I’m designing a control architecture for AMSystems to optimize 3D printing.

Tim Verdonschot, PDEng trainee
Mechatronic Systems Design

PDEng program
MECHATRONIC SYSTEMS DESIGN (MSD)
TU/e PDEng programs

Are you about to receive your master’s degree, but are you not quite done learning? Are you ready to sink your teeth into a high-tech project of your own? Join one of the Professional Doctorate in Engineering (PDEng) programs at the Eindhoven University of Technology (TU/e). You will become an expert in high-level technological design and gain valuable work experience in the R&D departments of leading high-tech companies. In this brochure, you will learn more about the Mechatronic Systems Design (MSD) PDEng program.

About Mechatronic Systems Design (MSD)

The Dutch mechatronics ecosystem already has been transformed into a high-tech sector with huge challenges in terms of multidisciplinary product and process design and engineering. The TU/e High Tech Systems Center (HTSC) aims to understand, teach and innovate system synthesis and design of complex equipment, instruments, robotic and manufacturing systems and systems-of-systems. The PDEng program MSD is closely connected to HTSC and focuses on combining in-depth understanding of the classical engineering fields, with multi-disciplinary, model based systems engineering to conceive, predict and verify cutting-edge system functionalities and architecture. A major aim of the program is to further define and improve a tailored systems engineering approach for high-end mechatronic systems.

PROGRAM STRUCTURE

MSD is a two-year, full-time PDEng program. You will be registered as an employee of TU/e and receive a salary and an attractive benefits package. Upon completion of the program, you will be awarded the Professional Doctorate in Engineering (PDEng).

Courses

During the first 12 months you learn new technologies and broaden and deepen your knowledge of mechatronics in a broad sense. You spend about half your time following courses and workshops, supervised by lecturers who have several decades of worldwide design experience with high-tech companies. The lecture program is structured to provide the solid background needed with industrial projects, including system engineering and technological design methods and tools.
The MSD PDEng Track provides you with all the design and leadership skills that no other program offers but that every high-tech company desires.

Nestor Hernandez Rodriguez, PDEng alumnus Mechatronic Systems Design

Training projects
The other half of your time is spent working on projects (real problems) from industry that are assigned by industrial partners, including well-known international companies such as ASML, TNO, ESA, VDL, and NXP, but also promising high tech start-up companies in the Brainport region. During these training projects you work in multidisciplinary teams. You solve problems and develop innovative solutions meeting industry standards. You master all the aspects of teamwork, supported by non-technical courses and professional development.

Design project
You spend the last twelve months in industry working on an individual, challenging and innovative technological design project – a real problem that needs a solution. This project will integrate a number of (sub-) disciplines. You’re supervised by engineers from industry as well as by university staff. This way you’re supported by scientific knowledge, practical design experience and project management expertise.

AFTER YOU GRADUATE
With a PDEng degree from TU/e, you are set to make an excellent start in the labor market with a unique experience in industry. The depth and experience you have gained through your course work and projects gives you a distinct advantage compared to university graduates. MSD graduates generally find a job in challenging, highly competitive industrial environments, both in The Netherlands as well as abroad.
MSD is open to graduates with a relevant MSc degree, comparable to a degree from a Dutch technical university. Acceptance in a TU/e PDEng program is on an application basis. Key qualities in the selection are technical excellence, motivation, ambition, (English) communication skills and critical thinking. Interested in applying? Read more at www.tue.nl/msd.

* The PDEng MSD is a subtrack of the PDEng Automotive Systems Design. After successfully completing the program, you will receive a diploma of the ASD program, mentioning that you specialized in Mechatronic Systems Design.

About TU/e

- Leading in engineering, science & technology
- High-quality research and education
- Excellent modern facilities
- International community of more than 80 nationalities
- Friendly, open culture

- International network with prominent universities and institutes
- TU/e alumni in high demand among employers
- Strong position in Brainport Eindhoven, the Dutch high-tech region

Program summary

- Program workload: Full-time
- Degree: Professional Doctorate in Engineering (PDEng)
- Language: English
- Start time: November (yearly)
- Duration: 2 years
- Salary: 1828 € per month