



Pre-Master Kick-off 2023

Hbo Bachelors, university Bachelors and HBO-TOP students

4 September 2023

Harald van den Meerendonk, Academic advisor pre-Master's and Master's students Electrical Engineering

Welcome

Marion Matters-Kammerer

- Program Director Electrical Engineering
Vice-dean of the department of Electrical Engineering



Elmine Meyer

- Program Leader Master Electrical Engineering
- Assistant professor Electromagnetics



Harald van den Meerendonk

- Academic advisor master, pre-master
and HBO-TOP students Electrical Engineering



Contents

- Introduction TU/e, Electrical Engineering
- Programs for hbo and university Bachelors
- Study Progress Requirement
- HBO-TOP, Re-enrollments, SMU
- Registration for courses
- Safety and health training
- Online education guide
- Academic advisor
- StudentBody
- Questions

Eindhoven University of Technology (TU/e)

Top-ranking Dutch University

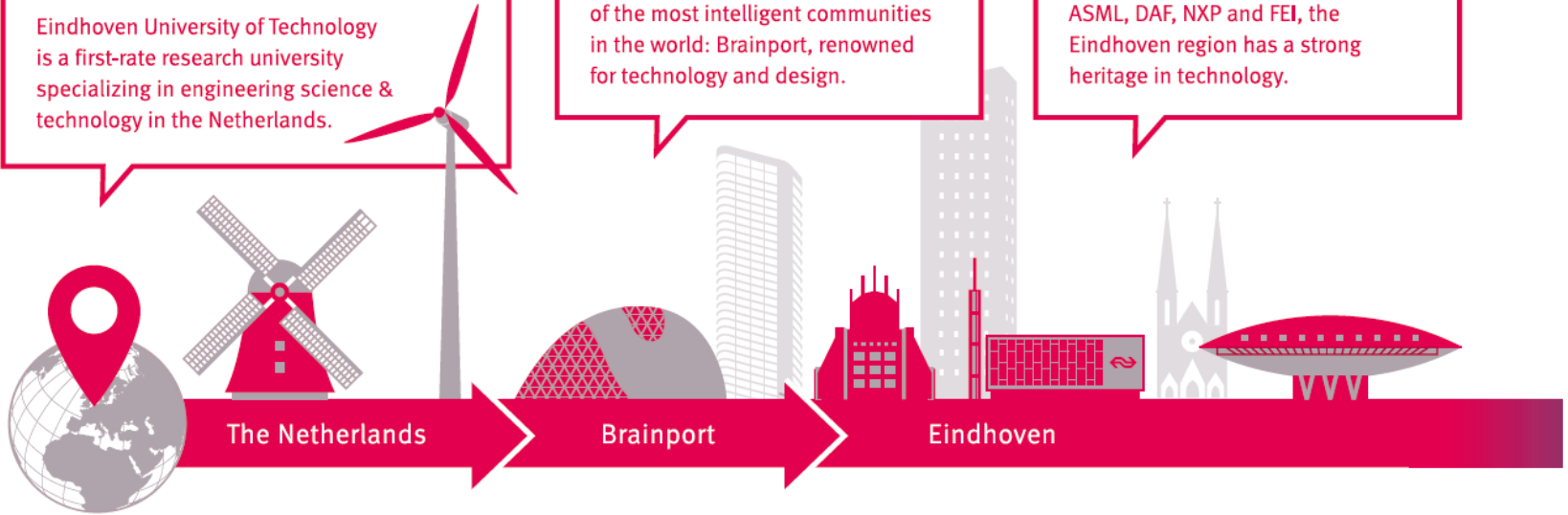
Eindhoven University of Technology is a first-rate research university specializing in engineering science & technology in the Netherlands.

At the heart of the Brainport region

TU/e is situated in the heart of one of the most intelligent communities in the world: Brainport, renowned for technology and design.

Strong technology heritage Eindhoven

With companies such as Philips, ASML, DAF, NXP and FEI, the Eindhoven region has a strong heritage in technology.



Electrical Engineering

- Department Electrical Engineering since 1957
- Education and Research
- Total students in BSc EE: 627, BSc AT: 233, MSc EE: 364
- Average # MSc EE Graduates per year 92 (2017-2022)
- 275 PhD students and 102 full-time TU/e academic staff members
- Collaboration with industry in the Brainport area on internships and graduation projects (over 200 companies in the area!)
- International connections (academia and industry)

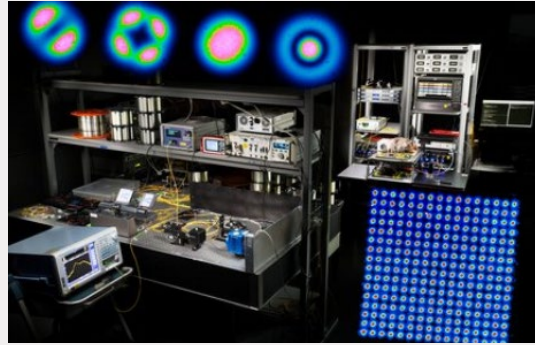


Nine research groups (1)



Control Systems (CS)

- Dynamic modelling and model-based control of complex dynamic systems
- 9 Labs



Electro-optical communication (ECO)

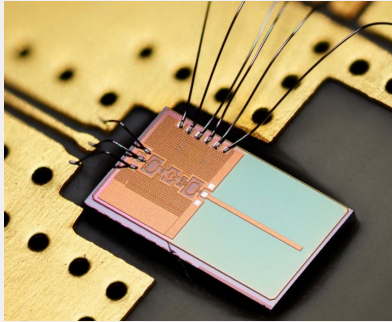
- High-capacity optical transmission
- Optical networks
- Terahertz photonics



Electrical Energy Systems (EES)

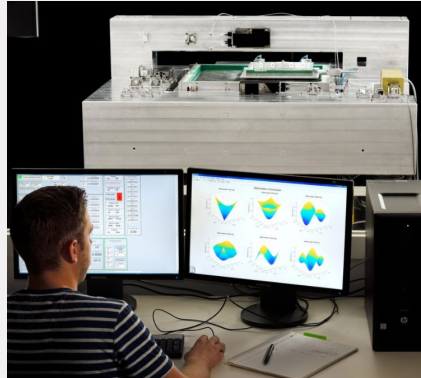
- Power grid technologies
- Intelligent power grids

Nine research groups (2)



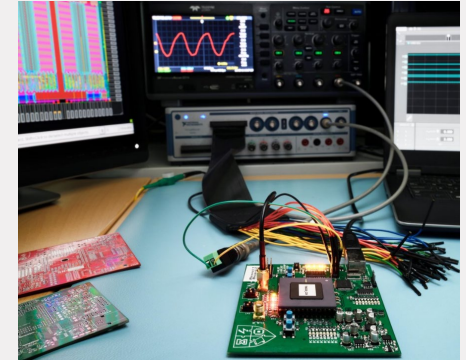
Electromagnetics (EM)

- Integrated Antenna Systems
- EM for Care & Cure
- Multi-physics modelling and computation
- EM Metrology
- EM Radio Science



Electromechanics and Power Electronics (EPE)

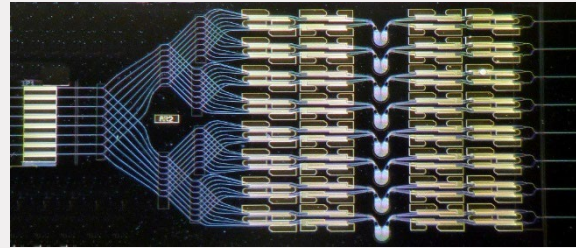
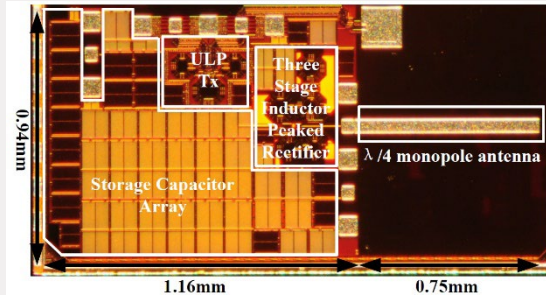
- High-performance motion technology
- High-efficiency energy conversion
- Electromechanics Lab
- Power Electronics Lab



Electronic Systems (ES)

- Model-driven engineering
- Smart electronic systems
- Digital nano-electronics

Nine research groups (3)



Integrated Circuits (IC)

- RF transceivers
- Wideband data converters
- Emerging technologies
- Resource efficient electronics
- MRI Hardware development

Photonic Integration (PhI)

Integrated photonic circuits for

- Communication
- Sensing

Focus on indium phosphide technology

Signal Processing Systems (SPS)

- Bayesian Intelligent Autonomous Systems
- Biomedical Diagnostics
- ICT
- Lighting and IoT

Two specialized master tracks

Care and Cure

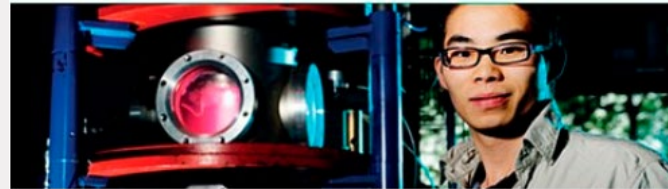


Care and Cure

The importance of the health field as a consumer of technological applications and, in particular, electrical engineering...

**Research groups:
Phi, EM, SPS, IC**

Connected World Technologies



Connected World Technologies

Telecommunication technology is a dynamic area of expertise: math & IT, physics, chemistry technology and innovation sciences...

**Research groups:
ECO, Phi, EM, SPS, IC**

Pre-Master's programs and students

- Hbo graduates follow the pre-Master's program for hbo Bachelors (a standard program).
- University graduates (from TU/e and other) follow the pre-Master's program for university bachelors (an individual program decided by the Admission Board)
- HBO-TOP students follow (parts of) the pre-Master's program for hbo Bachelors for their minor or Excellence program (Fontys only). Fontys decides on which courses for Excellence
- Both pre-Master's programs consist of 30 EC deficiency courses from the Bachelor of Electrical Engineering. Hbo bachelors have 15 EC extra deficiency courses in their Master's program, so-called homologation courses

Program (PM + M) for hbo Bachelors

- Pre-Master's program for hbo Bachelors: 30 EC
(5 courses from Mathematics, 3 from Electrical Engineering)
-

- Master's program for hbo Bachelors: 120 EC
(including 3 courses as homologation)

Program for hbo Bachelors

		EC	
First year	Pre-Master's program	30	
Second year	Homologation courses	15	←
	Core courses	15	differences from standard Master's program for TU/e bachelors
	Specialization courses	10	
	Professional Development	5	
	Elective courses	20	
Third year	Internship	10	←
	Graduation project	45	

Pre-Master's program for hbo Bachelors

Code	Name	EC	Quarter
2WBB0	Calculus variant 2 (<i>MTT: timeslot B, code: BEI/BAU</i>)	5	1
2DL60	Linear Algebra	2,5	1
5ESD0	Control Systems	5	1
2DL40	Advanced Calculus I	2,5	2
2DL70	Probability and Statistics	2,5	2
5EWB0	Electrical Power Engineering	5	2
2DL50	Advanced Calculus II	2,5	3
5ETA0	Introduction Telecommunication	5	3

Pre-Master's program for hbo Bachelors

- Still remaining 3 of 11 deficiency courses (EE) for 15 EC
- To be resolved in the Master's program for hbo Bachelors, Homologation part

Code	Name	EC	Quarter
5EPA0	Electromagnetics I	5	1
5ESCO	Signals II	5	1
5ECC0	Electronic Circuits II	5	2

Program (PM + M) for university Bachelors

- Pre-Master's program individual: 30 EC
(6 courses from bachelor EE determined by Admission Board)
-

- Master's program for EE Bachelors: 120 EC
(standard program)

Program for university Bachelors

	Pre-Master's program	EC
First year	Pre-Master's program individual	30
Second year	Core courses	15
(Year 1)	Specialization courses	10
	Professional Development	5
	Elective courses	30
Third year	Internship	15
(Year 2)	Graduation project	45

Pre-Master's program for university Bachelors

Code	Name	EC	Quarter
5ESD0	Control Systems	5	1
5ESCO	DSP Fundamentals (Signals II)	5	1
5ECC0	Electronic Circuits II	5	2
			3
5EPB0	Electromagnetics II	5	4
5EMA0	Mathematics II	5	4
5XXX0	Track-specific deficiency course	5	X

Pre-Master's program for hbo Bachelors

More information in the education guide

- Pre-Master's program:
<https://educationguide.tue.nl/programs/pre-master-programs/electrical-engineering>
- Master's program:
<https://educationguide.tue.nl/programs/graduate-school/masters-programs/electrical-engineering>

Study Progress Requirement

**The pre-Master's program
must be completed
within one academic year
(max. 2 semesters)**

(for TU/e premaster students only)

Study Progress Requirement

- If you complete the program within one academic year, you can continue with the master
- If you do not complete the program in one academic year, you cannot continue in the master, and you are not allowed to enroll in the pre-Master's program again for a period of three years
- After 1 March, you receive a pre-recommendation from the Examination Committee based on your results of the Q1 and Q2 exams
- After Q3 or Q4 (Q3 re-sits), you receive a binding study progress decision from the Examination Committee

Study Progress Requirement

- Pre-recommendation (positive/negative): a warning when there is insufficient study progress
- Study progress decision:
 - **Positive:** you completed the program, you can continue in the master
 - **Negative:** you did not complete the program, you are not allowed to continue in the (pre-)master
- In case you do not have sufficient study progress, experience study difficulties or there are special (personal) circumstances, let me know to discuss alternatives

Study Progress Requirement

No pre-recommendation/study progress decision ...

- ... when you de-enroll from the pre-Master's program before **1 March** and are not re-enrolled for another pre-Master's program at TU/e: you can re-enroll in the pre-Master's program next year
- If you de-enroll and re-enroll next year, the credits obtained will not be lost
- However: de-enrollment only to continue the program next year is not always the best option

Study Progress Requirement

- Do you still have one exam open after re-sits of Q3 or earlier?
 - Send a request to the Examination Committee for an additional exam
 - OER/PER 2023-2024 of the master EE, appendix 2, article 4, paragraph 6
“Students who still have to successfully complete one study component can make a single request for one additional opportunity to complete the study component from the Examination Committee during enrolment as preMaster’s students, preferably directly after not receiving a pass during the resit.”
- See the education guide:
<https://educationguide.tue.nl/programs/graduate-school/masters-programs/electrical-engineering/examination-committee-ee>

HBO-TOP

- Hbo students doing their minor at TU/e follow the pre-Master's program for hbo Bachelors.
- Duration of the minor at hbo (Q1 + Q2) < duration TU/e pre-Master's program (Q1, Q2 + Q3).
- Some schools require the pre-Master's program to be completed within one year as well
- Hbo students from Fontys following the Excellence program take only one or two courses from the pre-Master's program, as arranged with their Fontys coordinator

HBO-TOP

- HBO-TOP students who have completed all courses from the pre-Master's program, can continue in the master directly after graduation from hbo.
- HBO-TOP students who have completed parts of the pre-Master's program, become TU/e premaster students after graduation from hbo. They continue with the remaining courses from the pre-Master's program. After completion of the pre-Master's program, they can continue in the master.
- No Study Progress Requirement from TU/e for HBO-TOP students

HBO-TOP

- After completing your study at hbo, you have to enroll for either the premaster or the master at TU/e before **1 May 2024**, depending on completing the program or not
- HBO-TOP students are only allowed to register for the courses from the pre-Master's program or the three remaining deficiency courses 5EPA0 Electromagnetics I, 5ESCO DSP Fundamentals (Signals II) and 5ECC0 Electronic Circuits

Re-enrollments

- Have you already completed parts of your pre-Master's program (premaster re-enrollment or former HBO-TOP student)? Then you may meet the requirements to follow master courses as a TU/e premaster student:
- OER/PER 2023-2024 of the master EE, Appendix 2, article 2, paragraph 6
“If students cannot complete the pre-Master's program within six months of the start of the program and therefore are placed at a demonstrable disadvantage, and have obtained a minimum of 15 credits at that time, the students may submit a request to expand the program with a maximum of 15 credits worth of Master's study components. The credits obtained for Master's study components during the pre-Master's program may, at the request of the students, be recorded, retaining the grade and date of examination, on the students' Master's transcript. ”

Re-enrollments

- Send a request to the Examination Committee for taking master courses/exams as a premaster student (see: <https://educationguide.tue.nl/programs/graduate-school/masters-programs/electrical-engineering/examination-committee-ee>)
- Advice: take the homologation courses as master courses first!
- You have to pay for extra master courses on top of your pre-Master's program. Contact ESA (ESA@tue.nl) for paying for courses.
- You do not have to pay for the pre-Master's courses already obtained, only for the remaining courses!

Students from SMU via Hogeschool Zeeland

- Students from Shanghai Maritime University (SMU) may get exemptions for 4 Mathematics courses (2WBB0 Calculus variant 2, 2DL40 Advanced Calculus I, 2DL50 Advanced Calculus II and 2DL60 Linear Algebra) based on the results of Linear Algebra and Advanced Mathematics (A) I & II obtained at SMU
- The Examination Committee decides on exemptions based on your SMU transcripts
- Send a request to the Examination Committee with a copy of your English SMU Transcript of Records:
<https://educationguide.tue.nl/programs/graduate-school/masters-programs/electrical-engineering/examination-committee-ee>

Students from SMU via Hogeschool Zeeland

SHANGHAI MARITIME UNIVERSITY STUDENT ACADEMIC RECORD

Name	Student No	sex	Date of Admission	Date of Graduation						
Specialty	Electrical Engineering and Intelligent Control(Sino-Dutch)				Schooling		4 Years			
Course	Credits	Grade	Remark	Term	Course	Credits	Grade	Remark	Term	
College English Band One(1)	4			14-15-1	Choice of Western philosophy	2			14-15-1	
Advanced Mathematics(A)(I)	5			14-15-1	Military Course	1			14-15-1	
Mao Thought&the Theory of Socialism with Chinese Characteristics	3			14-15-1	Personal and Enabling Skills	5			14-15-1	
Electrical Engineering& Intelligent Control	1			14-15-1	Computer Application Skills	0			14-15-1	
Com puter Foundation for College Students	2			14-15-1	Physical Education(I)	1			14-15-1	
The Brief History of Modern China	2			14-15-1	Concept and Operation of Port	2			14-15-2	
Electrical Project Based Design(HZ)	3			14-15-2	The Philosophical Theory of Marxism	3			14-15-2	
Cultivation of Ethic Thought and Fundamentals of Law	3			14-15-2	Physical Education(II)	1			14-15-2	
Electrical Engineering Project Management(HZ)	3			14-15-2	Introduction to Management	2			14-15-2	
College English Band One(2)	4			14-15-2	University Physics(I)	3			14-15-2	
Complex Function & Integral Transformation	3			14-15-2	Advanced Mathematics(A)(II)	5			14-15-2	
Linear Algebra	2			15-16-1	Physics Experiment	1			15-16-1	
C Programming Language (HZ)	5			15-16-1	Principles of Electric Circuits	4			15-16-1	
Experiment on Electric Circuits	0.5			15-16-1	Physical Education(III)	1			15-16-1	
Psychological Health Education for College Students	2			15-16-1	Career Development for College Students	2			15-16-1	
College English(III)	4			15-16-1	University Physics(II)	3			15-16-1	
Experiment on Analog Electronic Technology	0.5			15-16-2	Management Information System	4			15-16-2	
Physical Education(IV)	1			15-16-2	Analog Electronic Technology	2.5			15-16-2	
Advanced Product Design(HZ)	5			15-16-2	College English(IV)	4			15-16-2	
University Physics(I)	3			15-16-2	Digital Electronic Technology	2.5			15-16-2	
Experiment on Digital Electronic Technology	0.5			15-16-2	KAB Entrepreneurial Basic of College Students	2			15-16-2	

Students from SMU via Hogeschool Zeeland

- Students from HZ/SMU can follow remaining EE deficiency courses (5EPA0 Electromagnetics I, 5ESCO DSP Fundamentals (Signals II) and 5ECC0 Electronic Circuits II) instead. Send a request to the Examination Committee!
- You do not have to pay for exemptions but you have to pay for following extra courses

Information channel 5INFO – Student information EE

Communication

- Important information for all students is communicated via announcements on the Canvas channel **5INFO - Student information EE**
- You are already subscribed
- Important information on the pre-master EE and other information will be communicated via this channel

<https://canvas.tue.nl/courses/27337>

IND Study Progress Check with residence permit for study

- Students with a **residence permit for study** have to pass at least 50% of the maximum number of credits per **each** academic year to retain their residence permit
- A study progress check takes place in September of the **next** academic year based on the results obtained in **this** academic year
- But: a **preliminary** check will also be carried out in this academic year in February/March to see if you are on track
- Completing the pre-Master's program means meeting the IND progress requirement as well
- In case of study problems, personal circumstances or insufficient study progress, contact your academic advisor in time

Registration for courses

- All courses from the pre-Master's program are Bachelor courses
- Rules of the Bachelor College apply according to the OER/PER Bachelor
- Register for courses via OSIRIS in time. Check the deadlines ([education guide](#) and ESA emails) and AKR/ACR ([Administrative Costs Regulation](#)) procedure!
- Course registration also includes exam registration

Registration for courses

- After registration, check and keep confirmation emails. If not received, contact ESA (ESA@tue.nl)!
- See the online education guide for more information:
<https://educationguide.tue.nl/practical-info/student-administration/enrolling-courses-and-examinations/enrolling-courses-and-examinations-bachelor-college/?L=2>
- Automatically registered for the courses from the first quarter
- Automatically registered for 2WBB0 in timeslot B, registration done by CSA MCS because of the huge number of students

Safety and health training

For all **new** students to TU/e

- Practical information about the buildings and learn how to avoid hazards and risks
- How to act in case of an emergency
- How to prevent physical complaints caused by computer work
- Training is mandatory for all new students
- You will be informed later by email via Osiris what you need to do

Quarterly meetings in the academic year 2023-2024

Q1W1	Q2W1	Q3W1
Kick-off everything you need to know about the pre-Master's program	Follow-up 1 evaluation, pre-recommendation, preparing for Q3	Follow-up 2 evaluation, preparing for the master
4 September 2023	November 2023	February 2024

Keep an eye on Canvas for more information on the Q&A sessions.

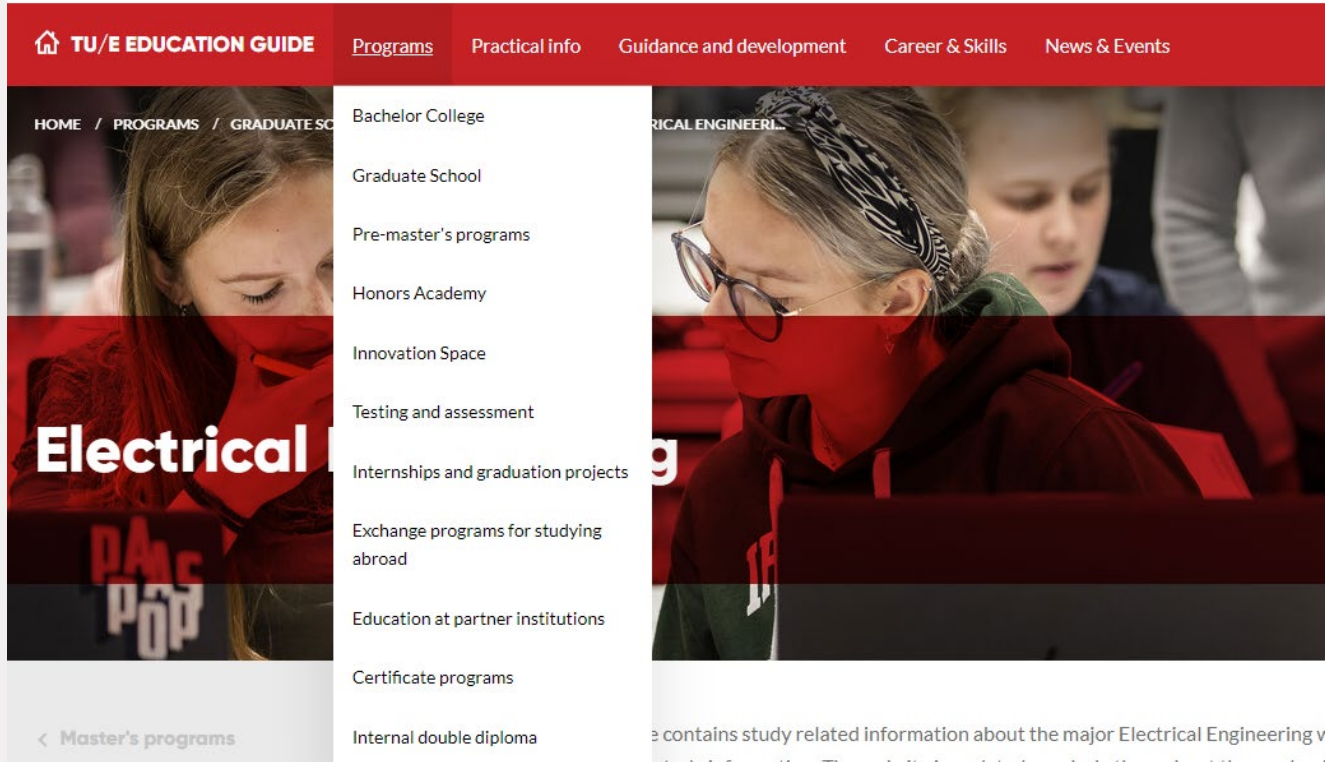
Online education guide Electrical Engineering

All information presented here can be found on the online education guide:

- Curriculum: pre-Master's program, Master's program (for hbo graduates)
- Regulations: Program and Examination Regulations (PER/OER) from both Bachelor and Master
- Examination Committee and Program Committee
- Forms
- Quality Assurance, A to Z

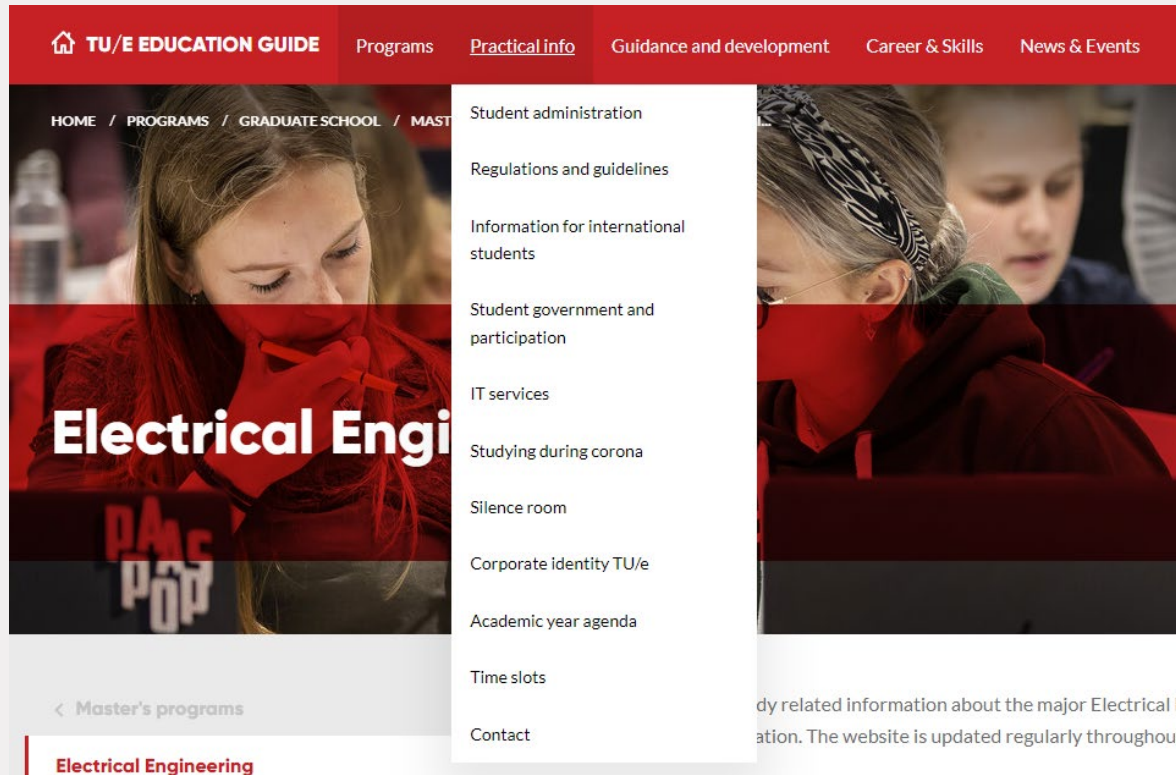
<https://educationguide.tue.nl/programs/pre-master-programs/electrical-engineering>

Online education guide: <https://educationguide.tue.nl>



The screenshot displays the TU/e Education Guide website. The top navigation bar is red with white text for 'TU/E EDUCATION GUIDE' and several menu items: 'Programs', 'Practical info', 'Guidance and development', 'Career & Skills', and 'News & Events'. Below this, a white navigation menu is open, listing various program types: Bachelor College, Graduate School, Pre-master's programs, Honors Academy, Innovation Space, Testing and assessment, Internships and graduation projects, Exchange programs for studying abroad, Education at partner institutions, Certificate programs, and Internal double diploma. The background features a red-tinted image of a student working on a laptop, with the text 'Electrical Engineering' partially visible. A breadcrumb trail at the top left reads 'HOME / PROGRAMS / GRADUATE SCHOOL'. A back arrow and the text '< Master's programs' are visible at the bottom left of the menu area.

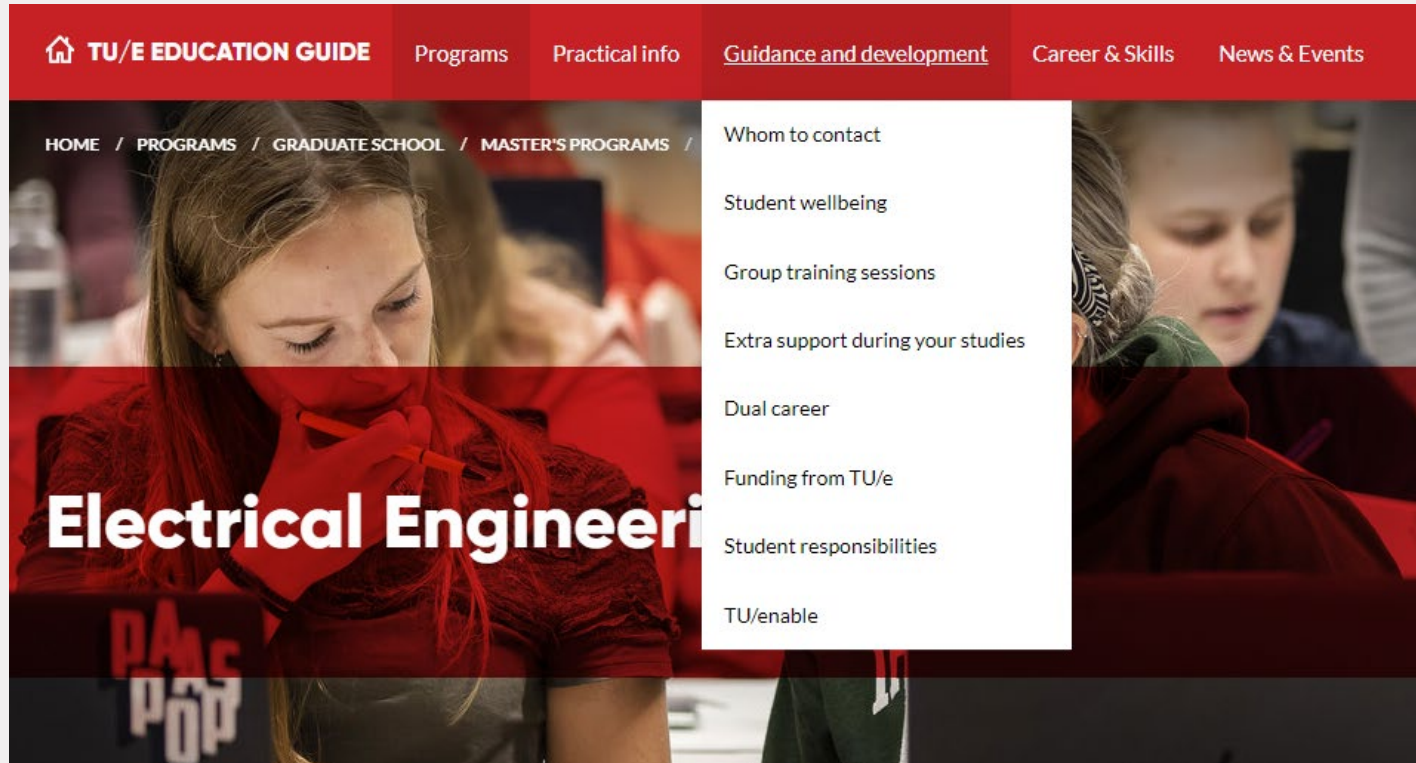
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dy related information about the major Electrical Er
ation. The website is updated regularly throughout t

Online education guide: <https://educationguide.tue.nl>



The image shows a screenshot of the TU/e Education Guide website. The top navigation bar is red with white text. The main content area features a large image of a student working on a project, with the text "Electrical Engineering" overlaid. A white dropdown menu is open, listing various support options.

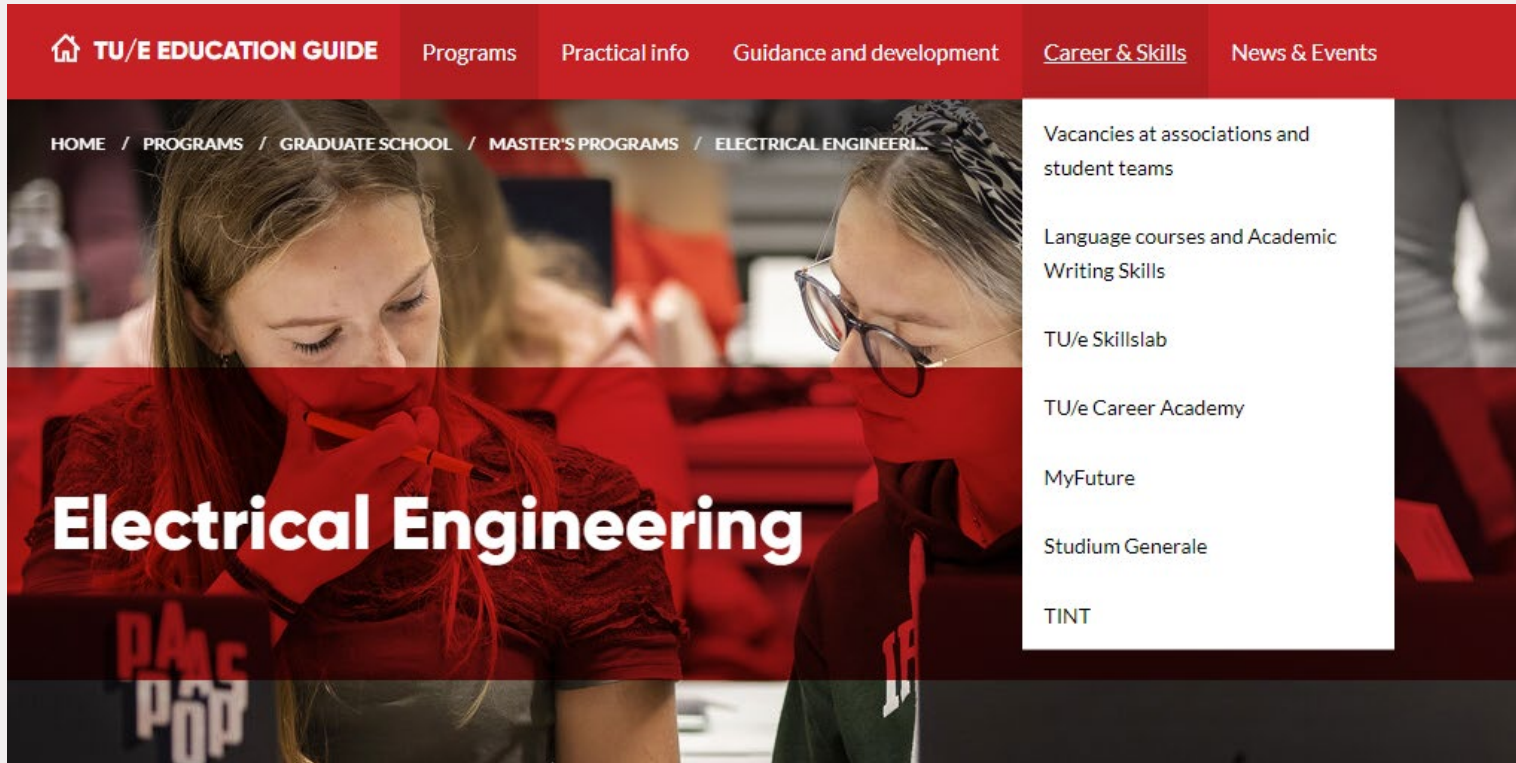
TU/E EDUCATION GUIDE Programs Practical info Guidance and development Career & Skills News & Events

HOME / PROGRAMS / GRADUATE SCHOOL / MASTER'S PROGRAMS /

Electrical Engineering

- Whom to contact
- Student wellbeing
- Group training sessions
- Extra support during your studies
- Dual career
- Funding from TU/e
- Student responsibilities
- TU/enable

Online education guide: <https://educationguide.tue.nl>



The screenshot shows the TU/e Education Guide website. The top navigation bar is red with white text. Below it is a breadcrumb trail: HOME / PROGRAMS / GRADUATE SCHOOL / MASTER'S PROGRAMS / ELECTRICAL ENGINEERING. The main content area features a large image of two students, a woman on the left and a man on the right, looking at a laptop. The text "Electrical Engineering" is overlaid in large white font. On the right side, a white dropdown menu is open, listing several resources:

- Vacancies at associations and student teams
- Language courses and Academic Writing Skills
- TU/e Skillslab
- TU/e Career Academy
- MyFuture
- Studium Generale
- TINT

Academic advisor

Academic advisor advises and helps you

- To improve your study progress
- With practical questions about the Master's program
- With study-related questions and problems
- With study skills
- With your planning
- In case of personal circumstances
- But: you also have a responsibility
<https://educationguide.tue.nl/guidance-and-development/student-responsibilities>
-

Academic advisor

Academic advisor may refer to

- Study choice advisor: problems related to doubts about study choice
- Student counsellor: study grants, financial support, functional impairment or chronic illness, top-level sports
- Study management advisor: improve study progress and study output
- Student psychologist: depression, anxiety, autism, ADHD, stress, assertiveness, personal circumstances
- Confidential counsellor: conflicts between student(s), teacher(s), staff, supervisors, or in case of undesirable or unwelcome behaviour
- <https://educationguide.tue.nl/guidance-and-development/who-to-contact>

Study+ - Studying at TU/e with extra support



What support does TU/e offer?
What are my responsibilities?
Where do I go for help?

To find out go to Canvas:
[Study+: Studying with Extra Support](#)

Source: [Sensibilisation aux différents types de handicaps - Halte Pouce : Accompagner le Handicap au Quotidien \(halte-pouce.fr\)](#)

Academic advisor

Academic advisor works according to privacy (GDPR /AVG) regulations

- Meetings and correspondence are always STRICTLY CONFIDENTIAL. Notes are being made and stored in your digital file to keep track of your situation. Personal information will NEVER be shared with lecturers and other staff unless there is an acute danger for you and/or others.
<https://educationguide.tue.nl/guidance-and-development/who-to-contact>
- Part of the GDPR/AVG is that you send emails using your **TU/e mail address**, not your personal email address
- Study progress check after Q1, just to check how you are doing after the first quarter

Academic advisor

Last but not least

- New external students who are assigned a student mentor will receive an email soon
- Let me know if you experience problems in your study (e.g. study delay, planning issues or management of your studies)
- Let me know if you run into personal problems that may influence your studies: the sooner I know, the better I can help you
- “I rather see you studying with **pleasure** than with distinction”

DO NOT BE AFRAID OR ASHAMED TO TALK TO ME 😊

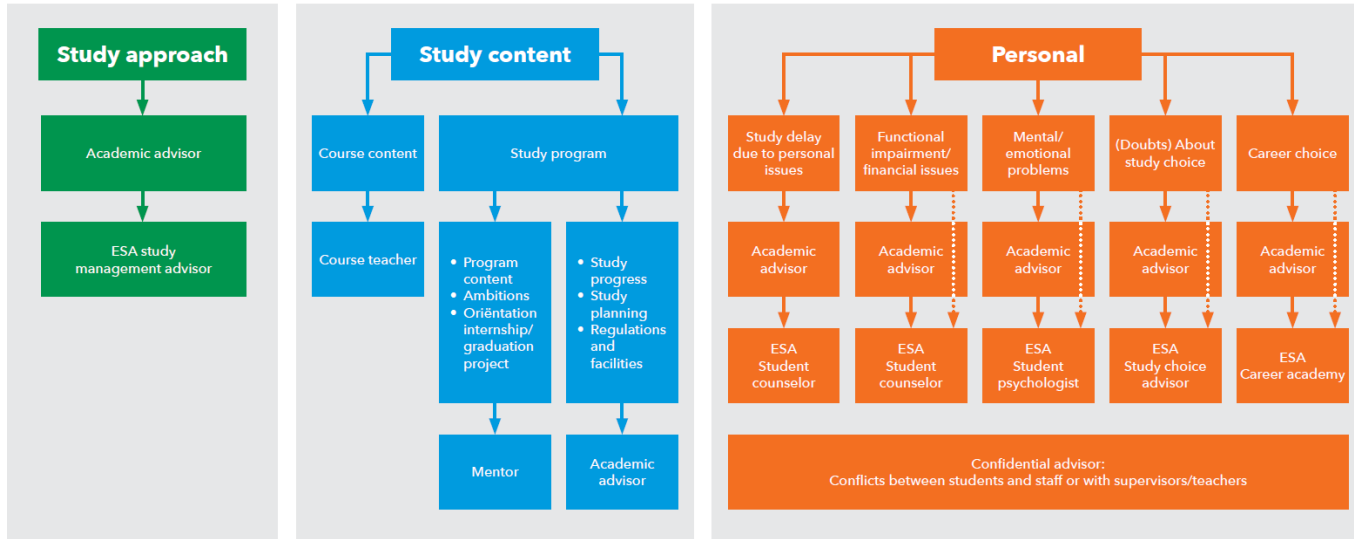
Academic advisor

But ...

- In case you do not want to discuss your problems with me,
- you can also talk to one of our **student** Confidential Contact Persons (peer listeners)
- 24 students are officially trained as confidential contact persons
- <https://educationguide.tue.nl/guidance-and-development/who-to-contact/confidential-contact-persons-peer-listeners>

Student guidance @ TU/e

Student guidance for master's students



Do you have other questions? Or want more info? Please visit: <https://educationguide.tue.nl/organization/advisors-and-tutors/>
Group training sessions: <https://educationguide.tue.nl/broadening/group-training-sessions/>
Not sure where to go? Contact your academic advisor.

Academic advisor

If you have any questions, come and visit me in Flux 0.122, make an [appointment](#) or send me an email:

EE.Academic.Advisor.MEE@tue.nl



StudentBody



Pre-Master Kick Off 2023

Contact: SB@tue.nl | Studentbody.nl

The StudentBody

- The educational feedback body of the Department of Electrical Engineering
- By students, for students

What do we do?

○ Year Councils

- Bachelor: first year, second year, third year councils
- Master: master council
- Premaster: premaster council

○ Panel of Education

- BBQ
- Dinner with the Dean
- Best Teacher Awards
- Contact us with educational problems

Year councils and panel of education

- Year Councils with Commissioner of Education
- Panel of Education with Commissioner of Education, Program Directors, Quality Assurance Officer and student-member of Department Council
- Setup unique within TU/e
- Short feedback loop
- Problems can be fixed a.s.a.p.

Practicalities

Premaster councils

- two or three premaster councils each quarter
- opportunity to inform us about the positives/negatives of each premaster course
- invitation will be send via Outlook (as meeting request) to not forget the meeting
- This presentation will be shared on the education guide:
<https://educationguide.tue.nl/programs/pre-master-programs/electrical-engineering>

Questions

Any questions?