
Education guide
Major Electrical Engineering
2019-2020

Adopted by the Departmental Board on August 29, 2019

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This education guide provides valuable information about the Electrical Engineering bachelor's degree program. This document is part of the student statute. The student statute contains the mutual rights and obligations of TU/e and the student: the law states that there must be a student statute and that it must be made known to the students. The student statute consists of two parts: an institute section (which applies to the entire TU/e) and a program section (which varies from program to program); the program section is part of the digital study guide. This document is the program section of the TU/e student statute.

It contains information about the structure of the three-year bachelor's degree program in Electrical Engineering, how the study is organized within our department as well as all kinds of practical study information.

In addition to the information provided here, you are strongly urged to consult the general study information on the digital education guide of TU/e.

1. Major Electrical Engineering

You have chosen to study Electrical Engineering within the TU/e Bachelor College.

Half of this three-year Bachelor's program is devoted to your major Electrical Engineering, a program that will prepare you for a job as an engineer in the Electrical Engineering domain. All first-year TU/e students follow a number of basic subjects like mathematics, physics and data analytics, which are more or less the same for every Bachelor's program at TU/e. In your first year you are already able to choose a number of subjects and so shape your study right from the beginning. Of course, you also get non-engineering subjects because engineers are concerned with more than engineering alone.

Focus

The Bachelor's program of Electrical Engineering focuses on the applications of electricity and magnetism, which include renewable energy systems, telecommunication, robotics, medical equipment and computers. Electrical Engineering has been the fastest growing field over the past fifty years, having an enormous impact on society. Just think of the tumultuous rise of computers, the introduction of mobile telephony and key medical innovations, like the MRI scanner. The field embraces both analog and digital systems in which hardware and software are equally important.

Subfields

More specifically, Electrical Engineering comprises the following subfields:

- Energy Technology
- Electronics
- Photonics or opto-electronics
- Electronic Systems
- Control Engineering
- Electromechanics and Power Electronics
- Telecommunication
- Signal Processing
- Electromagnetism

Themes

Within our own Electrical Engineering department the research focuses on three themes:

- The Connected World
- Care and Cure
- Smart and Sustainable Society

During your studies you will explore each of these themes, either in projects or in your final Bachelor project.

Aim

The program aims to bring you up to the level of engineering-science Bachelor as an electrical engineer. To this end the following objectives are central to the program:

- To give the student a broad knowledge base to enable him/her to accommodate to the subfields of the subject
- To provide the student with skills to optimize cooperation in a multidisciplinary team
- To prepare the Bachelor properly for an engineering-science Master in Electrical Engineering

2. Curriculum

The Bachelor's phase lasts three years and is completed with a Bachelor's Final Project (BEP). Each year is worth 60 credits, with each credit equivalent to 28 hours of study. A year is therefore 1680 hours of study, or 42 weeks of 40 hours.

The first year is designed to give the student insight into the contents of the rest of the study, subsequent studies and professional practice. It comprises basic subjects (including mathematics and physics) and various electrical engineering subjects. There is also plenty of scope for Design Based Learning (DBL). Our department offers interesting DBL projects in the first year ('Rock-your-Baby' and 'Venus exploration') in which you will learn to solve electrical engineering problems through working in project teams.

In the second and third years you will explore Electrical Engineering in more depth and will have more time for elective subjects.

USE = Course related to User Society and Enterprise

BEP = Bachelor Final Project (*Bachelor Eindproject*); minimum 10 credits, extensible to 15 credits

Colors: Blue = Major course, Pink = Elective, Orange=basic courses

Structure of the 3-year bachelor program for a student with a major in Electrical Engineering

The additional USE courses (15 ec) are part of the electives. Several labs and projects are integrated in the courses.

Electrical Engineering

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Year 1	Calculus 2 (2WBB0)	Applied Natural Sciences (3NBB0)	Data analytics for Engineers (2IAB0)	USE (0SAB0)
	Circuits (5ECA0)	Signals I (5ESE0)	Electronic circuits I (5ECB0)	Systems (5ESB0)
	Computation I (5EIA0)	Elective	Mathematics I (2DE20)	Elective
Year 2	Engineering Design (4WBB0)	Electromechanics (incl. lab) (5EWA0)	Computation II (5EIB0)	Mathematics II (5EMA0)
	Electromagnetics I (5EPA0)	Electrical Power systems (5EWB0)	Intro telecommunications (5ETA0)	Electromagnetics II (5EPB0)
	Elective / USE	Electronic Circuits II (5ECC0)	Elective / USE	Elective / USE
Year 3	Signals II (5ESC0)	Communication Theory (5ETB0)	BEP (5XEC0)	BEP (5XEC0)
	Control Systems (incl. lab) (5ESD0)	Elective / USE	Elective / USE	BEP Extension (5XED0)*
	Elective / USE	Elective / USE	Elective / USE	Elective / USE

*It is possible to extend the Bachelor's final project (BEP) to 15 ECTS (credits) by choosing the BEP Extension (5XED0)

Safety training

An Occupational Health, Safety & Environment training takes place during the first lecture week in the first quarter. During this training you gain practical information about the buildings, learn how to avoid hazards and risks, learn how to act in case of emergency, and learn how to prevent physical complaints caused by computer work. It's important to attend, not only for your own safety during your studies at EE, but also for the safety of your fellow students and EE staff. Therefore, the training is compulsory for all new students and counts as a practical exercise within your Bachelor's program. You will receive an invitation from your academic advisor with a time slot. If you do not attend you are not able to complete your program: your presence will be registered. You can find the PowerPoint presentation shown during the training of September 2019 [here](#).

2.1 Basic courses

Each student takes a number of basic courses. These basic courses provide the foundation for the 'Eindhoven Engineer', and will develop your transversal knowledge. This is the knowledge you will need to do major courses and electives both in and outside your Department.

The basic courses include Calculus, Applied natural sciences, Data analytics for engineers, Engineering Design, and USE (User, Society & Enterprise). There are different variants of the basic courses for different degree programs.

The [basic subject matrix](#) provides an overview of preferred basic courses per major. For Electrical Engineering these are the basic courses:

[2WBBO](#) - Calculus variant 2

[3NBBO](#) - Applied natural sciences

[2IABO](#) - Data analytics for engineers

[0SABO](#) - USE basis: Ethics and history of technology

[4WBBO](#) - Engineering Design

Changing Majors

When you [change your Major](#) during your Bachelor's program contact your academic advisor to discuss which basic courses and electives you can use in your new program and which new/extra courses you have to do in order to complete the new Bachelor's program successfully.

2.2 Electives and coherent packages

The elective part of your Bachelor's program consists of 15 credits of USE learning trajectory and of 45 credits of electives.

You can choose elective packages or separate elective courses. In principle, any course in the Bachelor College can be chosen as an elective, including major courses from other programs. You can take more than one USE learning trajectory, in this case the second USE trajectory will be marked as a coherent package of 15 credits.

Once you have made a final decision on your degree program, the optional component allows you to experiment with electives and packages to match your studies even more closely to your (developing) interests and capabilities as you progress through the program. Depending on your ambitions, interests and capabilities you could, for example, decide to deepen your knowledge of your major, explore the boundaries between a number of disciplines, study a combination of two majors (possibly to gain two degree certificates), take on the challenge of an Honors program or obtain a second-level teaching qualification for pre-university education.

However, you will need to bear in mind the necessary prior knowledge required for the course and the timeslot you wish to choose. The [TU/e PlanApp](#) and the digital education guide can provide useful guidance. Discuss your options with your student mentor (when you are a 1st year student) or your [teacher coach](#) (when you are a 2nd or 3rd year student). Also, the [Check your Match](#) event will be organized annually, where you can deepen the information about your electives and USE-trajectory.

USE-trajectories:

- Data Challenges
- Decisions under Risk and Uncertainty
- Design Thinking for a Connected Society
- Design for a Sustainable Future
- Designing for People, Sports and Vitality (DfPSV)
- Information Science, Technology and Society
- New Product Development and Marketing
- Responsible Innovation in a Global Context
- Robots Everywhere
- Patents, Design Rights, and Standards

- Quality of Life
- Technology Entrepreneurship
- The Future of Mobility
- The Human in Technology
- The Secret Life of Light

Tip: Use the electives in your first year to discover your personal interests. Most of the coherent packages start in the second year, on some of the packages we advise to start in the first year to make sure you finish your Bachelor in 3 years.

Tip: Would you like to do a Masters' after you finished the Bachelor College? We advise you to also check [this website \(in Dutch\)](#). If your major doesn't give direct admission to the Masters' program, you could take homologation courses as free electives. Contact the academic advisor of the Master's program for more information.

2.3 OSIRIS and PlanApp

At the beginning of your Bachelor's program, a program of examinations will be created for you in OSIRIS, and the compulsory courses for your program will be entered.

In the first year of the degree program you must add the two elective components in the first year by October 12, 2019, by means of the PlanApp, thus incorporating this component into your program of examinations.

In the first year of the degree program, no later than May 16, 2020 you must add your preliminary choice of electives and USE learning trajectory by means of the PlanApp, in which you must take account of the fact that your program of examinations must meet the conditions of Article 3.4, paragraph 7. You must also justify your choice with regard to your plans and ambitions and with an eye to the engineer's field of professional practice.

2.4 Approval of your examination program

Before you can receive your diploma, the Examination Committee (Study Program Committee) will assess your examination program for coherence, depth, and overlap. To this end, you will use the PlanApp to submit your personal examination program for assessment once you have compiled your complete examination program and earned 90 credits. If you are not sure whether your personal examination program will meet the requirements, you may always ask your academic advisor to assess it for you earlier.

After it has been approved by the Study Program Committee, your personal examination program will be "frozen" in OSIRIS: you will still be able to change the planning of your courses, but you will no longer be able to change the composition of the examination program. If you should decide to reconsider the choices you have previously made, you will have to submit the program to the [The Study Program Committee](#) once again.

IMPORTANT: The approval or disapproval of your examination program occurs separately from registering for and taking courses. Each quarter, you will be able to register for up to four courses at a time.

Please note!

- When you choose at least 25 credits in 2 coherent elective packages you don't have to substantiate your choice. The Examinations Committee cannot withhold approval of the program of examinations if the program meets the requirements, see OER, Art. 3.4.7.
- Each student of Electrical Engineering has to choose at least two DBL projects during the Bachelor's program with at least one project of course level 2 or 3. These DBL projects can also be projects, offered by other Departments. [The Study Program Committee](#) will check upon the correct realization of the elective space.
- Some courses are overlapping with courses of your own major, which means you are not allowed to choose them. Check the overview in the Program and Examination Regulations (OER) 2019-2020, Appendix 2, paragraph i of the excluded courses for your major to find out more.

3. Coaching and mentoring

As a first-year student you will receive guidance from a student mentor appointed by the department during the first year of your Bachelor's program. He or she will help you with the practical matters that you have to deal with related to your studies. For example, where you can buy books, what is the best way to study and how to find your way in student life. The student mentor also helps you in making choices concerning the elective courses, starting with the electives in quarter 2 and 4 in your first year. Throughout your Bachelor program you will be coupled to a teacher coach with whom you will meet at various moments. The nature of the discussions with your coach is mainly reflective, which means that your coach encourages you to think about your career path and provides you with specific feedback on these reflections. Also, if you would want to revise your choices for electives in the 2nd and 3rd year, you can discuss this with your coach, based on your interests that will become more evident throughout your bachelor. Furthermore the teacher coach can explain his or her expertise in the field and share own experiences during his or her career. This will provide you with helpful insights that you can use for your own personal and professional development.

4. Professional skills

The professional skills are embedded in the study components of the major and, without doubt, just as important for your development as an engineer. The credits are distributed over various courses in the major.

Each student has to study the following five skill themes:

1. Communication: Writing & Presentation
2. Cooperation
3. Reflection
4. Planning and organizing
5. Finding and processing (scientific) information

The number of hours that you devote as a student in professional skills is equal to five credits (approximately 140 hours). This is spread over the three years of the Bachelor's program.

Assessment of the professional skills

As a student you will receive feedback on all your professional skills at least three times during your Bachelor’s program. The five credits for Professional Skills are not awarded separately. They are an integral part of the various major study components covering the relevant skills.

The assessment for Professional Skills is expressed in the designations Good (GO), Sufficient (PA), Failed (FL) or Done (DN) or in tenths, on a scale of 0 to 10. In the latter case this assessment counts toward the final grade for the study component in which the relevant Professional Skill is embedded. In both cases the assessment is accompanied by individual feedback. The Professional Skills of level 3 are integrated in the Bachelor’s final project assessment (BEP). You have passed the Professional Skills once the Bachelor’s final project is completed with a final grade of 6.0 or higher and your level 3 skills have all been assessed with a PA or GO.

Professional skills major Electrical Engineering

The table below describes the embedding of the professional skills within the major Electrical Engineering.

Professional skills related to the major EE

PRV-major curriculum	EE
PRV1	2019-2020
PRV11 Working together 1	DBL RYB Y1/Q2 / DBL Venus - Y1/Q4
PRV21 Presentation Skills 1	DBL RYB Y1/Q2 / DBL Venus - Y1/Q4
PRV31 Writing Skills 1	Signal processing basics 1 Y1/Q2
PRV41 Reflection 1	Circuits (Labs) Y1/Q1
PRV51 Planning & organizing 1	Systems Y1/Q4
PRV61 Information 1	Systems Y1/Q4
PRV2	EE
PRV2	2019-2020
PRV12 Working together 2	Electrical Power Systems Y2/Q2
PRV22 Presentation Skills 2	DBL Wireless Charging J2/Q4
PRV32 Writing Skills 2	Electromechanics Y2/Q2
PRV42 Reflection 2	Electrical Power Systems Y2/Q2
PRV52 Planning & organizing 2	Bachelor Final Project Y3/Q3+Q4
PRV62 Information 2	DBL Wireless Charging J2/Q4
PRV3	EE
PRV3	2019-2020
PRV13 Working together 3	Bachelor Final Project
PRV23 Presentation Skills 3	Bachelor Final Project
PRV33 Writing Skills 3	Bachelor Final Project
PRV43 Reflection 3	Bachelor Final Project
PRV53 Planning & Organizing 3	Bachelor Final Project
PRV63 Information 3	Bachelor Final Project

NOTE:

- A number of professional skills is embedded in DBL projects in the elective space. When a student misses a specific skill due to other choices, the student needs to make sure to be on the right level before entering the Bachelor Final Project. A possible gap can be fixed by taking professionalization training courses at ESA.
- Students who attend one or several DBL projects 5XFA0, 5XIA0, 5XIB0, 5XSC0, 5XWF0, 5XTD0 will always have to take part in the embedded professional skills, regardless of the fact if the respective professional skills have already been completed in another course.

In addition to the professional skills you can take various supplementary professionalization training courses.

5. Bachelor Final Project (BEP)

You finish your Bachelor studies with the Bachelor Final Project (BEP). BEP assignments correspond with ongoing research activities within one of the capacity groups or one of the student projects (Automotive Student Teams). The BEP includes one level 2 and all six level 3 Professional Skills such as presenting, reporting, and acquiring information. You have passed the Professional Skills once the Bachelor's final project is completed with a final grade of 6.0 or higher and your level 3 skills have all been assessed with a PA or GO. The BEP assignments must be carried out during quarter 3 and 4 of the 3rd year with a kick-off session in week 8 of quarter 2 and a closing session in week 7 of quarter 4. The hours for this subject will be timetabled for you. You need to register for BEP (and BEP extension if applicable) in OSIRIS just as you subscribe to courses. Each BEP is 10 credits. If you have chosen the BEP Extension as well, this part must be described separately, both in the project description and the paper.

In extraordinary cases and under strict conditions the BEP assignment can be carried out during quarter 1 and 2. This is only possible with permission of your academic advisor. Furthermore, you will need to arrange your own project (private proposal, see below). Make an appointment with your academic advisor to discuss this in due time.

You may start your BEP if you obtained at least 120 credits, including

- the compulsory study components of the first year of the Bachelor's program
- two elective study components as stated in the Program and Examination Regulations 2019-2020 for the Bachelor's program in Electrical Engineering.

BEP Marketplace

You will receive an invitation for the BEP Marketplace when you have been registered successfully. The BEP Marketplace is a digital platform where you can find all available projects. Through this platform you will need to submit five preferences for projects. An automated ranking system will divide all chosen projects among the students. We use two main criteria for ranking a student when more students have chosen the same project: 1. Generation (youngest generation gets highest priority) and 2. Number of gained credits from your study program after Q1 (if generation is the same). 2a. Extracurricular credits (in case criterion 1 and 2 give the same ranking).

Own project

Finally, it is possible to arrange your own project (within or outside the university) under a few strict conditions:

- If you want to do your BEP in industry, you need to arrange the contacts yourself. Furthermore, you need to find a responsible supervisor from our department yourself. He or she can be any EE assistant, associate or full professor, or anyone explicitly appointed by the Examination Committee. Lastly, you need to set up a suitable project description together with your supervisor who will submit this so-called 'private proposal' to the BEP Marketplace, where it will be labeled as 'private', linked to you.
- If you want to do your BEP in a specific group with a specific supervisor, you need to find a responsible supervisor from our department yourself, come up with your own idea for

a project and set up a suitable project description together with your supervisor. Your supervisor can be any EE assistant, associate or full professor, or anyone explicitly appointed by the Examination Committee. He or she will submit this so-called 'private proposal' to the BEP Marketplace, where it will be labeled as 'private', linked to you.

- Students with a private proposal are excluded from the projects database in the Marketplace (for obvious reasons).

If you would like to arrange your own project, start with your orientation and arrangements as soon as possible. The deadline for submitting private proposals is the same as for submitting regular proposals (halfway December).

6. Examination Schedules

Examination schedules for all courses you are enrolled can be found in [My Timetable](#).

7. Graduation deadlines

In order to graduate and finish your Bachelor's program (or P diploma for generation 2016 and older) you need to subscribe yourself for an examination session. In [OSIRIS](#) you can easily arrange this by clicking on **Progress** and then **Qualification request**.

Propaedeutic certificate (generation 2017 and younger)

For students of generation 2017 and younger there is no formal propaedeutical phase anymore and accordingly no propaedeutical diploma. Instead there will be a certificate available when you have successfully completed the first year. If you would like to receive this certificate (it's not obligatory), ask the Center for Student Administration EE, Flux 0.125 for further details. Only students who have finished their propaedeutical phase in one year, will be invited for a ceremony.

Below you find the dates of the examination committee meetings. For the propaedeutical certificate no registration is needed is OSIRIS.

P-certificate meeting

29 August 2019
27 August 2020

Ceremony (only P in one year)

7 November 2019, 19.00 hrs, Blauwe Zaal)
x November 2020, to be determined

Propaedeutic diploma deadline (generation 2016 and older)

Students of generation 2016 and older need to subscribe in OSIRIS for the propaedeutical exam in order to receive the propaedeutical diploma. Without a propaedeutical diploma, registration for the bachelor exam is not possible.

Below you find the dates of the examination committee meetings. Please keep in mind the closing dates for subscribing to the meetings in OSIRIS. You don't have to be present at the meetings: you will be informed about the outcome afterwards. At the time you subscribe for a meeting you might still expect to receive some credits. However, 10 working days prior to the examination committee meeting all 60 credits should be successfully registered in OSIRIS. If not all credits are registered 10 working days prior to the examination committee meeting, you move on to the first subsequent examination committee meeting.

P-diploma meeting	Closing date OSIRIS	Ceremony
29 August 2019	1 August 2019	no ceremony
26 September 2019	29 August 2019	no ceremony
31 October 2019	3 October 2019	no ceremony
28 November 2019	31 October 2019	no ceremony
12 December 2019	14 November 2019	no ceremony
30 January 2020	2 January 2020	no ceremony
27 February 2020	30 January 2020	no ceremony
26 March 2020	27 February 2020	no ceremony
30 April 2020	2 April 2020	no ceremony
28 May 2020	30 April 2020	no ceremony
25 June 2020	28 May 2020	no ceremony
30 July 2020	2 July 2020	no ceremony
27 August 2020	30 July 2020	no ceremony

Bachelor graduation deadlines (all students)

Below you find the dates of the examination committee meetings. Please keep in mind the closing dates for subscribing to the meetings in OSIRIS. You don't have to be present at the meetings: you will be informed about the outcome afterwards. At the time you subscribe for a meeting you might still expect to receive some credits. However, 10 working days prior to the examination committee meeting all credits should be successfully registered in OSIRIS. If not all credits are registered 10 working days prior to the examination committee meeting, you move on to the first subsequent examination committee meeting.

For students of generation 2017 and earlier the total amount of credits in the bachelor phase is 180. For students of generation 2016 and older the bachelor phase consists of 120 credits due to the separate propaedeutical phase of 60 credits.

When you have graduated for the Bachelor's degree, you will receive an invitation for Momentum. This ceremony is held once a year.

B-examination meeting	Closing date OSIRIS	Ceremony / Momentum
29 August 2019	1 August 2019	27 September 2019
26 September 2019	29 August 2019	September 2020
31 October 2019	3 October 2019	September 2020
28 November 2019	31 October 2019	September 2020
12 December 2019	14 November 2019	September 2020
30 January 2020	2 January 2020	September 2020
27 February 2020	30 January 2020	September 2020
26 March 2020	27 February 2020	September 2020
30 April 2020	2 April 2020	September 2020
28 May 2020	30 April 2020	September 2020
25 June 2020	28 May 2020	September 2020
30 July 2020	2 July 2020	September 2020
27 August 2020	30 July 2020	September 2020

8. Examination Committee

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 [Examination Regulations of the Electrical Engineering](#) department.

One of the tasks of the Board of Examiners is the approval of elective programs, granting exemptions and the approval of study programs. For this purpose, the Study Program Committee ([SPC](#)) has been mandated.

Visit the website of the [Examination Committee of the Electrical Engineering department](#) for more information.

Contact

Examination.Committee.EE@tue.nl

Students may appeal a decision of the Examination Committee. Their appeal should be addressed to College of Appeals for Examinations (CBE) of the Eindhoven University of Technology within six weeks after the decision is made.

Downloads

[Fraud Policy](#)

[Exam Framework](#)

[Departmental Assessment Policy](#)

[Central Examination Regulations](#)

[OER, Program and Examination Regulations EE 2019-2020](#)

[Examination Regulations of the Electrical Engineering 2019-2020](#)

9. Program Committee

The Program Committee is an important body in which students and lecturers discuss the quality of education (BSc and MSc within Electrical Engineering) and the way in which it is organized. In this context, the Program Committee provides advice on the design of the curricula, quality assurance and policy-making.

The Program Committee consists of an equal number of student and lecturer members, and grants consent to the dean in regard to sections of the Education and Examination Regulations, and advises the program directors on the curriculum. The statutory task of the Program Committee is to provide advice on promoting and safeguarding the quality of the degree programs. (Section 9.18 WHW). The Program Committee is a representative advisory body with the right of consent in regard to the program-specific sections of the Education and Examination Regulations.

The Program Committee actively contributes to educational innovation and enhancement by taking the initiative to place topics on the agenda. The topics might specifically concern the degree programs for which the Program Committee has been established as well as cross-degree programs, topics such as a uniform procedures in the Bachelor College and Graduate School. For these topics a

Generic Program Committee has been conducted with representatives of all local Program Committees.

Program Committee meetings take place once every month. Visit the website of the [Program Committee of the Electrical Engineering department](#) for more information.

10. Honors program

The [TU/e Honors Academy](#) offers a varied choice of excellence tracks for Bachelor students (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. Regulations

Program and Examination Regulations (OER)

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 program and examination regulations and examination committee rules and guidelines. Subjects regulated by the TU/e Examination Committee Rules and Guidelines (Examination Regulations) 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

Notebook requirements

All students at TU/e are required to have a notebook during the course of their studies at TU/e. Students who do not wish to participate in the TU/e notebook program, can use a private notebook that meets the minimum requirements as described below. The TU/e expects active participation of all of her students. The use of a notebook for educational purposes (including examination and assessment) is part of this. Students can contact ICT Services for Students in the MetaForum for support in installing the software required.

Hardware requirements

Make sure your notebook meets the [minimum hardware requirements](#).

Software requirements

Your private notebook should meet the following requirements:

- A Dutch or English operating system;
- An up-to-date operating system supported by the developer (Windows, MacOS and Linux), with the exception of preview and RTM versions;
- In case of any new releases of the operating system, the ICT Services for Students require time to acquire the necessary knowledge;
- An installed and actively checking virus scanner;
- An active and correctly installed and set up firewall;
- Keyboard layout: English or international English.

Requirements concerning exams

For assessment purposes (exams), your private notebook should meet the following requirements:

- The notebook should have a screen, a keyboard and a mouse (i.e. no tablet);
- The notebook should be able to run a full-fledged (x86 or x64 Linux) operating system;
- The notebook should have a Linux with open source drivers supported WLAN chip;
- The notebook should have one or several external USB-A ports;
- The notebook should be able to start in UEFI and BIOS mode from a USB stick in an USB-A port;
- The notebook should have at least 4GB internal working memory;
- The notebook should have a battery with a battery life of at least 3 hours, and your notebook should be fully charged at the start of each exam.

Downloads/direct links

[Student statute](#)

[OER, Program and Examination Regulations EE 2019-2020](#)

[Examination Regulations of the Electrical Engineering 2019-2020](#)

[Guideline Bachelor College](#)

[Bachelor's before master's rule](#)

[Binding recommendation for continuation of studies](#)

12. Academic advisor

The academic advisor will advise students (either on request or on the advisor's own initiative) on all the aspects of the degree program, and will ensure, partly based on the student's study progress and whenever necessary, adequate referral to the competent bodies of TU/e, to student advisors of the ESA or TU/e confidential counselors. The academic advisor will inform students who fall behind in their studies about the opportunities to receive extra support or measures that may need to be taken to minimize further delay.

Bachelor students Electrical Engineering

dr. K.A.H. Schellekens - Nicolaije

FLX 0.123

T: +31 40 247 5913

E: Academic.Advisor.BEE@tue.nl

13. 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

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 Organisation (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**.

Download

[Quality assurance plan](#)

14. Contact

Departmental Board

[prof.dr.ir. A.B. Smolders](#), dean

[prof.ir. A.M.J. Koonen](#), vice-dean

[drs. J.C. van Wevelingen](#), managing director

Program directors

[ir. S. Hulshof](#), Bachelor

[dr. ir. H. de Waardt](#), Master, PDEng, PhD

Manager Education and Student Affairs EE/AP

[dr.ir. R.R. Trieling](#)

Center for Student Administration (CSA EE)

Flux 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 quarter (September 2nd, November 11th, February 3rd, April 20th)
CSA EE will also be open from 08.30 till 09.30 hrs.

Contact person Education guides EE

[C.R. van Kesteren MA](#)

15. A-Z

A

Absent during an exam or obligatory practicum- when you are no able to attend due to special circumstances, you need to report this within 24 hours to your academic advisor.

C

Canvas - You can use MyTU/e to access Canvas, the learning management system. In Canvas you'll find course information, practice tests, assignments, slides and more. You use Canvas during your education period, and to prep for exams. For any questions and comments, please contact the helpdesk by mailing ESAhelpdesk@tue.nl or calling 3826.

Center for Student Administration (CSA EE) - opening hours from Monday till Friday from 12.00 till 14.00 hrs, location Flux 0.125. Every first working day of each quarter (September 2nd, November 11th, February 3rd, April 20th) CSA EE will also be open from 08.30 till 09.30 hrs. Outside opening hours you can email CSA.EE@tue.nl. Forms can be put in the postbox CSA near the reception desk of Flux.

Change Electives – You can use the PlanApp to add or change coherent elective packages, separate electives and a USE learning trajectory in OSIRIS. You can do this at any point during your studies. If you are not sure whether your personal examination program will meet the requirements, you may always ask your academic advisor to assess it for you earlier. After it has been approved by the Examination Committee, your personal examination program will be “frozen” in OSIRIS: you will still be able to change the planning of your courses, but you will no longer be able to change the composition of the examination program. If you should decide to reconsider the choices you have previously made, you will have to submit the program to the Study Program Committee, EE.SPC@tue.nl once again.

Complaints – When you have a complaint about courses, grants, teachers, the way of testing of examinations, you can first contact our academic advisors.

In case of complaints about, for example a decision of the examination committee 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. For more information check our [education guide](#).

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, complaint or comment, you can send an e-mail to EE Examination Committee: Examination.Committee.EE@tue.nl.

H

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

I

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.

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](#).

M

My Timetable - [My Timetable](#) 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 My Timetable is adjustable to your own needs, and schedules of individual courses can be viewed. The tutorial can be found [here](#). For questions you can 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 you can contact the helpdesk at 3826 or per [e-mail](#). You can also contact the Center for Student Administration (CSA EE) in Flux 0.125.

P

PlanApp - Use the PlanApp to plot your personal study plan. The PlanApp has been integrated in OSIRIS, the system knows the compulsory part of your study program. This gives you a starting point: your basic courses and major courses have already been entered. Now it's up to you to fill your study plan with USE-courses, electives and elective packages. In OSIRIS' course catalogue you will find detailed descriptions of all these courses. Contact the helpdesk at mytue@tue.nl or (040-247) 3826 for questions.

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](#)

R

Registering for a course - To participate in courses and examinations you need to be registered for the course. New first-year students are automatically registered for the courses in the first quarter, but you must do this yourself starting from the second quarter. 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 (or the examinations associated with it). The deadlines for enrollment can be found [here](#).

The course registration is done via OSIRIS. It is important to know that you can also enroll in courses that are not in your examination program. For more information, see [Approval of Examination Program](#).

S

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

T

Thor The study association Thor focusses on the enrichment of the students of Electrical Engineering and Automotive Technology at TU/e. In order to achieve this goal, activities are organized for and by students.