

MASTER ENGINEERING SYSTEMS 2025-2026

SUSTAINABLE ENERGY

LEARN HOW TO OPTIMIZE OUR ENERGY SYSTEMS FOR THE FUTURE. STUDY SUSTAINABLE ENERGY AT HAN.

[HANUNIVERSITY.COM/MSE](https://hanuniversity.com/mse)

OPEN UP NEW HORIZONS.

HAN UNIVERSITY
OF APPLIED SCIENCES



PROFESSION

As an energy systems engineer, you have an active role in the transition towards a reliable sustainable energy system. Your job? Developing the technology, models and smart control for sustainable energy systems. Systems that generate, store or distribute energy. Locally. Regionally. Nationally. Even internationally.

Where you'll work? At SMEs, grid operators, energy providers or government bodies. Work on developing innovative energy systems, providing solutions for the societal energy challenges of today and tomorrow. Or play a role in maintaining the energy balance on a national or international scale.

JOBS

With this master degree, you can get a job as:

- Energy Engineering Analyst
- Renewable Energy Asset Manager
- Energy System Engineer
- Energy Consultant

A GOOD MATCH?

- Are you looking to take your engineering expertise to the next level?
- Are you interested in sustainable and renewable energy systems?
- Do you enjoy doing applied research to solve complex problems?

YES? Then the program is a good match for you!

MODULAR-BASED PROGRAM

Engineering Systems is modular-based. You follow 4 modules in total and conclude with a major project. Each module starts with the theory. Then you participate in a group project where you apply the theory in a real-life case. This is called the minor project. The modules you follow depend on your track. Each track has compulsory and elective modules.

PROGRAM IN BRIEF

THEORY AND PRACTICE

Theory and practice go hand in hand in this master degree. In the 1st year you follow practice-based modules. So you delve into the theory and at the same time put it into practice during minor projects. Here you work in small groups with other students. Your aim? To solve actual issues from research and industry. Knowledge and techniques from research are thus implemented and applied in an industrial environment. This collaborative approach strengthens ties with industry and stimulates the exchange of knowledge. After finishing the practice-based modules you work on your major project. That's when you independently conduct research for a company.

TRACKS

Sustainable Energy is a track within the Master of Engineering Systems. Other tracks are:

- Automotive Systems
- Cyber-Physical Systems

What is common to all these tracks? Solving complex problems through applied research. And developing innovations that meet the needs of the market and/or society.

WHY STUDY SUSTAINABLE ENERGY AT HAN?

Supported by industry

Companies in the energy field provide guest lectures and project supervisors, share knowledge and facilitate minor and major projects and excursions.

Based on industry needs

The program is based on continual interaction with industrial partners. Our applied research focuses on their needs and interests.

Research centers

Work on innovative projects at HAN's Sustainable Electrical Energy Center of Expertise (SEECE) and the Balanced Energy Systems Research Center.

Direct transfer after bachelor

Transfer directly after your Bachelor in Automotive Engineering, Electrical Engineering, Mechanical Engineering or related discipline

RESEARCH

A key aspect of this master program is the inclusion of innovative research projects. Projects that focus on energy related topics. Collaborate with the Sustainable Electrical Energy Center of Expertise (SEECE) and the Balanced Energy Systems Research Center. They translate knowledge into commercially viable products and services. How? Through applied research and collaboration with regional companies in the energy sector.

PROGRAM OVERVIEW

1st semester

Systems Modeling Module:

- Applied Physics
- Introduction Modeling
- Practice Modeling and Simulation
- System Identification
- Energy-Based Modeling
- Minor Project

Applied Control Module:

- Feedback Control
- Digital Control
- Apply Controller Strategies
- Controller Implementation
- Multivariable Systems and Optimizations
- Minor Project

2nd semester

Choose 2 elective modules from:

Reliable Electricity Hubs:

- Subsystems
- Asset Management
- Control
- Electricity in Society
- Minor Project

Hydrogen Technology:

- H2 Components
- System Design, Integration, Control and Safety
- Role in Energy Transition
- Hydrogen in Society
- Minor Project

Big Data and Small Data:

- Data Collecting, Exploration and Preprocessing for Machine Learning
- Machine Learning
- System Identification
- State and Parameter Estimation
- Advanced Modeling (Minor Project)

3rd semester

- Major Project

MAJOR PROJECT

During your major project, you do research in an industrial setting. Previously you worked in teams with classmates. Now you're in the lead! Demonstrate your technical, communication, reporting and presentation skills. The project takes 5 to 6 months for full-time students. Past students did their graduation projects at Bosch, Hyster-Yale, DAF, Ford, Apollo Tyres, VDL, and V-Tron. Want to do your project abroad? No problem. HAN can support you online.

STUDY PART-TIME

Want to broaden your knowledge while working? Develop your professional skills even further with the part-time Sustainable Energy track. Instead of doing an internship, you expand your skills in your current job.

→ Duration: 2.5 - 3 years

→ Study load: 20 hours/week with 8-10 contact hours on 1 day

→ Start: September

[Hanuniversity.com/mse/parttime](https://hanuniversity.com/mse/parttime)

ADMISSION REQUIREMENTS

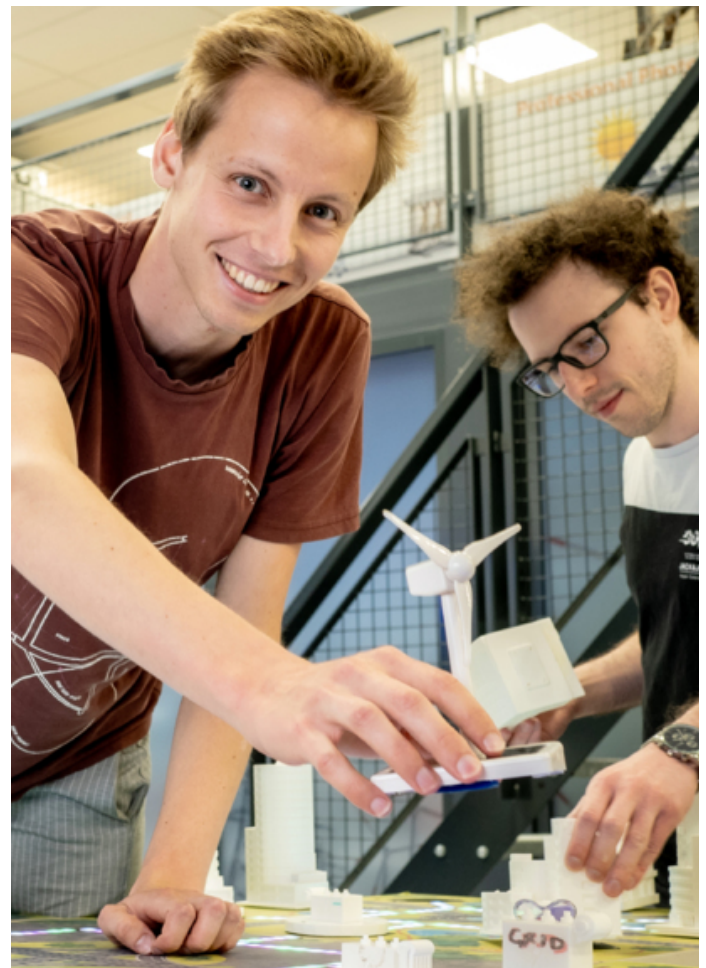
For this master, there will be a selection procedure. The following admission requirements apply. You need to have one of these bachelors:

- Bachelor degree in Automotive Engineering; Electrical Engineering; Mechanical Engineering or related discipline.

Fluency in English:

- Depending on your educational background, an English proficiency test may be required.

hanuniversity.com/admission





OPEN DAYS

Interested in Sustainable Energy?
Join one of our Online Open Days
in November, January or March.
Talk to our students. Ask all your
questions. Get a tour through our
campuses and much more!

hanuniversity.com/openday

NEXT STEPS IN ORIENTATION

Interested in studying at HAN University of Applied Sciences?
Want to find out more first? Come and meet us! Either online or in
person. Here's how you can meet our lecturers, students and
alumni:

- Open Days
- Education Fairs
- Webinars
- Meet 1:1
- Student for a Day
- Sample Lecture

hanuniversity.com/meetus

APPLICATION PROCEDURE

Step 1

Apply on [Studielink.nl](https://studielink.nl). Select the program Master Engineering
Systems. Then select the track Sustainable Energy.

Step 2

Upload the necessary documents. You can see your application
status and find your required documents on [My Application](#).

Step 3

The program manager reviews your application. You might be
asked for additional information.

Step 4

Find out whether you've been accepted. You'll be informed about
the outcome of your application by mail.

Step 5

Admitted to the program? Paid the tuition fees? Then you're
officially enrolled in the program.

IN SHORT



Location
Arnhem



Language
English



Program start
September



Program duration
Full time: 1.5 years
Part-time: 2.5 - 3 years



Study load per week

- Full-time: 40 hours (of which 16-20 contact hours on 2 days per week)
- Part-time: 20 hours (of which 8-10 contact hours on 1 day per week)



Degree
Master of Science in Engineering Systems



Accreditation
Accredited by the Accreditation Organisation of
the Netherlands and Flanders (NVAO)

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HAN CAMPUS ARNHEM

Ruitenberglaan 29
6826 CC Arnhem
Netherlands

QUESTIONS?

Education Office
Master Engineering Systems
+31 26 365 82 15
technicalmasters@han.nl
www.hanuniversity.com

SOCIAL

HANuniversitycom
 HANuniversity_com
 HANuniversity_com
 Master Engineering Systems