

Master Engineering Systems (MES), track 'Automotive'

Information MAE

2nd year at HAN

March 2021

Dr. Ir. Saskia Monsma

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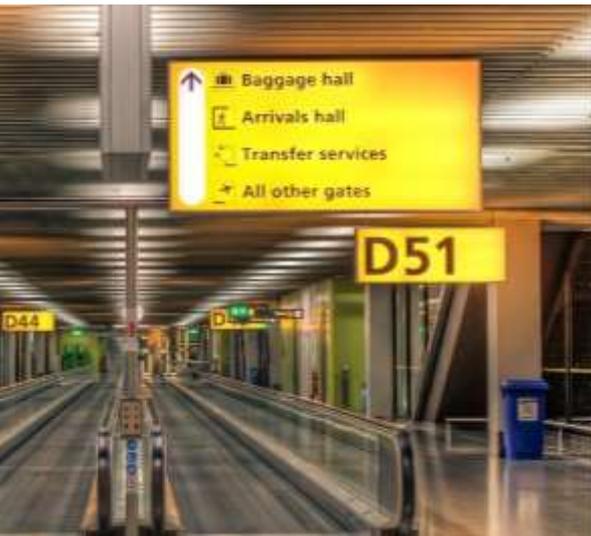
The Netherlands – Geography

- Western Europe
- 17 Million inhabitants
- Cities : Amsterdam, Rotterdam...
- Beautiful countryside
- Excellent highways & Public transport
- Nearby : Paris, Brussels, London, Berlin...



The Netherlands - Social Structure

- Highly educated population
- Knowledge based society
- Open and safe community
- Multi-cultural, multi-lingual
- Internationally oriented



And in Dutch...?



HAN University of Applied Sciences

- University of Applied Sciences
- 2 Locations: Arnhem & Nijmegen
- 35,000 students (82 Bachelors & Masters)
- 2,500 International students (70 countries)
- 4 Faculties
 - Engineering
 - Economy & Management
 - Education
 - Health & Social sciences



HAN School of Engineering & Automotive



- Located in Arnhem
- Automotive part consists of :
 - Research group Automotive
 - Applied Research Laboratory - Automotive (ARL-A)
 - Automotive Education (Bachelor & Master)
- Part of Automotive Centre of Expertise (ACE)

The HAN Buildings in Arnhem





Applied Research Lab Automotive (ARLA)



Road Simulator





HAN

HAN Formula Student Team



HAN Hydromotive

HAN Racing Team (HRT)





HAN Master of Automotive Systems Key Points

MSc Degree

- Professional Masters
 - Strong practical focus (applied research)
 - For an engineering leadership role in business
 - Close cooperation with industry, institutes & research (lecturers, guest lectures, Master Advisory Council, projects with industry and research, ...)
- International focus
- English

Master Engineering Systems (MES), track Automotive



Vehicle Dynamics
Advanced Driver Assist Systems (ADAS)
Collision warning & avoidance
Lane keeping assistant
Brake assist
Electronic stability control

→ for cleaner, safer and smarter vehicles

Fuel consumption
Emissions
Engines
Electrical & hybrid vehicles



Advanced Driver Assist Systems
Intelligent mobility
Cooperative, connected and automated mobility (C-ITS)
Communication: V2V, V2I, V2X
¹⁴ Legal & business aspects

MAE year 2 at HAN

Entry requirement: ≥ 54 EC from 1st year

Semester 1

- Module **Applied Control** (15 EC)
- Module **Advanced Vehicle Dynamics** (15 EC)
- From Module Systems Modeling:
 - Practice Modelling & Simulation (2 EC)
 - System identification (2 EC)

Possible to follow in addition:

A module of Intelligent Mobility
or Green Mobility

Semester 2

- Major Project (30 EC)



Teaching Method

- Lectures, lab session, minor projects
- Practical and theoretical (research oriented)
- Interactive, flipped classroom
- International classroom
- Theory application in case studies
- Major Project at a company, university or research institute



Home > Education system > The Dutch way of teaching

- + Degrees
- + Dutch institutions
 - Tuition fees and cost of living
- + Map of institutions
 - Dutch grading system
 - Number of international students
- + High quality education
 - The Dutch way of teaching**

The Dutch way of teaching

Develop an open mind through interactive learning.

The Dutch teaching style is interactive and student-centred. It focuses on teamwork, which makes it easy to meet other international students. Studying in Holland means developing an open mind and increasing your international orientation.

A large part of all study programmes is dedicated to writing papers and working in groups to analyse and solve specific problems. You will also get a chance to get practical work experience through internships or do experiments in laboratories, depending on the field of study.

Teamwork

Holland has received international praise for its teaching style, which centres on students working together as a team and on self-study and self-discipline. The teacher will act as a facilitator and guide in the learning process.

Interaction in class

Interaction in class is highly appreciated. You are expected to think about the knowledge that is presented to you and develop and express your own opinion. You are free to ask questions and be critical of what lecturers or fellow students say. Use your own creativity to apply your newly-gained knowledge.

Respect for all opinions

The Dutch teaching method is founded on respect for each individual's opinions and convictions. This mindset is not limited to education institutions, it is a national characteristic. It is the foundation for Holland's diverse and plural society.

Video testimonial

International students in Holland talk about Dutch higher education



[watch more videos](#) +

Quick links

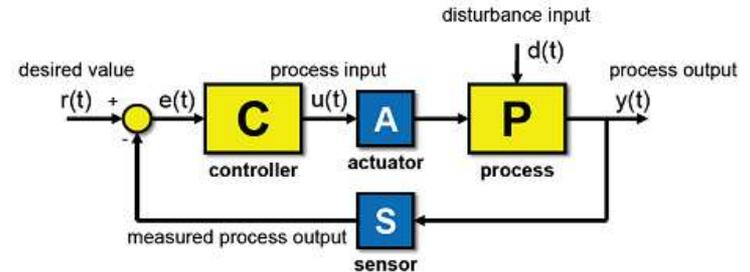
- [Find a study programme](#)
- [Find a scholarship](#)
- [Living in Holland](#)

[Link to module Applied Control video](#)

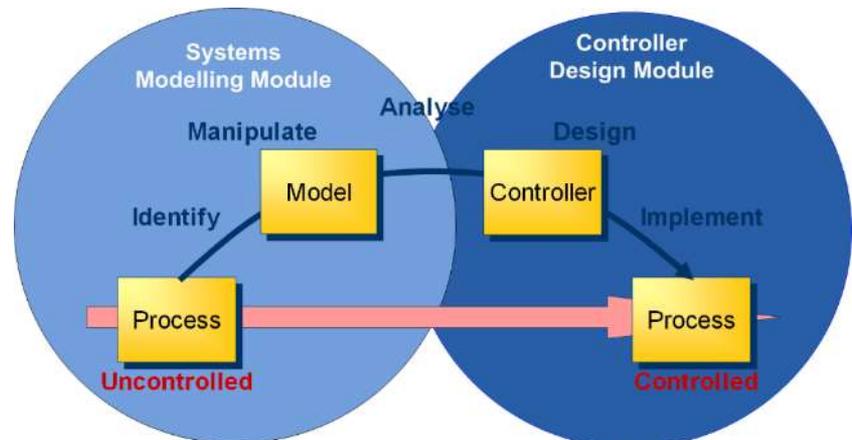
Module Applied Control

Learn how to:

- Apply feedback control (analogue and digital)
- Apply practical solutions (anti windup, smith predictor and bumpless transfer,...)
- Implement controllers on multiple platforms
- Apply control strategies (feedforward, cascade, ratio and override,..)



Richard Kaandorp



[Link to module video](#)

Module Advanced Vehicle Dynamics

Learn how to:

- Model and validate linear and nonlinear vehicle behavior, emphasizing tires, driver, passenger cars, race cars, articulated vehicles and motorcycles.

Saskia Monsma



Major Project



In this project you will

DEMONSTRATE YOUR MASTER LEVEL

By

- Solving a practical technical problem for a client
- Developing and applying new knowledge
- Demonstrating the final qualifications on master level

HAN-Automotive: Projects



MES – Major Project Partners



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Career paths

- Field of work in automotive companies
 - Software and test engineering
 - Development and Design engineering
 - Applied research
 - Production
 - Management
- Job titles
 - Vehicle application engineer
 - Product engineer
 - Researcher
 - Calibration engineer
 - Advanced research engineer
 - System/CAE engineer



[Link to video module Applied Control](#)

[Link to video module Advanced Vehicle Dynamics](#)

Videos

[Video MES](#)



Video Rollover mechanics for commercial vehicles



HAN Master | Automotive Systems | Blended Learning

HAN Student Support Program

- Introduction week new students end of August
- Travelling support, visa & residence permit
- Arranging accommodation in Arnhem
- Subscription / administration support
- Subscription of HAN intranet
- Erasmus support
- Facilitation of sport activities
- Thesis assignment support

Practical Information

- Starts in August
- One time costs
 - Tuition fees : € 2,143 (/year)
 - Visa + residence permit : € 310
 - Administration: € 750
- Recurring Costs
 - Accommodation : € 400 / month
 - Living expenses : € 350 / month
- Travel
 - Bicycle / Walk
 - Public transport (Train, bus, taxi etc.,)
- Accommodation
 - Student housing outside HAN
 - Individual rooms, joint areas for cooking



Useful links

- HAN Master Automotive systems
 - https://www.han.nl/opleidingen_courses/master/en/automotive-systems/
- HAN Automotive research group
 - <http://www.han.nl/international/english/about-han/research/automotive/research-groups/>
- HAN ARL-A
 - <http://www.han.nl/international/english/about-han/research/automotive/laboratories/>
- Dutch organisation for internationalizing education
 - <http://www.nuffic.nl/en>
- Visa
 - <https://ind.nl/EN>
 - <https://ind.nl/EN/Documents/3087.pdf>
- Scholarships
 - <http://www.studyinholland.nl/scholarships/grantfinder>
 - <http://www.yourfutureinautomotive.com/travel-bursary>
- General
 - <https://www.studyinholland.nl/education-system/the-dutch-way-of-teaching>
 - <http://www.han.nl/opleidingen/master/en/automotive-systems/application/>
 - <http://www.studyinholland.nl/>
 - <http://www.sportinarnhem.nl/>

Thank you and welcome!



Contact:

- Educationoffice.tm@han.nl
- +31 26 36 58 215

Questions

