for both students and teachers.

Subjects covered by the OER include:

- the content of the program and the associated final examinations, the number and sequence of other examinations and the times when these can be taken;
- the type of examination (oral, written or other types of examination);
- the period of validity of successfully completed examination components;
- the right of inspection and evaluation.

The Higher Education and Research Act (Wet op het hoger onderwijs en wetenschappelijk onderzoek) draws a distinction between the OER and the Regulations of the Examination Committee (RE). Subjects regulated by the Regulations of the Examination Committee include:

- compilation Examination Committee;
- procedures Examination Committee;
- tasks Examination Committee;
- rules relating to quality assurance of testing and exams;
- rules relating to measures taken in the event of fraud by examinees;
- rules and guidelines relating to testing and exams;
- compensation regulations;

- graduation regulations.

17.2 Exemptions

The Examination Committee shall only process individual requests for exemptions. The request must have a detailed motivation, proof of having attained the study component, the subject description, the study materials, the test made, an official grade list, and advice from the teacher who is responsible for the subject for which exemption is being requested. The above shall be considered in the decision making, in which previous decisions shall be taken into account.

Exemptions are only granted if the student can provide persuasive evidence from which it is clear he/she meets the learning objectives of the study component in question. The advice of the teacher is taken into consideration.

The following limitations apply for the Master program:

- Exemptions are not possible for:
  - core courses (another core course must be chosen).
  - specialization path courses and other certification courses (if the relevant teacher agrees with the fact that the student already possesses the knowledge and skills, a free elective must be chosen instead).
  - free electives (another elective course must be chosen.
- Exempted courses cannot be listed as elective.
- The graduation project cannot be exempted.

17.3 Transitional arrangements

- A student is exempt from the diagnostic test for professional skills with retroactive effect (which was mandatory prior to the academic year 2020-2021) in as far as this test was not completed by the student on or after September 1, 2020.
- The degree program specific qualitative admission requirements, as stipulated in Appendix 1, under l, apply to students who wish to start a Master's degree program on or after September 1, 2020.

Master's program

Students that started their Master's program in 2014-2015 or earlier, will be transferred to the revised Master's program of September 2015. Depending which part of the old Master's program already has been completed, the examination committee will compose an adapted program.

As of 2018-2019, the graduation project is 45 EC and only applies to master students who started in 2018-2019 and later. For students who started in 2015-2016, 2016-2017 and 2017-2018, the graduation project remains 40 EC.

For students of generation 2018-2019 or earlier who (partly) finished the old professional development program, the examination committee will arrange an adapted program.

For students who commenced the graduation project before August 31, 2021, the graduation procedure of the Regulation of the Examination Committee of Electrical Engineering of 2020-2021 applies.

18. Quality Assurance

Providing high quality education is of utmost importance to the department of Electrical Engineering. To maintain the quality, it is essential that every educational component is subject to structural and recurrent evaluation.

Course evaluations

The most common method of evaluation is by conducting surveys. Courses and projects are evaluated with digital surveys in EvaSys on a yearly basis. The results of the surveys enable us to collect the thoughts and opinions of students and give them the opportunity to provide feedback on their education. Educational components that are new will be evaluated for 3 consecutive years using surveys until they reach a sufficient level (see quality assurance plan for the criteria). Components that have reached a sufficient level are evaluated once every 3 years (1-year evaluation, 2 years no evaluation). The results of the surveys are evaluated by several stakeholders, such as the program committee, examination committee, quality assurance officer, the responsible lecturer/teacher, chairmen of research groups and the departmental board. If the course scores insufficient, an improvement plan will be conducted together with the responsible lecturer/teacher for the next round. The following year these components are monitored based on the evaluation and the improvement plan. After this the cycle of quality assurance starts again.

The educational program as a whole is also subject to yearly evaluations, organized on a central level by TU/e or other interested external parties (VNSU).

Additional Quality Assurance evaluation methods

In addition to the surveys, the department makes use of other more direct methods of evaluation for educational components. Student meetings are organized for bachelor and master students (year councils) on a regular basis. This way students can provide direct feedback on their educational program to the staff.

Compared to surveys, where evaluations take place at the end of the educational component, these types of evaluation methods are powerful tools for intermediate evaluations. For an overview of our evaluation instruments, see the quality assurance plan.

Quality Assurance officer

A quality assurance (QA) officer is appointed by the department to maintain all the processes related to quality assurance and ensures that all responsible parties receive the information necessary to perform their duties. For example, the departmental QA officer maintains a record of course evaluations and determines which courses require evaluation, which policy should be used and communicates with the central QA officer of ESA on practicalities regarding EvaSys surveys. In addition to this, the QA officer attends meetings with other departmental QA officers to discuss general matters and developments related to quality assurance.

Accreditation

Based on the framework of accreditation developed by the Dutch-Flemish Accreditation Organization (Dutch abbreviation: NVAO) all educational programs are subject to periodic evaluation by a visiting

panel. Accreditation is a formal decision that the educational program complies to the quality demands formulated by the NVAO and that the graduation diploma is recognized as valid by the government. Accreditation lasts for 6 years and the current accreditation decision for the educational programs of Electrical Engineering lasts until **27th of April 2023.**

Downloads
Quality assurance plan EE 2021-2022

19. Contact

Departmental Board
prof.dr.ir. A.B. Smolders, dean
prof.dr.ing A.J.M Pemen, vice-dean research
prof.dr. M. Matters-Kammerer, vice-dean education
drs. J.C. van Wevelingen, managing director

Program director
prof.dr. M. Matters-Kammerer

Manager Education and Student Affairs EE
dr.ir. R.R. Trieling

Center for Student Administration Electrical Engineering (CSA EE)
Flux 0.124/0.125
T 040 247 4883 / 2806
E CSA.EE@tue.nl

Office hours: Monday - Friday 12:00 - 14:00 hrs.

Every first working day of each new quarter (Sep. 6, Nov. 15, Feb. 7, Apr. 25) CSA EE will also be open from 08.30 till 09.30hrs.

Contact person Education guides EE
C.R. van Kesteren MA

20. A-Z

A

Absent during an exam or obligatory practicum - When you are not able to attend due to special circumstances, you need to report this within 24 hours to your academic advisor.

Academic advisor - Academic advisor master EE.

Academic calendar – The academic calendar for the academic year can be found here.

C

Canvas – Canvas is the online learning environment. In Canvas you'll find course information, practice tests, assignments, slides and more per course. You use Canvas during your education period and to

prepare for exams. For any questions and comments, please contact the helpdesk by mailing ESA@tue.nl or calling +31 (0)40 247 4747.

Center for Student Administration EE (CSA EE) - Opening hours from Monday till Friday from 12.00 till 14.00hrs, location Flux 0.124/0.125. Every first working day of each quarter (Sep. 6, Nov. 15, Feb. 7, Apr. 25) CSA EE will also be open from 08.30 till 09.30hrs. Outside opening hours you can email CSA.EE@tue.nl. Forms can be put in the postbox CSA near the reception desk of Flux.

Complaints – When you have a complaint about courses, teachers, exam methods or exams, please contact the StudentBody. In case of complaints about, for example a decision of the Examination Committee EE or an examiner, admission to the Master Program or a binding recommendation the continuation of studies (BSA), you can appeal to the Examination Appeals Board.

Confidential advisor - TU/e currently has three confidential counselors who hold an independent position and enjoy the protection of the student.

E

Examination Committee – The Examination Committee is, among other things, responsible for the quality of the exams and final examinations. If you have a request, compliant or comment, please send an email to the Examination Committee EE.

H

Honors program – In the TU/e Honors Academy various Honors Tracks have been launched, addressing major societal and scientific questions and challenges

I

IEEE - The Institute of Electrical and Electronics Engineers, Inc. is an international organization by and for academic engineers in the field of electrical engineering. Worldwide, there are more than 330.000 members. IEEE SBE is the student branch at TU/e. It is the most active branch of IEEE in Europe. Every year, they organize a wide range of activities. With this, the Student Branch Eindhoven prepares students socially, culturally and professionally for their future. More information on IEEE SBE, its activities and memberships can be found on the IEEE student branch website.

Innovation Space - TU/e Innovation Space hosts exciting interdisciplinary TU/e courses and projects that (can) have a societal impact. These courses help companies and researchers to solve real-world challenges and allow you to unleash your talents to build innovative solutions. If you want to learn in an innovative way, take up a challenge and realize a prototype, follow one of the courses or projects in TU/e innovation Space and become part of a vibrant community.

Illness during an exam- When you are not able to attend an exam due to illness, you need to report this within 24 hours to your academic advisor.

M

MyTimetable - MyTimetable generates your personal schedule, which can be used by students and lecturers. It's possible to synchronize with all regular agenda-applications, so you can use your own preferred system to view your schedule. The schedule in MyTimetable is adjustable to your own needs,

and schedules of individual courses can be viewed. The tutorial can be found here. For questions please contact roosters@tue.nl.

MyTU/e – MyTU/e provides an easy-to-use, personalized and effective system for you to manage everything you need to make a success of your learning and working at TU/e. this cloud based system provides you with everything you need in one place and with notifications to keep you updated. MyTU/e will be your go-to app for your learning, education and working experience.

O

OSIRIS - Go to MyTU/e to log into OSIRIS, the student information system that records all student data, from enrollment right through to graduation. Lecturers use OSIRIS to enter grades and check their groups and course information. Students use OSIRIS to view their grades, register for courses and examinations, and to keep track of their progress. For questions about OSIRIS please contact the ESA helpdesk at +31 (0)40 247 4747 or per email. You can also contact the CSA EE in Flux 0.124/0.125 during opening hours.

OSIRIS course catalogue – In the OSIRIS course catalogue you can browse through all the courses that are on offer at the TU/e and for each course a detailed description can be found including contents, learning goals, assessment methods, instructional methods, material, pre-knowledge, etc.

P

Platform – Make sure to keep up to date with important messages, updates and information about the EE education via the Canvas student communication platform 5EE-INFO-STUDENT, the communication channel for students of the Department of EE.

Program Committee - A Program Committee is an advisory and consultative body at degree program level, instituted by law. The Program Committee of Electrical Engineering covers the bachelor and master programs. The Program Committee consists of an equal representation of both lecturers and students.

Q

Quality assurance - Providing high quality education is of utmost importance to the department of Electrical Engineering. Therefore, it has set up a quality assurance program and a quality assurance officer. You can read all about this here.

R

Registering for a course - To participate in courses you need to be registered for the course. This is possible up to 20 working days before the start of the new quarter. If you are not registered for the course, you will not be able to take it. If you do not register for exams, you will also not able to take them. The deadlines for enrollment can be found here.

Registering for exams after the registration period has passed - Students who fail to register for an exam within the period specified shall not be allowed to participate in the exam, unless the students have paid administration costs totaling € 20 per study component no later than five working days before the examination period. After payment of the administration costs the students are immediately registered.

S

Student statute – As a student you have rights and obligations. You can read about this on our study guide.

Student body - The Student Body (SB) is the center of education participation at the department of Electrical Engineering. SB is run by three students of the department. Any student who has suggestions, complaints, or questions about the education can contact the SB.

Student teams – TU/e is a breeding ground for young engineers who address societal challenges by carrying out projects. Projects in which education, innovation and entrepreneurship are combined with surprising outcomes. TU/e counts several student teams which address challenges in the fields of energy, health and smart mobility.

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Thor - The study association Thor focusses on the enrichment of the study, career and leisure of the students of Electrical Engineering and Automotive Technology at TU/e. In order to achieve this goal, many activities and drinks are organized for and by students. As a master student you can join several master associations. Thor has many committees you can join and even has its own pub on the 6th floor of Flux, FLUX 6.152, that is open every weekday.