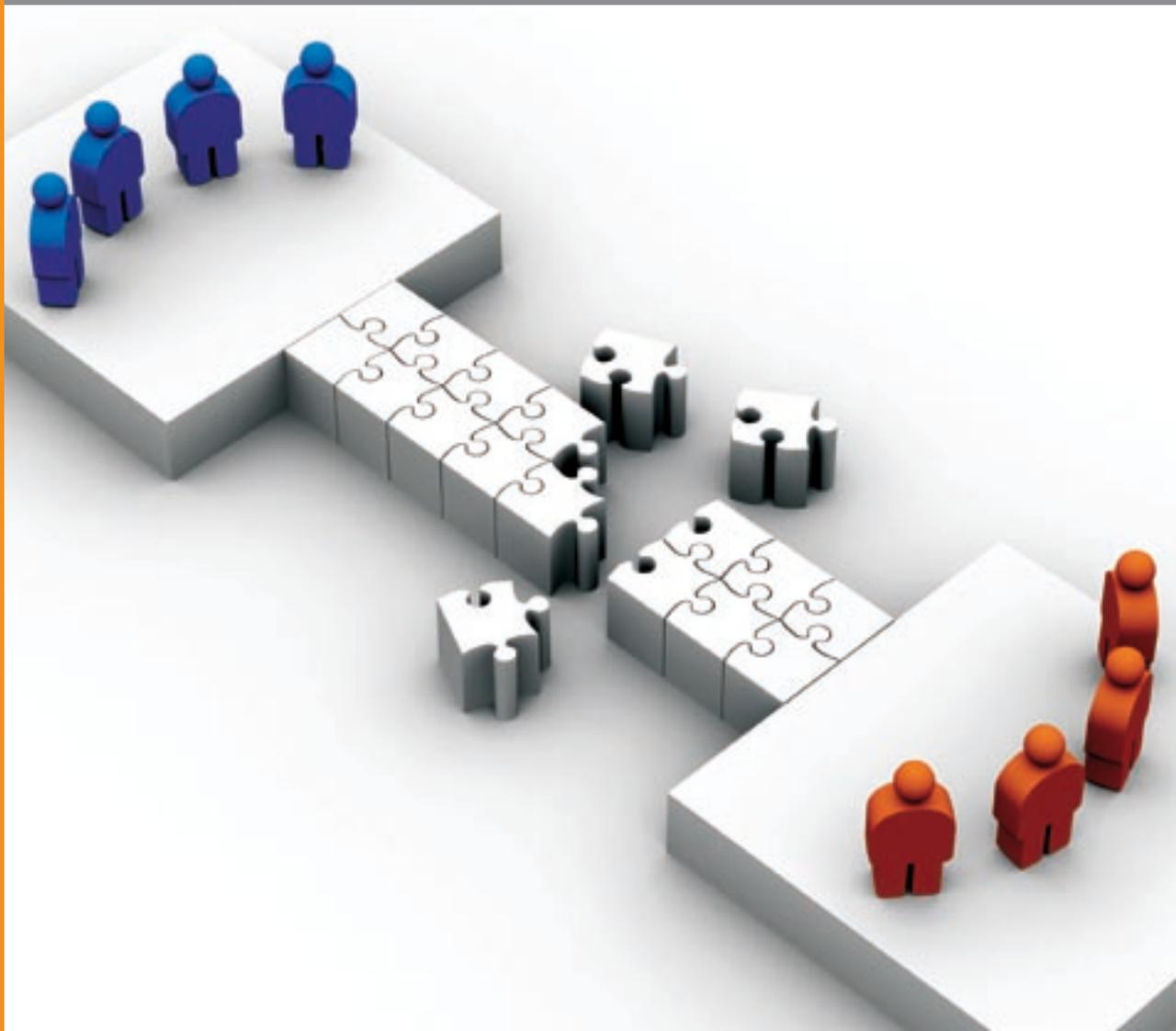


3TU.

# 3TU MSc in Science Education and Communication

Science Communication track

*A critical qualification for future decades*



**TU Delft** Delft  
University of  
Technology

**TU/e** Technische Universiteit  
Eindhoven  
University of Technology

UNIVERSITY OF TWENTE.

# The challenge of Science Education and Communication

Science and technology are omnipresent in modern society. They have a major impact on people's lives. It is important that knowledge of scientific and technological developments and the scientific method is widely available, and that it is adapted to different target groups. Young people need this knowledge to understand the world and make a career. Industry needs it to be aware of developments that will improve and create products, raise output, and enhance the standard of living. Journalists need it to write informatively. Politicians need it to make well-balanced decisions and improve citizens' standards of living.

To provide information about such complex matters as science and technology, there is a demand for specialists who combine expertise in science and technology with expertise in education and communication. Therefore, it is important to understand more about the relationship between science and society. In order to get the message across effectively and to create conditions for a true dialogue, rephrasing, interpreting, translating, evaluating, and researching are necessary. The 3TU\* MSc in Science Education and Communication trains science education and communication experts who can do exactly this.

There are two tracks within the Science Education and Communication MSc programme:

## Science Communication

(Language of instruction: English)

As a science communication specialist you will be in a position to facilitate dialogue and the transfer of knowledge between scientists and engineers, and key players in industry and government. You will also be able to inform the general public and involve young people in the world of science and technology. In addition, you will serve as a bridge between science and technology, and society at large. More information on the 3TU Science Communication track can be found at [www.3tu.nl](http://www.3tu.nl).

## Science Education

(Language of instruction: Dutch)

The Science Education track primarily prepares you for a teaching position in upper secondary schools within the Dutch educational system. More information on this 3TU track can be found at [www.tulo.tudelft.nl](http://www.tulo.tudelft.nl) (Delft University of Technology), [master.utwente.nl/sec](http://master.utwente.nl/sec) (University of Twente), or [www.esoe.nl](http://www.esoe.nl) (Eindhoven University of Technology).

\* The three leading universities of technology in the Netherlands - Delft University of Technology, Eindhoven University of Technology and the University of Twente - have joined forces in the 3TU.Federation ([www.3tu.nl](http://www.3tu.nl)). This federation maximizes innovation by combining and concentrating the strengths of all three universities in research, education and knowledge transfer.

## A curriculum for the needs of tomorrow

The two-year MSc programme (120 European credit points) builds on a Bachelor of Science degree and is a mixture of advanced-level science and technology and communications subjects. Students learn to become specialists, as well as to be all-round exponents of science and technology and communication. To achieve this, they need to deepen and broaden knowledge gained in their Bachelor's. The programme covers academic subjects, technological design skills and a research thesis in which science and technology are combined with communication.

A key aspect of the Science Communication curriculum is making science communication as effective, accessible and professional as possible by examining the relationship between science and society. The issue of content is addressed, and how to bring complex subjects across to key audiences. Policy and strategy are also addressed, as well as choice of objectives to be formulated, and selection of communication pathways. Students will be guided by their academic supervisors to rethink and redesign science communications processes. Graduates will become future partners for industrial leaders, scholars, politicians and lay audiences, helping them with the challenges they face in our knowledge-based society. You can choose to follow the MSc SEC programme at either Delft University of Technology or the University of Twente. Both universities also have opportunities for doctoral research studies in this field.



# Programme

The Science Communication track starts with general modules on subjects such as an introduction to science communication and education, science journalism, and social science research methodology. The programme focuses on science communication based on a firm theoretical foundation. Areas such as communication theory and research are addressed in detail. Depending on the specialism of the University concerned, subjects such as communication strategy and policy, knowledge transfer, designing communication processes, mass communication, science marketing, crisis and risk communication, health communication, entertainment education, and science communication in relation to new technologies will be treated in depth. Relevant practical skills are also included. As a final demonstration of what they have learned, students will write a thesis in which science and technology are combined with communication.

First year			
1st semester		2nd semester	
First quarter	Second quarter	Third quarter	Fourth quarter
- Introductory Science Communication and Education subjects	- Deepening Science Communication subjects - Social Science Methodology subjects		
Deepening Science & Technology subjects			
Second year			
1st semester		2nd semester	
First quarter	Second quarter	Third quarter	Fourth quarter
Deepening and broadening (Science) Communication subjects		MSC integrative thesis	
Broadening S & T subjects			



## Picture yourself as ...

Due to the developments in science and technology and their impact on society and industry, communication engineers are increasingly in demand. As a result there are numerous career opportunities in industry, government, non-governmental organisations and, of course, at universities and other knowledge institutes. Areas that will feature prominently in your work environment are science and technology, design and optimisation of science communication processes, science communication strategy, knowledge management, and knowledge dissemination. Research in science communication is growing in importance because of the need for innovation in the processes, strategies and management of science communication. The curriculum of the MSc SEC programme is specially designed to prepare students for research careers as well as for working as communication engineers in various sectors.

The MSc programme is geared towards the application of existing concepts from communication theory to situations where clarification of complex scientific concepts and ideas is required. The focus is on bridging the gap between science and technology and society. Graduates pave their professional career paths as key players in, for instance, high-tech business, government agencies, the media and universities. High-tech enterprises, for example, increasingly need marketing professionals with expertise in processes related to science and technology.

### What our students say

*“Currently I am working on my graduation project at the Dutch National Aerospace Laboratory. I am optimising passenger flows and tracking passengers through airport terminals, using RFID chips and Bluetooth technology. Because communicating these new technologies to future passengers will be important, the NLR wants to take all communication aspects into account at an early stage. I was selected for this particular project because I have a thorough knowledge of mathematics and have researched communication into communication processes in my Master’s programme. It is a fascinating challenge.”*

Chris Kuiper, Master student Science Communication; BSc in Mathematics

*“I am working on a science communication project for an inspiring consultancy company which develops innovative products and services for the supply of sustainable energy. One of the things I have investigated is how to improve the ‘perceived external prestige’ of the company by using R&D products. We read a lot about this subject in our courses on science marketing and communication policy and strategy. I was able to put theory into practice and to make concrete recommendations to the company. My company mentor was very enthusiastic about the recommendations and applied some of them right away.”*

Gabriëlle van Leeuwen, Master student Science Communication, combined with Industrial Design Engineering

# What is the 3TU.Federation?

The three leading universities of technology in the Netherlands - Delft University of Technology, Eindhoven University of Technology and the University of Twente - have joined forces in the 3TU.Federation ([www.3tu.nl](http://www.3tu.nl)). This federation maximizes innovation by combining and concentrating the strengths of all three universities in research, education and knowledge transfer.

Within the framework of this cooperation, five joint MSc programmes have been developed that address key issues in engineering and society. These five MSc programmes are:

- Construction Management and Engineering
- Embedded Systems
- Science Education and Communication
- Sustainable Energy Technology
- Systems and Control

## The main advantages for students

The 3TU MSc programmes have been developed as exclusive programmes of outstanding academic quality that enable you to study at three of the top universities in the Netherlands. These programmes focus on areas of innovation developed with state-of-the-art engineering expertise. You will have the opportunity to acquire qualifications and competences that are in high demand. Upon graduation you will have obtained an outstanding qualification profile. The 3TU masters combine excellent subject-based competences, research skills, the capacity for independent analysis and synthesis and an advanced capability to apply knowledge in practice.

The core programmes of the 3TU masters are largely identical and can be followed at any of the three locations. The admission procedures, teaching and examination regulations and academic calendars at all three universities have been carefully matched. You will benefit from the special strengths of the three universities by choosing a specialization at any of the three locations. You will be registered at the location of your choice, but you will automatically be co-registered at the other two locations to ensure access to the facilities of all three.

# Universities of Technology in the Netherlands

## Delft University of Technology (TU Delft)

TU Delft ([www.tudelft.nl](http://www.tudelft.nl)) is an enterprising university at the forefront of technological development. The university trains the engineers of tomorrow by means of its fundamental and applied research and educational programmes. With its broad knowledge base, worldwide reputation and successful alumni, TU Delft contributes significantly to the development of responsible solutions to urgent societal problems worldwide. The university offers 16 BSc and 39 MSc programmes. With approximately 16,500 students, TU Delft is the nation's largest university of technology with the most comprehensive range of engineering courses.

Delft <-> Enschede 200km  
Enschede <-> Eindhoven 178km  
Delft <-> Eindhoven 131km



## Eindhoven University of Technology (TU/e)

Eindhoven University of Technology ([www.tue.nl](http://www.tue.nl)) is a modern and relatively young university. Students find the atmosphere open, informal and friendly. As an 'Eindhoven educated engineer', you are able to carry out complex analyses and develop solutions based on your findings. You are a problem solver with the ability to design new products, processes and systems. This means you can offer the community new opportunities for sustainability, safety, health, welfare and prosperity. You can look forward to a varied, challenging, lucrative and socially relevant career.

Compared to other universities TU/e has the highest scientific output in cooperation with industry. This position confirms the unique and close cooperation in R&D with the high-tech business sector in Brainport Eindhoven and the rest of the Netherlands.

## University of Twente (UT)

Integrating social and engineering sciences. Developing high tech, with a human touch. This is what the University of Twente is committed to. Through teaching and research at the highest level. And through the innovations brought to the market place by over 700 spin-off companies. We offer degree programmes in fields ranging from the behavioural and management sciences to engineering and natural sciences. Research spearheads include nanotechnology, biomedical technology, information technology, governance studies, and learning and cognition.

The University of Twente is the only full-campus university in the Netherlands. 2,700 faculty and staff and 8,500 students and work and unwind in the beautiful green park grounds, supported by top facilities for research and teaching, as well as for sports and culture. It is home to events such as the world's largest annual student think-tank Create Tomorrow. All on less than 2 hours drive from Amsterdam. UT offers 23 BSc programmes and 33 MSc programmes.



### Admission requirements

The Science Communication track in the MSc programme Science Education and Communication is offered at Delft University of Technology and at the University of Twente. Delft University of Technology, Eindhoven University of Technology and University of Twente all offer the Science Education track. Applicants seeking admission to the MSc programme in Science Communication should possess a first degree in a natural sciences or technology subject. Students may be required to follow a bridging course.

### How to apply

Applications can be submitted via either TU Delft or University of Twente. Applicants are advised to consult information on the websites of the individual universities. Delft ([www.sec.msc.tudelft.nl](http://www.sec.msc.tudelft.nl)) and Twente ([www.graduate.utwente.nl/sec](http://www.graduate.utwente.nl/sec)).

### More information?

For more information visit [www.3tu.nl](http://www.3tu.nl)

Additional information can be obtained from:

Delft: drs. M.A.F.M. Jacobs, [info-sec@tudelft.nl](mailto:info-sec@tudelft.nl)

Eindhoven: Mw. V.J.J.C. van de Reijt, [info@esoe.nl](mailto:info@esoe.nl)

Twente: C.H. Vrugterman, [c.h.vrugterman@utwente.nl](mailto:c.h.vrugterman@utwente.nl)