

A young man with short brown hair and a light beard is focused on working on a mechanical assembly. He is wearing a dark grey t-shirt. The background shows a laboratory or workshop environment with various equipment, including a green emergency exit sign and some cables. The image has a red overlay at the bottom where the text is located.

# Master Kick off – Get to know your program

## *Master Sustainable Energy Technology*

Ann De Veirman – academic advisor SET

Marika Koopmans – program coordinator SET

August 2023

# WHO ARE WE?

## STAFF BEHIND THE SCENES – MASTER AT, S&C, SET



**Hans Kuerten**

*Program Director  
ME, SET, S&C*



**Yves Houben**

*Manager ESA-ME*



**Ann De Veirman**

*Academic advisor AT,  
SET & SC*



**Marike Koopmans**

*Program Coordinator  
AT, SET & SC*



**Paula Verbeek**

*Policy Advisor ESA-  
ME*



**Paul Klijn**

*secretary EC AT,  
SET & SC*



**Kim van Waesberge**

*CSA officer AT, SET &  
SC*



**Monique van de  
Donk**

*Internationalization  
officer ESA-ME*

# INTRODUCTION MASTER PROGRAM SET

- **Academic year agenda: how to prepare yourself!**
- Study management
- Coaching
- Student life at TU/e

# Academic year agenda: Q1

| Date                                                                                                                                  | Activity                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• 27 August</li><li>• 1 September (AKR)</li><li>• 8 September: New TU/e students only</li></ul> | <p>Courses:</p> <ul style="list-style-type: none"><li>• Closing date registration for courses quarter 1</li><li>• Register yourself for two core courses and for one elective or specialization course in Osiris</li></ul> |
| <b>4 September</b>                                                                                                                    | <b>Start courses</b>                                                                                                                                                                                                       |
| 11 September                                                                                                                          | Specialization meeting (invitation via CANVAS 4INFOSET)                                                                                                                                                                    |
| September/October                                                                                                                     | CANS/RSI and Work safety (invitation will follow)                                                                                                                                                                          |
| September/October                                                                                                                     | Student mentor meetings (invitation will follow)                                                                                                                                                                           |

# Your first priority NOW: Registration of Q1 courses

- The deadlines for Q1:
  - deadline for course registration was Aug 27, AKR (administrative cost regulation; 20€) deadline is Sept 1 5PM. For new TU/e students (only!) the Q1 deadline is extended to Sept 8!  
Send an e-mail to: [esahelpdesk@tue.nl](mailto:esahelpdesk@tue.nl); Subject: 'aanmeldverzoek' followed by 'course code'.
  - Deadline for exam registration is Oct 16.
  - After the deadline registration is no longer possible!
- You have to register for your **courses and exams** in Osiris!  
Attention: make sure to use the check mark 'exams' in Osiris.
- You are only allowed to take the exam with an exam registration (Osiris).
- You have to register for resits. This is not done automatically.

QUESTIONS? Contact [esahelpdesk@tue.nl](mailto:esahelpdesk@tue.nl)

# Program overview & core program

Not for students who did 5EWB0 in their BSc program. These students take an additional specialization course, recommended are 5SEDO (2.5EC) and 5SEE0 (2.5EC)

**Q2: 4EM70 Sustainable Energy Sources (ME, AP)**

**Q1: 5LEE0 Electrical power engineering and system integration (EE)**

**System integration project  
5LEF0**

**Q1: 7LY3M0 Building performance and energy systems simulation (BE)**

**Q2: 0EM140 Energy, Economy & Society (IE&IS)**

- |            |                                                                                                                                                                      |            |                    |       |       |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|-------|-------|
| 1st year   | <ul style="list-style-type: none"><li>• Core program (30 EC)</li><li>• Specialization courses (15 EC)</li><li>• Free electives (incl. homologation, 15 EC)</li></ul> |            |                    |       |       |
| 2nd year   | <table border="1"><tr><td>Internship</td><td>Graduation project</td></tr><tr><td>15 EC</td><td>45 EC</td></tr></table>                                               | Internship | Graduation project | 15 EC | 45 EC |
| Internship | Graduation project                                                                                                                                                   |            |                    |       |       |
| 15 EC      | 45 EC                                                                                                                                                                |            |                    |       |       |

## COURSES: FOR SPECIALIZATION

- 15 EC for specialization courses
- Choose from the list 'courses MSc SET 2022/23'
- Courses are linked to profiles (this are **suggestions!**)
- You can choose **every** specialization course from the list!
- Most courses are 5 EC, some are 2.5 EC
- TIS (IE&IS): in Q1 OEM110 Research Methodology for IS (mandatory specialization course)

**Discuss with your mentor which courses suit your specialization and personal profile**

[illegible]

# SET profiles

**Courses MSc Sustainable Energy Technology 2023/24**

|                                        |
|----------------------------------------|
| Core course                            |
| Homologation course                    |
| Homologation course for specialization |
| Specialization course                  |

30 EC

Homologation modules are part of free electives. The total amount of bachelor and homologation courses may not exceed 15 EC. Homologation is strongly advised, depending on student's background. See information at the online education guide for target groups (see footnote nr 7)

*Bachelor course, approval of Examination Committee depends on bachelor profile and specialization. The total amount of bachelor and homologation courses may not exceed 15 credits.*

*Students need to choose at least 15 EC of specialization courses from this list. Suggestions for specialization courses are indicated for each profile.*

### Quarter 1

|       |                                        |                       |                                                              | Credits | Timeslot |
|-------|----------------------------------------|-----------------------|--------------------------------------------------------------|---------|----------|
| BE    |                                        | 7LY3M0                | Building performance and energy systems simulation           | 5       | C        |
| EE    |                                        | 5LEE0 <sup>[1]</sup>  | Electrical power engineering and system integration          | 5       | D        |
| ME    |                                        | 4WM20                 | Homologation Matlab Simulink                                 | 2.5     | E1       |
| ME    |                                        | 4SE010                | Homologation Heat, Flow and Thermodynamics                   | 2.5     | E2, E3   |
| AP    | Plasma and Materials Processing        | 3MB010                | Physics of Plasma and Radiation                              | 5       | A        |
| AP    | Fluids and Flows                       | 3MS010                | Advanced fluid dynamics                                      | 5       | E        |
| BE    | Building Physics and Services          | 7XC1M0 <sup>[2]</sup> | Circularity in the built environment                         | 5       | A        |
| BE    | Building Physics and Services          | 7LY5M0                | Data science for intelligent buildings                       | 5       | B        |
| BE    | Building Physics and Services          | 7L53M0                | Sustainable Buildings/Physical Aspects of Building Materials | 5       | A        |
| CEC   | Macromolecular and Organic Chemistry   | 6EMA53 <sup>[3]</sup> | Molecular photophysics                                       | 5       | D        |
| EE    | Electromechanics and Power Electronics | 5LW00                 | Control of Rotating Field Machines                           | 5       | A        |
| EE    | Electromechanics and Power Electronics | 5LWH0 <sup>[4]</sup>  | Modelling & control of power converters                      | 5       | C        |
| EE    | Electrical Energy Systems              | 5LEL0                 | Power Quality Phenomena                                      | 5       | E        |
| IE&IS | Technology, Innovation & Society       | 0EM110 <sup>[5]</sup> | Research methodology for the innovation sciences             | 5       | B        |
| ME    | Power & Flow                           | 4BM60 <sup>[6]</sup>  | Interfacial transport phenomena for engineering flows        | 5       | D2, D3   |
| ME    | Power & Flow                           | 4RM00 <sup>[4]</sup>  | Introduction to Computational Fluid Dynamics                 | 5       | B        |

SET profiles for specialization:



|   |                                                                       |
|---|-----------------------------------------------------------------------|
| 1 | Chemistry for sustainable energy systems (PMP, CEC groups)            |
| 2 | Engineering for sustainable energy systems (P&F, ET, TPM, CEC groups) |
| 3 | Systems for sustainable heat (ET, P&F, TPM, CEC groups)               |
| 4 | Electrical power systems (EPE, EES)                                   |
| 5 | Application in the built environment (BPS, ET)                        |
| 6 | Energy & society (TIS)                                                |

|   | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| A |   |   |   |   |   |   |
| B |   |   |   |   |   |   |
| C |   |   |   |   |   |   |
| D |   |   |   |   |   |   |
| E |   |   |   |   |   |   |
| F |   |   |   |   |   |   |
| G |   |   |   |   |   |   |
| H |   |   |   |   |   |   |
| I |   |   |   |   |   |   |
| J |   |   |   |   |   |   |
| K |   |   |   |   |   |   |
| L |   |   |   |   |   |   |
| M |   |   |   |   |   |   |
| N |   |   |   |   |   |   |
| O |   |   |   |   |   |   |
| P |   |   |   |   |   |   |
| Q |   |   |   |   |   |   |
| R |   |   |   |   |   |   |
| S |   |   |   |   |   |   |
| T |   |   |   |   |   |   |
| U |   |   |   |   |   |   |
| V |   |   |   |   |   |   |
| W |   |   |   |   |   |   |
| X |   |   |   |   |   |   |
| Y |   |   |   |   |   |   |
| Z |   |   |   |   |   |   |

- Specializations are organized in six profiles, which help you in choosing your specialization
- Sections involved in SET are connected to one or more of the [profiles](#)



# COURSES: FREE ELECTIVES (15 EC)

Courses on Master level intended to broaden or deepen your knowledge

- extra specialization courses.
- all TU/e courses on Master level
- an extension of the internship with 5 EC
- deficiency courses (determined by the admission committee or in consultation with mentor)
- **homologation modules** that are offered for SET, and complementary to the student's background

# COURSES: FREE ELECTIVES (15 EC)

Be aware:

- No overlap between courses allowed (in free electives and specialization)
- You need approval of the courses

TU/e courses on Bachelor level only if:

- indicated as necessary by the department admission committee upon admission to the program and/or
- necessary as personal deficiency courses and/or
- necessary as homologation module for specific groups of students
- max 15EC; approval of examination committee required

# HOMOLOGATION COURSES

Opportunity to work on deficiencies

- 4MW20 Matlab simulink (2.5 EC, Q1)
  - For international / non-TU/e students without matlab experience
- 4SE010 Heat, flow and thermodynamics (2.5 EC, Q1)
  - For BSc electrical engineering
  - Not needed for BSc Mechanical Engineering!

No permission of examination committee required, approval of mentor required

# Academic year agenda: Q1

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| 4 September                                                                                                                           | Start courses                                                                                                                                                                                                              |
| <b>11 September</b>                                                                                                                   | <b>Specialization meeting (invitation via CANVAS 4INFOSET)</b>                                                                                                                                                             |
| September/October                                                                                                                     | CANS/RSI and Work safety (invitation will follow)                                                                                                                                                                          |
| September/October                                                                                                                     | Student mentor meetings (invitation will follow)                                                                                                                                                                           |

# MASTER ALLOCATION PROCEDURE (4MAPSET)

Implemented within the Department of Mechanical Engineering to allocate students to sections:

- affects students within the sections in the Department of Mechanical Engineering
- can also affect students choosing a section in one of the partner departments

For more detailed information go to [educationguide.tue.nl](https://educationguide.tue.nl)

# TIMELINE MAP (4MAPSET)

Specialization  
meeting SET  
September 11  
(Monday  
afternoon)

|                                                        |                                                                   |                                                                                                                                                                                                                       |                                                                                                                      |                                                                                                                          |
|--------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Centrally organized specialization information meeting | Possibility for sections to organize an extra information meeting | <ul style="list-style-type: none"> <li>➤ 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> preference for a section in OSIRIS STUDENT: 4MAPAT / 4MAPSET</li> <li>➤ Upload CV + motivation letter in CANVAS</li> </ul> | <ul style="list-style-type: none"> <li>➤ Selection round 1</li> <li>➤ Allocation in second half of week 5</li> </ul> | <ul style="list-style-type: none"> <li>➤ Selection round 2 / 3</li> <li>➤ Allocation in second half of week 6</li> </ul> |
| Week 2 of Q1<br>11 – 15 Sept                           | Week 3 – 4 of Q1<br>18 – 29 Sept                                  | Deadline 2 Oct 2023, 9:00 AM<br><u>Open: Tuesday 19 Sept</u>                                                                                                                                                          | Week 5 of Q1<br>2 – 6 Oct                                                                                            | First half of week 6 of Q1<br>9 – 13 Oct                                                                                 |

# Academic year agenda: Q1

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| 4 September                                                                                                                           | Start courses                                                                                                                                                                                                              |
| 11 September                                                                                                                          | Specialization meeting (invitation via CANVAS 4INFOSET)                                                                                                                                                                    |
| September/October                                                                                                                     | <b>CANS/RSI and Work safety (invitation will follow)</b>                                                                                                                                                                   |
| September/October                                                                                                                     | <b>Student mentor meetings (invitation will follow)</b>                                                                                                                                                                    |

# **CANS/RSI and Work safety** ***For new TU/e students only***

**Information meetings will be organized.**

**You will receive an invitation during the first quarter.**

**MANDATORY under Dutch law**

***Your presence will be checked***



# Looking ahead!

## *Student meetings – year 1 & 2*

Goals:

- Sharing experiences at the TU/e and in the Master's program
- Sharing information about what you need to arrange for the next stage of your Master's program
- Community feeling



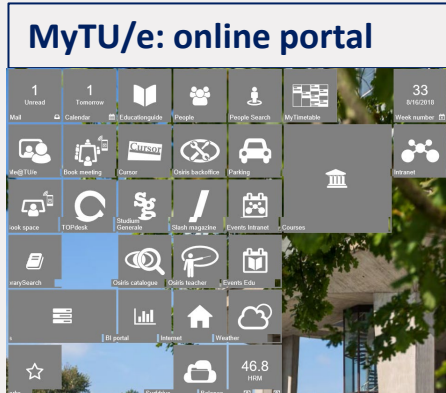
Topics Master Kick-off, Specialization and Q meetings:

| Year 1: Master Kick-off (August)                                                                                                                     | Specialization meeting SET (September 11 <sup>th</sup> )                                                                                 | Year 1: Q2 meeting (November)                                                                                                                                                        | Year 1: Q3 meeting (March)                                                                                                                                         | Year 1: Q4 meeting (May)                                                                                                                             | Year 2: Q1 meeting (October)                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Program Introduction</li><li>• Study management &amp; coaching</li><li>• Information &amp; support</li></ul> | <ul style="list-style-type: none"><li>• Specialization choice - MAP</li><li>• Information session about specialization options</li></ul> | <ul style="list-style-type: none"><li>• Specialization choice</li><li>• To do list</li><li>• Registration exams and Q2 courses</li><li>• Fraud basics</li><li>• Evaluation</li></ul> | <ul style="list-style-type: none"><li>• Quality assurance: NSE</li><li>• Practicalities</li><li>• <b>How to find an internship?</b></li><li>• Evaluation</li></ul> | <ul style="list-style-type: none"><li>• <b>How to organise your internship?</b></li><li>• How and when to search for a graduation project?</li></ul> | <ul style="list-style-type: none"><li>• How to organize the graduation project (online meeting)</li></ul> |

# INTRODUCTION MASTER PROGRAM SET

- Academic year agenda: how to prepare yourself!
- **Study management**
- Coaching
- Student life at TU/e

# ONLINE EDUCATIONAL SYSTEMS



**Education guide: Program overview, elective courses list, homologation courses, procedures, examination committee, teaching and examination rules**



## Osiris: course and exam registration, progress overview



**Canvas: Learning management system, course information, course materials, assignments, 4INFOSET, etc.**



## MyTimetable: personal time schedule

**More information + videos:** <https://educationguide.tue.nl/studying/services/online-systems/>

# ONLINE EDUCATION GUIDE

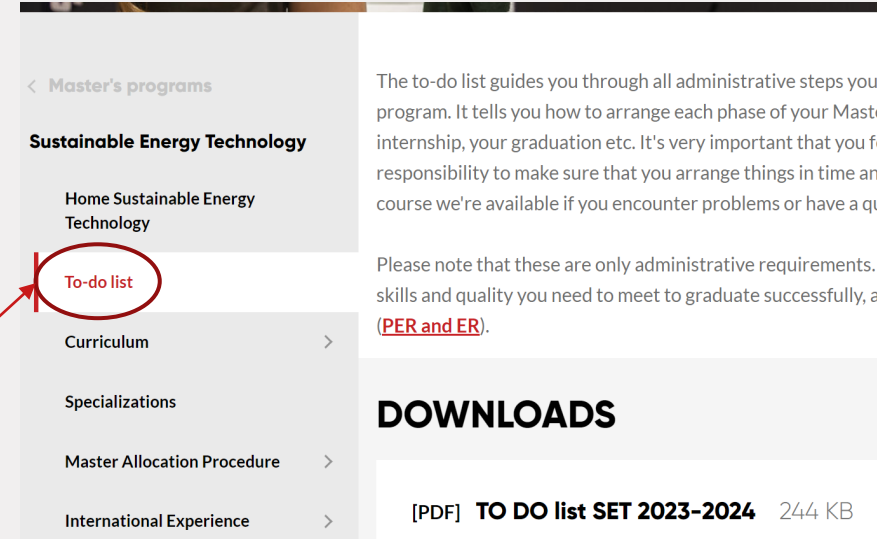
<https://educationguide.tue.nl/>

Go to: Programs > Graduate School > Master's Programs > Sustainable Energy Technology

<https://educationguide.tue.nl/programs/graduate-school/masters-programs/sustainable-energy-technology/>

- Program overview
- Specialization courses list
- Homologation courses
- Procedures
- Examination committee
- Teaching and examination rules

Regularly check the [to-do list](#) !



< Master's programs

**Sustainable Energy Technology**

Home Sustainable Energy Technology

**To-do list**

Curriculum >

Specializations

Master Allocation Procedure >

International Experience >

The to-do list guides you through all administrative steps you program. It tells you how to arrange each phase of your Master internship, your graduation etc. It's very important that you responsibility to make sure that you arrange things in time and course we're available if you encounter problems or have a question.

Please note that these are only administrative requirements, skills and quality you need to meet to graduate successfully, a (PER and ER).

**DOWNLOADS**

[PDF] **TO DO list SET 2023-2024** 244 KB

# 4INFOSET (CANVAS, MANDATORY)

4INFOSET Information of the study: MSc SET

Recent announcements

- No title**  
Dear master students, With this message we would like to inform you about upcoming changes, new regulations, and other matters in the Master's Program for the academic year 2019-2020: see...
- Summer newsletter SET**  
Dear master students, The academic year 2018-2019 is coming to an end. We hope you are able to finish up successfully and use the summer to get lots of positive energy and plans. With this mes...
- Information: education office AT, SET and S&C and international office**  
Dear SET, AT and S&C students, Please hand in all forms (Internship/ Agreement or forms for grants), for the beginning of next academic year, before Wednesday the 10th of July! Holiday opening hours: Week 30 (Mond...

Recent activity in 4INFOSET Information of the study: MSc SET

- 1 announcement**

You will be added to the course, if not do it yourself!!!!

Student information meetings will be announced here.  
Student information will be posted here ('files').

**Read your TU/e mail!**

# Study management: the PSV approach

## Prioritize-Specify-Visualize



### Prioritize:

- Register for 15EC courses
  - 15EC courses requires 420 study hours (1EC = 28 hours)
  - 20EC is allowed, but not recommended
- Make a priority list: which course is the most important to pass this Q?
  - It is recommended to focus first on the core and homologation courses.

Why such a priority list?

If the workload is too high, you can drop the course that is lowest on your priority list.

There may be foreseeable and unforeseen reasons why the workload in a Q is too high for you (think about illness, other non-study related activities, etc)

# Study management: the PSV approach

## Prioritize-Specify-Visualize



### Specify

- Each course of 5EC requires 140 study hours
- Specify what you need to do for this course: e.g. follow lectures or read the lecture slides, work out your lecture notes (after the lecture), make assignments, look for more information in the textbook, attend and prepare meetings with peers (project courses)
- Estimate for every activity how much time that is going to cost you (weekly) and indicate when extra time is required to meet deadlines for assignments or interim exams.
- If you find it difficult to plan, you can
  - Discuss with peers
  - Plan a meeting with the academic advisor ([via this link](#))
  - Consider to contact [the study management advisor](#) and to follow a study management training

# Study management: the PSV approach

## Prioritize-Specify-Visualize



### Visualize

- Put the activity blocks in a visual 10-week agenda (1Q = 10 weeks)
  - Include lectures, guided self-study, exams
  - Indicate if they are **on-campus or online** (information to be found in Canvas)
  - Allow yourself some free time for sports, leisure, meeting friends etc.
  - For Q1: do not forget to plan the MAP activities

If the conclusion is that your agenda is too full, go back to P (PSV is an iterative approach)

**USE THE PSV APPROACH BEFORE THE START OF EACH Q**



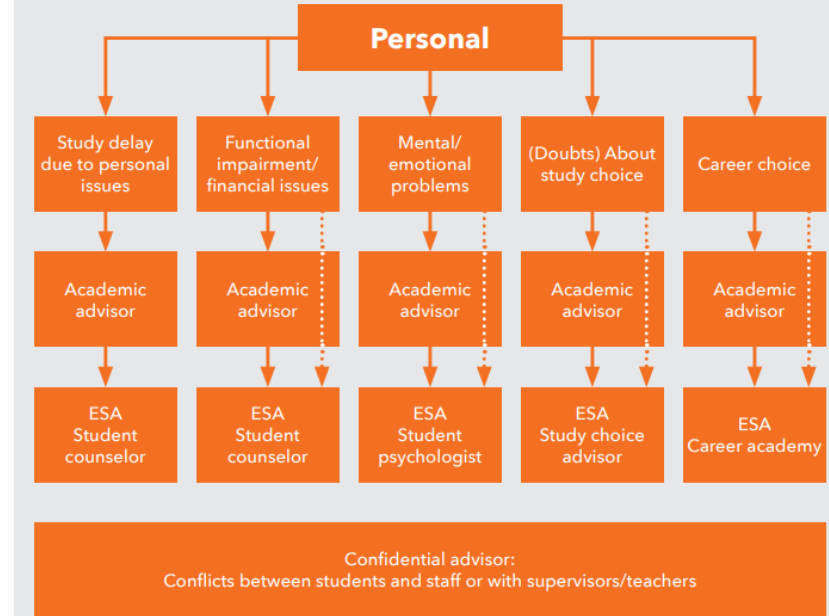
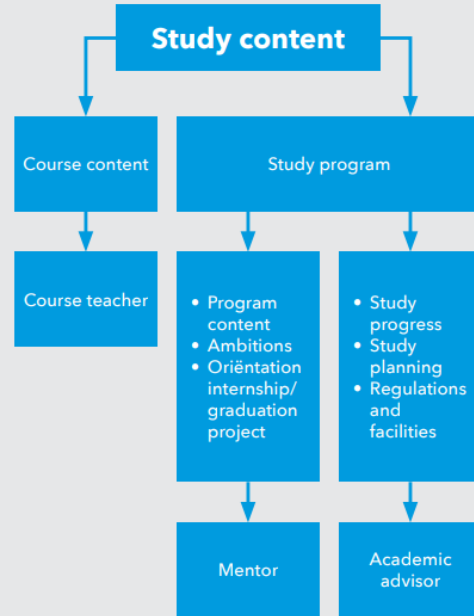
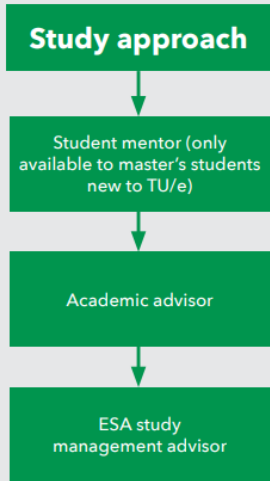
# INTRODUCTION MASTER PROGRAM SET

- Academic year agenda: how to prepare yourself!
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# INTRODUCTION MASTER PROGRAM S&C

- **Academic year agenda: how to prepare yourself!**
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# Student guidance for master's students



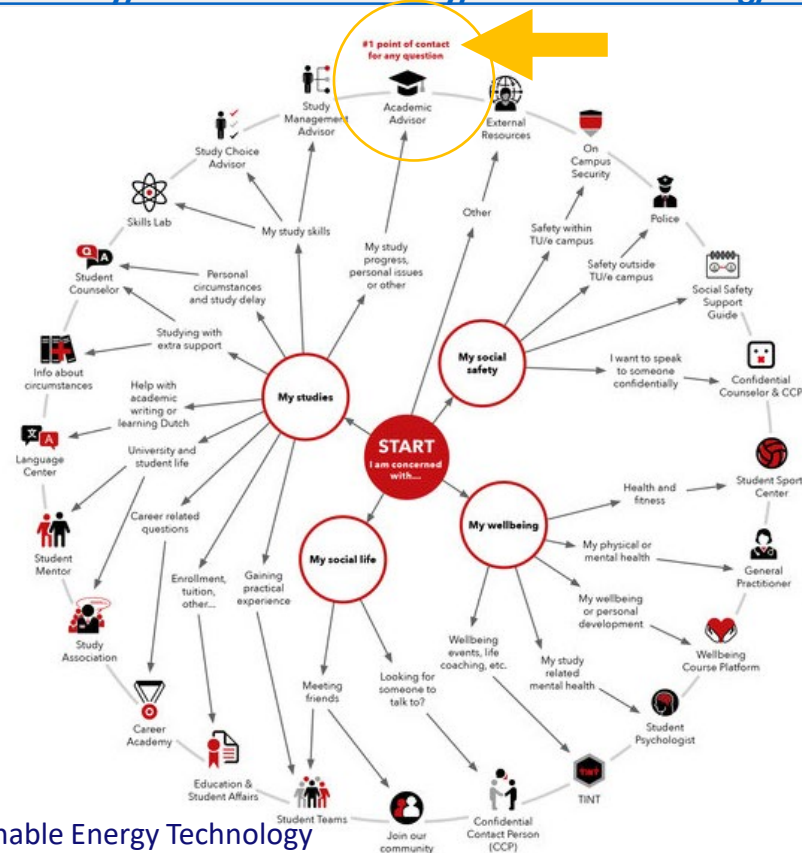
Also check: <https://www.tue.nl/en/our-university/about-the-university/student-wellbeing>

More information? Check it on the [student guidance page](#). Also have a look at the **group training sessions** we offer.

Not sure where to go? Contact your academic advisor.

# Where to find support?

<https://www.tue.nl/en/our-university/about-the-university/student-wellbeing/where-to-find-support>



# COACHING – STUDY APPROACH – PROGRESS - PERSONAL

**Academic advisor:** Ann De Veirman (me.academic.advisor.at.sc.set@tue.nl)

- Advice and help to enhance study progress (also in case of personal issues)
- Information about the regulations and how to organise your study
- Personal and confidential appointments

**Please do not use my personal email address**

- Read first the information in the education guide and on Canvas
- Ask specific questions
- Always mention your name, program (MSc SET) and student ID
- **Contact us in time**

# COACHING – STUDY APPROACH

## **Student mentor (for students NEW at the TU/e):**

- Supports you in finding your way at TU/e, the campus and the city of Eindhoven
- First point of contact in your first week at TU/e
- Organizes several group and individual meetings (attendance is recommended)
- Various topics will be covered (study, culture, education systems, exams, sports & leisure, etc.)

There are 2 student mentors (Bas, Lucas).

## **NEW THIS YEAR:**

The student mentors will also help in building the MSc SET community (because MSc SET students have different BSc backgrounds).

# COACHING – STUDY CONTENT

## **Mentor (academic staff member)**

- Guides you in choosing your specialization electives and in compiling your curriculum
- Guides you in making a choice for an internship & graduation project and in finding a subject and location
- Discusses your plans to improve your professional skills
- Supports you in thinking about your career path

**Internship supervisor:** Is responsible for your graduation project (can be your mentor)

**Thesis supervisor:** Is responsible for your graduation project (can be your mentor or internship supervisor)

# INTRODUCTION MASTER PROGRAM SET

- Academic year agenda: how to prepare yourself!
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# Student life at TU/e

- Simon Stevin, study association Mechanical Engineering (lunch lectures for MSc students)
- EIRES: Energy lectures
- Cosmos, international students
- Students Sport Centre
- Student teams
- Teaching assistant
- ....

*Questions? Discuss with  
your student mentor!*

# If you have additional questions ...

- Contact the academic advisor (Ann De Veirman)  
E-mail: [academic.advisor.at.sc.set@tue.nl](mailto:academic.advisor.at.sc.set@tue.nl)