

Boost your career

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Website: www.3TU.nl/SAI

Introduction

Are you a graduate young professional or currently completing your Master of Science programme at a (technological) university? Are you looking for an even faster successful career in industry or business? Then you should consider applying to one of the technological designer programmes at the 3TU. School for Technological Design, Stan Ackermans Institute.

Together the three Dutch universities of technology – Delft University of Technology, University of Twente and Eindhoven University of Technology – offer ten exceptional two-year programmes that will put you on a faster track to a successful career in industry. In addition to broadening your technological expertise, you will also learn more professional skills that will enhance your career opportunities.

Industry offers engineers from our programmes excellent jobs, because of the strong reputation of our graduates.

As well as that, the technological designer programmes were initiated at the request of the Dutch high-tech industry. High-tech companies need professionals who can design and develop complex new products and processes and offer innovative solutions. All ten programmes work closely together with high-tech industry, offering you the opportunity to participate in large-scale, interdisciplinary design projects. With this unique cooperation we provide you with a valuable network of contacts in industry.

The technological designer programmes clearly meet an important need of the Dutch high-tech industry. Over the past twenty years more than 2,500 of our graduates have found challenging and exciting jobs with (multi-) national companies, including Philips, ASML, Océ Technologies, Akzo Nobel, Vodafone, Ericsson, DSM, Unilever, Schiphol Airport and TNO. These companies are united in their praise for the quality of the technological designer programmes and their graduates, and offer them a faster track in their career.

To ensure their continued enthusiasm, the programmes employ a strict selection process, accepting only excellent young professionals and graduates with at least a Master of Science diploma from a (technological) university.

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As part of their more intensive cooperation, the three Dutch universities of technology have decided to combine their technological designer programmes in the 3TU. School for Technological Design, Stan Ackermans Institute.

The 3TU technological designer programmes offer you an opportunity to enhance your expertise and project management skills with an extensive hands-on assignment, supervised by experienced professionals. Each programme covers a different speciality, for example managing complex architectural construction projects, designing mechanisms for user interfaces for consumer products or developing

high-tech software systems for software-intensive systems. The focus of the programmes is described further on in the brochure.

The two-year, full-time programmes all lead to a Professional Doctorate in Engineering (PDEng) degree. If you are accepted into one of the programmes, you will be appointed as a trainee for the duration of two years and will receive a salary. All technological designer programmes are taught in English.

The structure of all programmes is more or less the same: during the first part of the programme you will gain extensive knowledge and experience of the latest design methods and their applications. You will also learn to work in interdisciplinary teams and will further develop your professional skills.

You will apply what you have learned during the second part of the programme, when you will design an innovative industrial product or process for one of many prominent high-tech companies. The close cooperation between these companies and the technological designer programmes offers exciting career opportunities. Many of our graduates are offered a job with the company in which they did their final project, or find work through the extensive network of contacts they have acquired.

Programmes

A short description of the ten technological designer programmes is given on these pages. The location of the programme is also mentioned, because the programmes are offered by one of the three universities united in the 3TU. School for Technological Design. For more information: www.3TU.nl/SAI.

Architectural Design Management Systems (ADMS) Location: Eindhoven University of Technology

ADMS is a programme for young academic graduates who want to gain competences for the improvement and innovation of architectural design processes, both in relation to the remodelling of such processes and to their organisation and management. The emphasis is on the development of conceptual and working methods, which are scientifically robust and valid, to support practical and effective decision-making. To strengthen the market position of designers in the building industry, it is essential for design processes to be structured in a way that takes sufficient account of changing organisational structures of clients and users, the increasing complexity of construction projects, both functional and technical, the growing number of design specialists, and the need to increase efficiency and quality. The two-year programme is based on relevant knowledge and theories provided by both the Architecture, Building and Planning department and the Technology Management department.

Designer in Bioprocess Engineering (DBE) Location: Delft University of Technology

In the Designer in Bioprocess Engineering programme, you will develop into a visionary teamworker with a strong, state-of-the-art, background in the Biosciences & Chemical Engineering knowledge required for innovative bioprocess design. As well as that you will gain knowledge of business sciences such as economic evaluation and project management. This will allow you to evaluate the implementation of developed processes in the real-life industrial environment, taking into account process sustainability. Throughout the programme, you will be trained to develop and apply an independent attitude, a critical approach, creativity and a focus on innovative applications of the interdisciplinary field of Biochemical Engineering. The biotech industries in the Netherlands and other countries appreciate the added value of the graduate Designers in Bioprocess Engineering, and offer them a range of careers in all aspects of bioprocess development.

Design and Technology of Instrumentation (DTI) Location: Eindhoven University of Technology

Instruments have replaced the human eye, ear and nose as sensors in high-tech environments such as industrial labs, production lines or hospitals. The core of the DTI programme is the design of these systems. The emphasis is on successful project management. Techniques from fields like mechanical and electrical engineering, physics, chemistry and information technology ('brains') are combined into well-functioning systems. The DTI programme has a separate industrial course and a curriculum for becoming a medical physicist.

Information and Communication Technology (ICT) Location: Eindhoven University of Technology

The design of innovative consumer products and professional systems that communicate with their (global) environment (such as wireless and electro-optical communication) is extremely challenging. This leads to many new solutions, for example embedded software and monolithic integrated (opto-) electronic circuits in telecommunications, medical applications and consumer products. The ICT programme trains you in the designing of systems that can process, store and convey information in every sense of the word. This programme includes describing and simulating circuit components and designing and constructing system parts and components. In addition, the interactions between hardware and software are also fully addressed.

Logistics Management Systems (LMS) Location: Eindhoven University of Technology

The logistics and management of complex industrial processes require insight in planning, organising and controlling the flow of goods from raw material to end-user, as well as logistic aspects of workflow management. The LMS programme is designed to broaden, increase and integrate your knowledge and skills in the field of logistics. The programme pays considerable attention to designing, building, testing and implementing complex logistics management systems.

Mathematics for Industry (MI) Location: Eindhoven University of Technology

Mathematics is making an increasing contribution to the design of industrial products and processes. The MI programme is designed to develop problem-solving abilities that focus on the mathematical components of design processes taking place in industrial environments. This course concentrates on mathematical techniques and the development, use and analytical possibilities of mathematical models. There is also a link to science and management studies.

Process and Equipment Design (PED) Location: Delft University of Technology

The Process and Equipment Design programme trains MSc graduates to become qualified designers capable of designing 'fit for purpose' and 'first of a kind' products, processes and equipment. It encourages trainees to actively look beyond the boundaries of their own discipline and to recognise the challenges and restrictions imposed by product chain management, time and money. During design projects, industrial and academic knowledge are brought together and applied in real industrial assignments. As qualified designers, graduated trainees can expect to find challenging careers in the process industry and with engineering contractors.

Process and Product Design (PPD) Location: Eindhoven University of Technology

The process industry demands an integrated approach to chemical, physical and mechanical processes. The PPD programme focuses not only on process design, but also on the relationship between the product, its functionality and its microstructure. This leads to an integrated approach to the development, design and implementation of processes for a large number of products in the process industry.

Software Technology (ST) Location: Eindhoven University of Technology

The development of software for advanced systems has many different aspects, including requirements, specification design and implementation, testing deployment and organisation. The ST programme focuses on the project-based design and development of software for resource-constrained software-intensive systems such as real-time embedded systems. This programme addresses formal methods of specification, verification and design together with software engineering and system technology.

User System Interaction (USI) Location: Eindhoven University of Technology

Consumer electronics, modern interactive websites or innovative shopping aids for elderly people require user-friendly interaction between humans and systems. This applies especially to complex technological systems with extensive information flows, such as computer-based and interactive learning systems. The USI programme trains you as a designer with the skills to develop these interactions. You will be trained in the proven scientific methods and techniques you need to design and evaluate the user interfaces of products, services and systems. You will learn the entire design cycle by working on a variety of applications.

Application and Selection

Are you a graduate young professional or currently completing your Master of Science programme at a (technological) university? Are you interested in technological design and looking to enhance your skills and expertise to boost your career in business or industry? Are you ready for a two-year training programme while receiving a salary? If so, the technological designer programmes at the 3TU. School for Technological Design, Stan Ackermans Institute are exactly what you are looking for.

Application is open to university graduates from the Netherlands and other countries. You will at least need a Master of Science degree or equivalent, preferably in the exact sciences. There will be an assessment and selection before you can enter the programme. The programmes of the Stan Ackermans Institute use strict selection criteria to ensure the required high quality. Excellent marks, motivation and a design-oriented attitude are vitally important. You should also have an excellent command of the English language.

You can apply by sending your letter of application with a complete curriculum vitae and at least two letters of recommendation (in English). Suitable candidates will be invited for an interview with the selection committee of the relevant programme.

Please note that each programme has different starting dates, as well as its own specific admission requirements and selection procedure. The exact requirements and selection procedure for each programme are listed on www.3TU.nl/SAI. Click on 'programmes' and visit the individual website of the programme. You can also contact the coordinator of the programme.

Appointment and degree

Appointment

If you are selected for the programme, you will be appointed as a trainee for the duration of the programme, up to two years. You will be a member of the scientific staff and will receive a salary in accordance with government regulations. Because you are a trainee, you do not have to pay a tuition fee.

Diploma and degree

On successfully completing the programme, you will receive a certified diploma. You will be entitled to use the academic degree Professional Doctorate in Engineering (PDEng) and will be registered as a Technological Designer in the Dutch register kept by the Royal Institution of Engineers in the Netherlands (KIVI NIRIA). The quality of the programmes is assured by an assessment and certification procedure on behalf of the Dutch Certification Committee for Courses to become Technological Designer (CCTO, Nederlandse Certificatie Commissie voor Opleidingen tot Technologisch Ontwerper).



www.3TU.nl/SAI

Technological universities in the Netherlands

Delft University of Technology

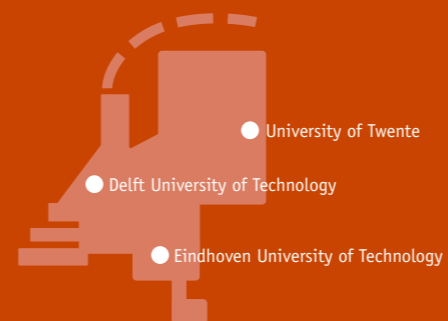
TU Delft is an entrepreneurial university at the forefront of technological development. As such it is constantly involved in furthering technological advances in the interests of society. By means of its fundamental and applied research and educational programmes, TU Delft trains the engineers of tomorrow. TU Delft offers 15 BSc and 29 MSc programmes. With approximately 13,000 students, TU Delft is the largest and most comprehensive university of engineering sciences in the Netherlands. For more information: www.tudelft.nl.

Eindhoven University of Technology

Eindhoven University of Technology, founded in 1956, is a research-driven, design-oriented university of technology, with the primary objective of providing young people with an academic education within the engineering science & technology domain. TU/e offers 12 Bachelor's programmes and 27 Master's programmes. In the research field the TU/e prefers to focus, within the engineering science & technology domain, on the specific areas in which it takes a significant role in the international scientific world, and in which it can make meaningful contributions to the knowledge-intensive industries and technological innovations. For more information: www.tue.nl.

University of Twente

University of Twente, founded in 1961, is one of Europe's finest educational resources encouraging research and entrepreneurship in both technology and social sciences. A young and innovative institute, UT is internationally respected in areas ranging from public policy studies and applied physics to biomedical technology. It offers 21 Bachelor's programmes and 19 Master's programmes in the area of technology and engineering. And because there is more to life than studying, the Netherlands' only campus university (140 hectares) has many sports and cultural facilities. For more information: www.utwente.nl.



For more information:

Website: www.3TU.nl/SAI

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The 3TU. School for Technological Design, Stan Ackermans Institute offers ten two-year postgraduate technological designer programmes. This institute is a joint initiative of the three technological universities of the Netherlands: Delft University of Technology, Eindhoven University of Technology and University of Twente.
More information: www.3TU.nl/SAI.