STUDENT EXCHANGE OPPORTUNITIES

UNIVERSITY OF TWENTE.

STUDENT EXCHANGE
OPPORTUNITIES

"I know everyone says this, but exchange at the UT honestly changed my life. I fell in love with the Netherlands and with Europe, and was lucky enough to make friends from over 45 countries! Living in Enschede is very easy, and the UT is very welcoming of international students, so I now consider Twente to be my home away from home!

The exchange application process can take a little while, but please be patient, because it's totally worth it! A semester abroad has its ups and downs - winter is cold, and you do still have to do some study during semester, because the Dutch work HARD - however on the whole, it's an amazing life experience and something you will not regret.

Also, learn a bit of Dutch before you go! Ignore anyone who tells you it is a useless language, because it will very quickly become a language very dear to your heart and will always remind you of your amazing times in Enschede (and all your cool new Dutch friends!)."

Thomas from Australia

5 REASONS FOR GOING ON EXCHANGE TO THE UNIVERSITY OF TWENTE

01 ONE OF THE WORLD'S **TOP RESEARCH** UNIVERSITIES

02 LEADING THE WAY IN **ENTREPRENEURSHIP** AND **SOCIETAL IMPACT**

03 THE ONLY 'PARK-LIKE' CAMPUS IN THE NETHERLANDS: **A SMART LIVING LAB**

04 STATE-OF-THE-ART **RESEARCH LABS** AND FACILITIES

05 **HIGH TECH HUMAN TOUCH:** COMBINING TECHNOLOGY, SCIENCE AND ENGINEERING WITH SOCIAL SCIENCE TO INITIATE CHANGE IN SOCIETY.

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INTRODUCING THE
UNIVERSITY OF TWENTE

The University of Twente, a technological research university and home to 1,522 scientists and 372 laboratory facilities, offers multiple exchange opportunities. With this brochure we aim to share information about the content of our student exchange programmes. But first a bit of insight into the education model of the University of Twente.

All bachelor programmes at the University of Twente are designed based on the Twente Education Model (TOM). In this model, the programmes consist of modules. Each module of 15 ECTS credits has a theme with a variety of subject matters and different learning methods such as workshops, lectures and feedback sessions with students. In each module, the offered knowledge and skills are strongly connected with a project. One module covers one block (half a semester). The different aspects of a module are related to the study programme and often interconnected. Central to each module is a team project in which students address a real-world problem. This way, students put scientific theory into practice.

The aspect of problem-based learning is also implemented in our master programmes. The programmes are structured to help students develop three complementary profiles: that of a researcher, a designer or an organizer. Students will grow as researchers by learning to critically assess existing scientific knowledge and adding to the development of new knowledge. Learning to be a designer requires skills to integrate scientific knowledge, whereas organizers need to become experts in combining knowledge from various scientific fields with the aim of implementing new solutions. Where the bachelor level education is built of coherent modules, the master level education consists of individual courses. All of our programmes lead towards science degrees. This means that students need to have some background in mathematics.

Yours sincerely,

Faculty and Central Exchange Coordinators
Centre for Educational Support | International Relations

HIGH TECH HUMAN TOUCH

HUMANS AND TECHNOLOGY ON THE SAME TEAM

The University of Twente is a technological research university. The future of people is technology. And the future of technology? People! Our focus on people is as striking as our multidisciplinary, application-oriented approach to education and research. We call it High Tech, Human Touch.

INTERNATIONAL COMMUNITY

Many international students and staff come to Twente, but the opposite is also true: we collaborate with universities and companies abroad and we encourage you to grow professionally and personally, to establish a broad foundation and to become a true, global citizen.

MOST ENTREPRENEURIAL UNIVERSITY

We recognize the value of typically human traits such as creativity, innovation and courage and we foster their development. No wonder more than 1.000 successful start-ups have been initiated here so far, including Booking.com and Takeaway.com.

THE ONLY 'ALL-IN' CAMPUS IN THE NETHERLANDS

Your time as a student will be unforgettable at our beautiful safe and green campus, where you can study, live, get active and enjoy yourself. It is a 'smart living lab', where people and technology bring out the best in each other.

STUDENT EXCHANGE
OPPORTUNITIES

University of Twente highly values international exchanges and therefore we offer the following exchange opportunities:

ENGLISH TAUGHT EDUCATION

The majority of our bachelor and master programmes are taught in English. All programmes mentioned in this brochure are open to exchange students. In the chapters below, indexed on subject area, you can also find so called 'exchange study packages': these are block or semester opportunities for incoming exchange students. The master programmes list the specializations of our degree programmes: this information can help you to select courses.

INTERDISCIPLINARY EXCHANGE OPPORTUNITIES

At UT these are referred to as 'High Tech Human Touch' minors or HTHT-modules. These block or semester options are taught in English by academics from different disciplines.

LABORATORY RESEARCH OR AN ASSIGNMENT IN A RESEARCH GROUP

There are various terms for this; in general, we refer to this as a placement. It can start at any time during the academic year depending on the schedule of the research group. Procedures are different from incoming exchange for coursework as the academic arrangements are usually tailor made.

SUMMER SCHOOL PROGRAM CURIOUSU

Our English taught festival-style summer school programme offering academic courses, inspirational speakers and social activities. Students from partner universities can apply for a discounted rate.

OUR FOCUS ON
SOCIETAL
CHALLENGES

In an unpredictable and rapidly changing world, we focus all of our education and research on developing relevant answers for five societal challenges.

UTWENTE.NL/RESEARCH

CREATING INTELLIGENT MANUFACTURING SYSTEMS and leading the way in combining production technology, ICT, supply chains and business modeling to create a more circular economy.

ENGINEERING OUR DIGITAL SOCIETY and helping society manage the shifts and shake-up caused by digitalization, for example through reliable digital systems, well-informed decision-making and explainable data analytics.

SHAPING OUR WORLD WITH SMART MATERIALS that offer functionalities not yet found in the physical world, for example by leading the way in nanotechnology and biomedical materials.

ENGINEERING FOR A RESILIENT WORLD by combining three vital knowledge domains – data, technology, people – that can help us end poverty and sustainably manage climate change, production and consumption.

IMPROVING HEALTHCARE BY PERSONALIZED TECHNOLOGIES, as illustrated by our pioneering role in early detection and targeted treatment of diseases and increased patient independence.
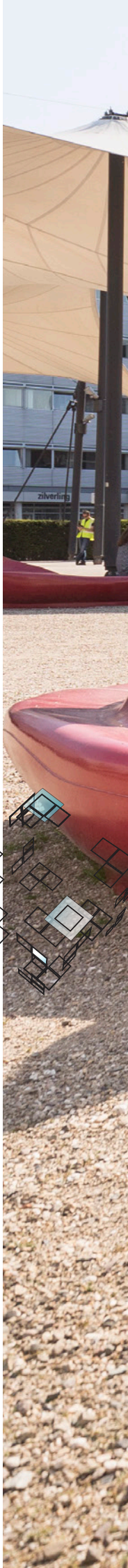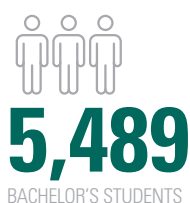
OUR CAMPUS

UNIQUE IN THE NETHERLANDS

One of the University of Twente's crown jewels is undoubtedly our campus. A sustainable, well maintained parkland dotted with top facilities, the campus has as many activities to offer as a small city. It's a dynamic community to live and work in, where around 11.000 students and 3.000 staff — representing around 100 nationalities — use the latest knowledge and technology for a better future.

EVERYTHING FROM NANOLAB TO STARBUCKS

The campus covers 146 hectares — approximately 200 football fields — where you can find everything you need to learn, work and live. From libraries and laboratories to fitness facilities and sports fields. You can play almost any sport here, such as baseball, beach volleyball, archery and even muggle quidditch.

FACTS & FIGURES

372
LABORATORY FACILITIES

11,333
STUDENTS

63
POST-MASTER'S STUDENTS

18
CULTURAL SOCIETIES

3,000
STUDENT APARTMENTS

29%
INTERNATIONAL STUDENTS

398
PRE-MASTER'S STUDENTS

39
SPORTS SOCIETIES

49,000
ALUMNI

5,489
BACHELOR'S STUDENTS

4,010
MASTER'S STUDENTS

146 HECTARE
SURFACE AREA

3,074
EMPLOYEES

DID YOU KNOW THAT THE
UNIVERSITY OF TWENTE…

✓ IS SET ON A BEAUTIFUL CAMPUS, THE ONLY **PARK-LIKE CAMPUS** IN THE NETHERLANDS

✓ IS ONE OF 14 DUTCH UNIVERSITIES RECOGNIZED AND **FUNDED BY THE GOVERNMENT** OF THE NETHERLANDS

✓ PROVIDES AN INTERNET CONNECTION OF 1 GIGABIT PER SECOND AND A **CAMPUS-WIDE WIFI NETWORK**

✓ LIES IN THE EAST OF THE NETHERLANDS, CLOSE TO THE GERMAN BORDER AND IS IN THE **HEART OF EUROPE**

✓ IS HOME TO **MESA+**, ONE OF THE WORLD'S LARGEST **NANOTECHNOLOGY RESEARCH INSTITUTES**

✓ IS THE **MOST ENTREPRENEURIAL UNIVERSITY** IN THE NETHERLANDS, ACCORDING TO AN INDEPENDENT RANKING

✓ IS A FOUNDING MEMBER OF THE **EUROPEAN CONSORTIUM OF INNOVATIVE UNIVERSITIES (ECIU)**

✓ HAS **STRONG TIES WITH UNIVERSITIES** IN AUSTRALIA, BRAZIL, CHINA, GERMANY, INDIA, INDONESIA, MEXICO AND OTHER COUNTRIES

✓ IS THE FINISH LINE OF THE BIGGEST RELAY RACE IN THE WORLD, THE **'BATAVIERENRACE'**, WHICH IS FOLLOWED ANNUALLY BY EUROPE'S LARGEST ALL-NIGHT STUDENT PARTY

LIVING IN THE NETHERLANDS AND **IN ENSCHEDE**

The Netherlands is known for its capital city, Amsterdam, as much as for its bikes, water management and tolerance. But what is it really like to study in this small country in Northwest Europe? And what secrets are there to discover in our university city, Enschede?

UNIVERSITY LIFE, DUTCH STYLE

As many international students will tell you, one of the great benefits of studying in the Netherlands is that it can help you develop an open mind and a more international perspective. We have many thousands of internationals studying and working here. The Dutch education system is interactive with an exceptional focus on teamwork and independent, proactive thinking.

INTERNATIONAL STUDENT ASSOCIATIONS

All Dutch universities have their own network of student-run associations that bring students together for academic activities, sports and recreation. Three of the larger international associations are active at the University of Twente: AIESEC, AEGEE and the Erasmus Student Network (ESN). UniTe is our own student platform for internationalization and integration. These associations will assist you with everyday situations and help you settle in and make friends.

UTWENTE.NL/GO/ASSOCIATIONS

MOST DUTCH PEOPLE UNDERSTAND ENGLISH

The Netherlands is a small country and home to almost 17 million people. Many European capitals are within easy reach: Brussels is two hours away by train and a short flight from Amsterdam will take you to London, Paris, Madrid or Berlin. Most Dutch people speak, or understand, English. In fact, the Netherlands is ranked number 1 in the world when it comes to proficiency in English as a second language. Public transport is well-organized and safe. To travel the Dutch way, of course, get a bicycle (we actually have more bikes than people in the Netherlands). During our introduction days for international students we can help you buy your very own bike.

ENSCHEDE, A TYPICAL STUDENT CITY

The city of Enschede, located in the east of the Netherlands near the German border, has a population of around 158,000 – one third of whom are students. The city boasts colourful weekly markets, bustling shopping streets and well-tended parks – in fact, it is one of the greenest cities in the Netherlands, with a 52-kilometre walking and cycling route winding right through its green belt. But its student population gives the city its flair. Every day, you will see students cycling to their classes, reading on the banks of Rutbeek Lake or having fun in the Old Market pubs. Enschede is home to three higher education institutions: the University of Twente, Saxion University of Applied Sciences and the ArtEZ Institute of the Arts. The centre of student life is undoubtedly the University of Twente's unique campus.
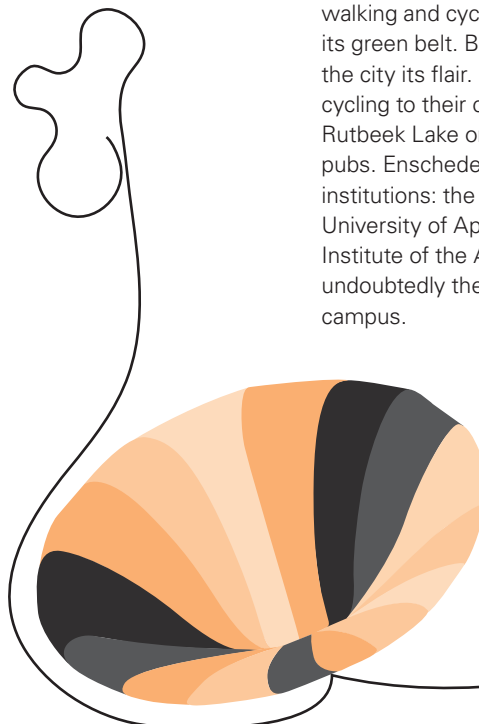
PRACTICAL MATTERS

ACADEMIC YEAR
Beginning of September until end of July. Semester 1 (fall semester) runs from early September till end of January and semester 2 (spring semester) runs from early February till end of June (followed by re-sits in July).

ACCOMMODATION
On campus or in the city of Enschede. The housing service offers support to all our international students. If you are in need of an entry visa and/or residence permit you get a guaranteed offer.

ADMISSION PROCESS
After nomination by the home university to the central office at UT, the decision on admission is made by the faculties. The process can take up to two months.

COORDINATOR
Each faculty has a departmental exchange coordinator as a point of contact on academic and programme questions.

CONSORTIA
UT is part of the European Consortium of Innovative Universities (ECIU), IS: Link as well as the Global E3 consortium. We welcome all GE3 engineering students to come study overseas, as well as US PhD students for an international research experience funded by NSF (GIRE).

COSTS OF LIVING
Exchange students don't have to pay the tuition fee, as they pay tuition at their home institution. The total cost of living is approximately €10,000.- per year.

COUNSELLING
Counselling service is available for personal matters that you might encounter.

COURSE CATALOGUE
The incoming exchange website is the home of all exchange opportunities: www.utwente.nl/en/education/exchange-students. The total overview of modules and courses taught at UT can be found in the Course Catalogue.

CREDITS AND STRUCTURE
A student's workload is measured in ECTS credits. According to Dutch law, one credit represents 28 hours of work (incl. self-study) and 60 credits represent one year of full-time study. One semester equals 30 credits and one block (half semester) equals 15. Exchange students are often required to take a full workload by their home institution.

Fall semester (Sept – January)	
Block 1A	Block 1B
15 credits	15 credits
Spring semester (February – July)	
Block 2A	Block 2B
15 credits	15 credits
Summer	
Block 3	
var. credits	

DEADLINES
Coursework nomination period runs from 15 March – 15 April (for fall semester and/or full year) and 15 August – 15 September (for spring semester). Students taking up a lab project can enrol throughout the year (depending on availability of professors).

DUTCH
The majority of exchange students register for English taught (exchange) programmes. However, if you are interested in learning some Dutch or if you need to improve academic skills, you can contact the UT Language Centre.

ENTRY VISA AND RESIDENCE PERMIT
As governed by Dutch law, our immigration officers apply for a visa and/or residence permit on your behalf.

ERASMUS
UT is a proud and active participant in the Erasmus+ programme. The provisions as published in the Erasmus Charter Higher Education are followed accordingly and, as well as our Policy Statement, can be read online.

GRADES
In the Netherlands, you can get a grade between 1 and 10 - 1 being the lowest, and 10 being the highest. The pass grade is 6. But that's not all: a 10 is hardly ever given, as you will have to perform better than the lecturer in order to get one.

INSURANCE
Our immigration officers also advise on insurance matters.

INTRODUCTION
The Kick-In is organized prior the fall and spring semesters. Students are strongly advised to partake.

LANGUAGE REQUIREMENTS
Incoming exchange students need to comply with our English language requirements.

PREREQUISITES FOR MODULES/ COURSES
The majority of bachelor modules and master courses will have prerequisites defined. These prerequisites will have to be met in order to be admitted.

QUALITY OF EDUCATION
For information about quality of education, accreditation and the Dutch Code of Conduct, please see: utwente.nl/en/education/about-our-education/quality.

SCHOLARSHIPS
The majority of incoming exchange students apply for funding at their home university or for national funding schemes in their home country. Please contact your home international office about any options. Occasionally there are programmes available at the UT.

SOFTWARE SYSTEMS
Mobility Online: exchange application software; OSIRIS: course registration software for admitted students; Canvas: content course information for registered students.

TERMINOLOGY
It is likely that there are differences in terminology between your home university and the UT. We do our best to provide transparent information.

FACULTY OF BEHAVIOURAL, MANAGEMENT AND SOCIAL SCIENCES (BMS)

> COMMUNICATION SCIENCE (BACHELOR + MASTER LEVEL)

> EDUCATIONAL SCIENCE & TECHNOLOGY (MASTER LEVEL)

> EUROPEAN STUDIES (MASTER LEVEL)

> INDUSTRIAL ENGINEERING AND MANAGEMENT (BACHELOR + MASTER LEVEL)

> (INTERNATIONAL) BUSINESS ADMINISTRATION (BACHELOR + MASTER LEVEL)

> PHILOSOPHY OF SCIENCE, TECHNOLOGY & SOCIETY (MASTER LEVEL)

> PSYCHOLOGY (BACHELOR + MASTER LEVEL)

> PUBLIC ADMINISTRATION (BACHELOR + MASTER LEVEL)

COMMUNICATION SCIENCE

BACHELOR'S PROGRAMME: COMMUNICATION SCIENCE

Communication Science at UT pushes you to explore and utilize the interdependencies between technology and communication. While new technologies are changing the way we communicate, they, in turn, depend on effective communication: many brilliant technological innovations have failed due to communication problems. In this area, you, as a communication professional, can play the role of 'user's advocate'. Product and packaging design strongly affect consumer product perception. The interior design of meeting rooms, workstations, or consultation rooms affects people's behaviour and experiences.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Going Viral (15 credits) – Block 1A
• Facilitating Technological Change (15 credits) – Block 1A
• Damage Control (15 credits) – Block 1B
• The Privacy Paradox (15 credits) – Block 1B

MASTER'S PROGRAMME: COMMUNICATION STUDIES

Specializations:
» ORGANIZATIONAL COMMUNICATION & REPUTATION
» TECHNOLOGY & COMMUNICATION
» MARKETING COMMUNICATION & DESIGN
» DIGITAL MARKETING COMMUNICATION

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

EDUCATIONAL SCIENCE & TECHNOLOGY

MASTER'S PROGRAMME: EDUCATIONAL SCIENCE & TECHNOLOGY

This programme focuses on the design and evaluation of teaching and learning programmes in schools and organizations. The scope is wide: from educating primary school children and young people in secondary and vocational education to in-service or on-the-job training for adult employees, such as nurses, teachers, civil servants, managers and leaders. You will learn all about theories of learning and assessment, learning technologies – for example, serious games – effective training approaches and learning interventions. You will also discover how to design and evaluate different learning scenarios, progressing to producing recommendations and solutions for practical problems.

MASTER LEVEL EXCHANGE COURSES:
• Designing, Learning and Performance Support (5 credits) - Block 1A
• Team Learning at Work (5 credits) - Block 1A
• Assessing, Monitoring, and Improving Student and School Performance (5 credits) - Block 1B
• HRD & Technology in a live context (5 credits) - Block 1B
• Trending topics in Educational Science and Technology (10 credits) - Block 1AB
• Learning and Instruction (5 credits) - Block 1A, 2A
• Innovative Technology-based Learning Environments (5 credits) - Block 2A
• Teacher Learning and Development (5 credits) - Block 2B

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

EUROPEAN STUDIES

MASTER'S PROGRAMME: EUROPEAN STUDIES

In this programme, you will study the interactions between national, European and international bodies and how they respond to complex global challenges. If you want to prepare yourself for helping Europe to balance technological advances with human values, this programme is the place to do it. European Studies deals with the economic, political, legal, cultural and linguistic aspects of our relationship to the European Union. It also works toward achieving a more holistic perspective on the political system and its underlying processes.

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

INDUSTRIAL ENGINEERING AND MANAGEMENT

BACHELOR'S PROGRAMME: INDUSTRIAL ENGINEERING AND MANAGEMENT

Our Bachelor's programme focuses on several sectors, particularly industry, transport, healthcare and finance. What makes our programme unique is its project-based education. During internships and graduation projects, you'll work in a scientific way on current issues faced by prominent companies in these sectors. In ten-week modules you'll carry out practical team projects, solving real-life problems.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Introduction to Industrial Engineering and Management (15 credits) – Block 1A
• Finance for Engineers (15 credits) – Block 1A
• Operations Management (15 credits) – Block 1B
• Business Intelligence and Information Technology – Block 2A
• From Product Design to Online Business (15 credits) – Block 2A
• Modelling and Analysis of Stochastic Processes (15 credits) - Block 2B
• Supply Management (15 credits) - Block 2B

MASTER'S PROGRAMME: INDUSTRIAL ENGINEERING AND MANAGEMENT

Specializations:
» FINANCIAL ENGINEERING & MANAGEMENT
» HEALTHCARE TECHNOLOGY & MANAGEMENT
» PRODUCTION & LOGISTICS MANAGEMENT
» ADDITIONAL SPECIALIZATIONS IN MULTIPLE DOMAINS: FIND OUT MORE AT UTWENTE.NL/GO/IEM

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

"The best parts of the University of Twente are the student life, the high quality of education and the Dutch genuine lifestyle."

Victor, Sweden

(INTERNATIONAL) BUSINESS ADMINISTRATION

BACHELOR'S PROGRAMME: INTERNATIONAL BUSINESS ADMINISTRATION

What is unique about our programme is that you will look at entrepreneurship in the broadest sense of the word: from developing radical new products and services to improving the purchasing process, financial management or human resources policies. An added bonus is that on that our campus you are surrounded by the latest (technological) developments, ideas and innovations. This will give you an edge in exploring ways in which companies can effectively use all that technology. In the International Business Administration programme you learn to think sharp, like a designer. For example, you will know how to successfully market a high-tech innovation without getting caught up in the latest hype.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Crossing Borders – limited seats available (15 credits) – Block 1A
• Organization and People (15 credits) – Block 1A
• Strategy, Marketing & Economics (15 credits) – Block 1A
• High Tech Talent Management in Global Context (15 credits) – Block 1B
• Innovation & Entrepreneurship (15 credits) – Block 1B
• Technology, Business Operations Management (15 credits) – Block 1B
• Supply Management (15 credits) – Block 2A
• Digital Marketing for Networked Businesses (15 credits) – Block 2A
• Financing Entrepreneurial Start-ups and Innovative firms (15 credits) – Block 2B

MASTER'S PROGRAMME: BUSINESS ADMINISTRATION

Specializations:
» ENTREPRENEURSHIP, INNOVATION & STRATEGY
» FINANCIAL MANAGEMENT
» HUMAN RESOURCE MANAGEMENT
» INTERNATIONAL MANAGEMENT
» PURCHASING & SUPPLY MANAGEMENT
» STRATEGIC MARKETING & DIGITAL BUSINESS

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

PHILOSOPHY OF SCIENCE, TECHNOLOGY & SOCIETY

MASTER'S PROGRAMME: PHILOSOPHY OF SCIENCE, TECHNOLOGY & SOCIETY

How are information and communication technologies affecting our privacy? Can we anticipate the future implications of robotics for society? Are there ethical limits to genetic modifications of animals and human beings? How do new technologies change our behaviour and our perceptions of the world? Our programme in Philosophy of Science, Technology & Society (PSTS) focuses on analysing and evaluating the role of technology in a broader social context. PSTS is the premier Master's programme for learning how to critically analyse and assess the impact of technology on society.

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

PSYCHOLOGY

BACHELOR'S PROGRAMME: PSYCHOLOGY

Unlike many other Psychology programmes in the Netherlands, we focus as much on the theory as on the practical side of psychology. You'll learn how to systematically analyse psychological problems and design creative behaviour modification solutions. As a university known for its technical studies; you also learn to combine your knowledge of psychology with thinking about how to design new technologies, such as social robots and smart information systems. This is why we place a strong emphasis on media and technological innovations: smartphone apps that you can use to warn people about dangerous situations, or new Internet therapy methods. You don't have to be a hard-core sciences or IT student to benefit from this kind of knowledge on the job market. Our programme is small-scale, with lots of teaching and challenges in small groups. Students and teachers work together in a pleasant, informal environment.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Health Psychology & Applied Technology (15 credits) – Block 1A
• Professional Learning in Organisations (15 credits) – Block 1A
• Psychology in Learning & Instruction (15 credits) – Block 1A
• Psychology of Safety (15 credits) – Block 1A
• Human Factors & Engineering Psychology (15 credits) – Block 1B
! *Limited options in the second semester (2A & 2B)*

MASTER'S PROGRAMME: PSYCHOLOGY

Specializations:
   » CONFLICT, RISK & SAFETY
   » HEALTH PSYCHOLOGY & TECHNOLOGY
   » HUMAN FACTORS & ENGINEERING PSYCHOLOGY
   » LEARNING SCIENCES
   » POSITIVE PSYCHOLOGY & TECHNOLOGY

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PUBLIC ADMINISTRATION

BACHELOR'S PROGRAMME: MANAGEMENT, SOCIETY & TECHNOLOGY

The world is rapidly changing. New technologies, population growth and other forces are creating new opportunities as well as tough challenges, such as climate change, the energy transition, financial instability, migration and terrorism. All of these complex problems have one thing in common: in each of them, technology plays an increasingly crucial role. More than ever, this means that leaders, policy makers and public managers need a solid foundation in technology. This will give them a better understanding of today's issues and help them design more effective solutions. You will learn to contribute to the public wellbeing by combining technology and management.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Public Management (15 credits) – Block 1A
• Public Governance Across Countries (15 credits) – Block 1B
• Europe in Crisis (15 credits) – Block 2A
• Policy-making and Planning – Block 2A
• Europe and the World (15 credits) – Block 2B
• Governance at the Street-level (15 credits) – Block 2B

MASTER'S PROGRAMME: PUBLIC ADMINISTRATION

Our Master's programme in Public Administration will enable you to tackle the grand societal challenges of today and tomorrow. What makes this programme unique is that you will learn to combine public administration expertise with cross-disciplinary research in a domain you are excited about, for example, healthcare, urban innovation, (cyber) security or sustainability.

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS
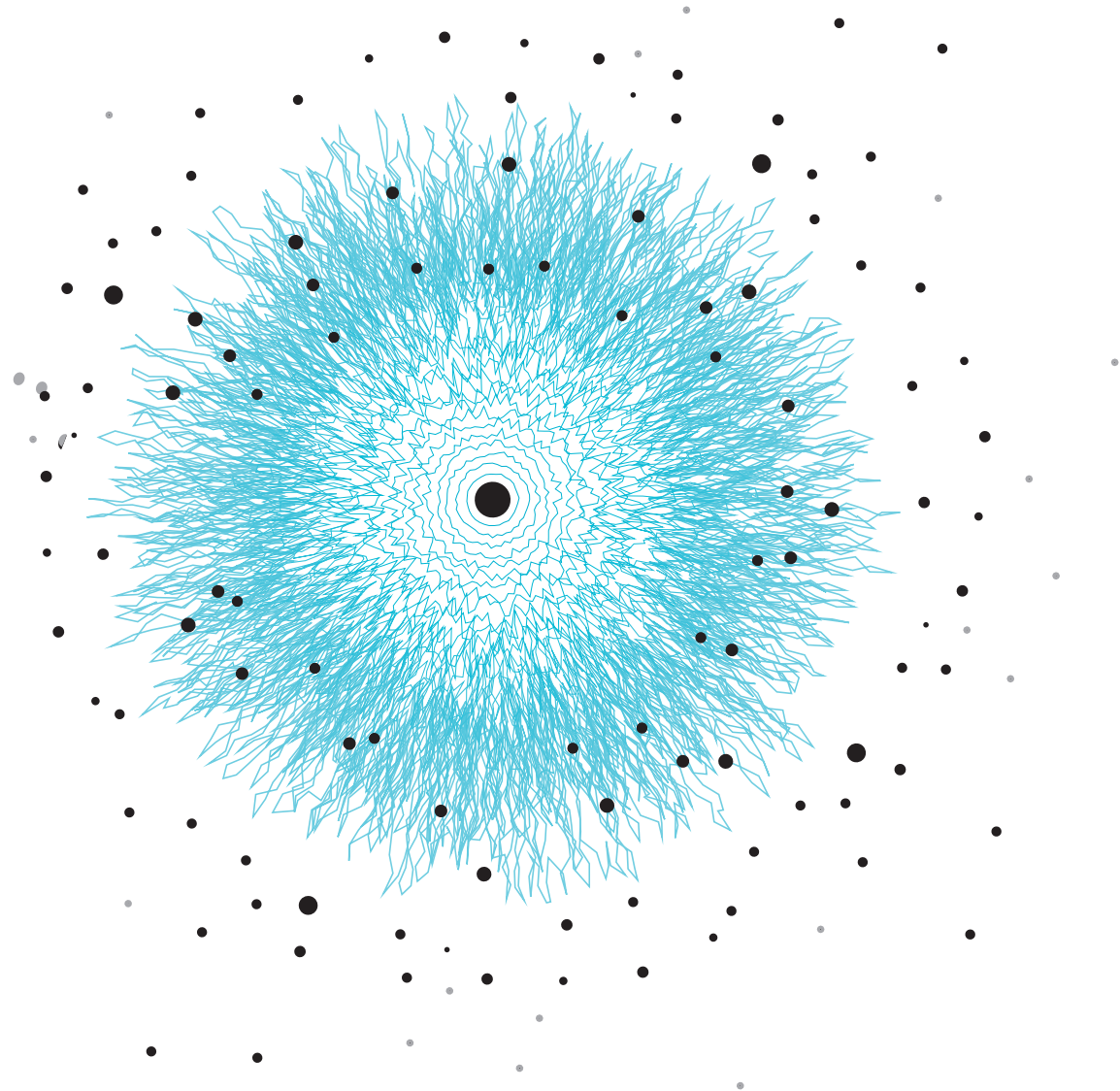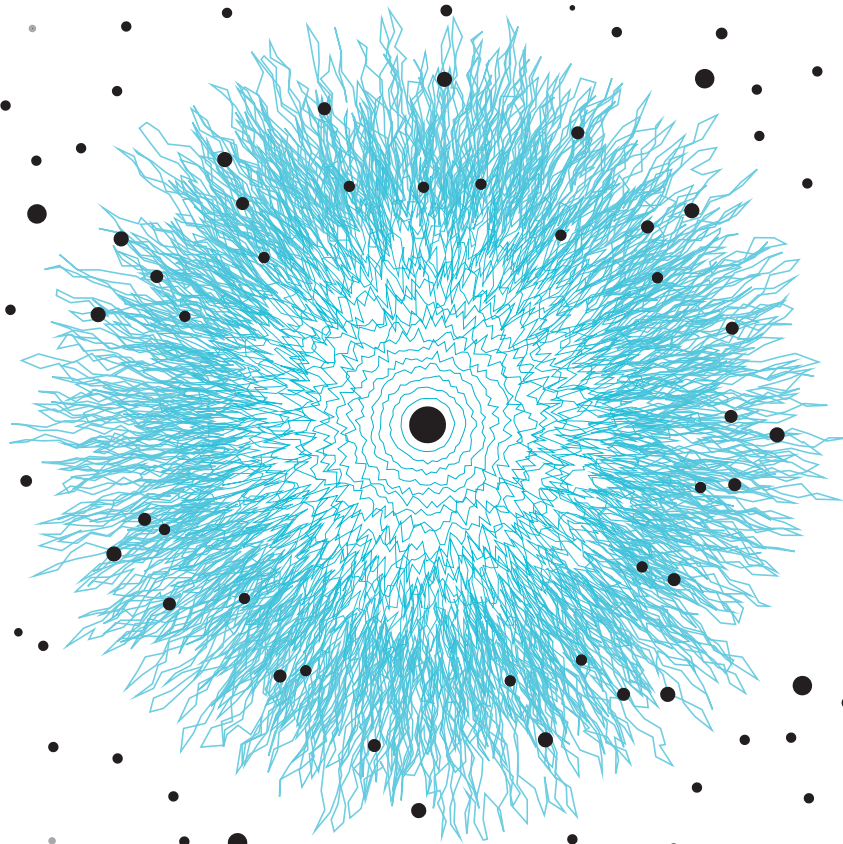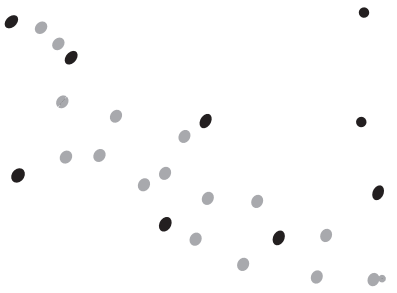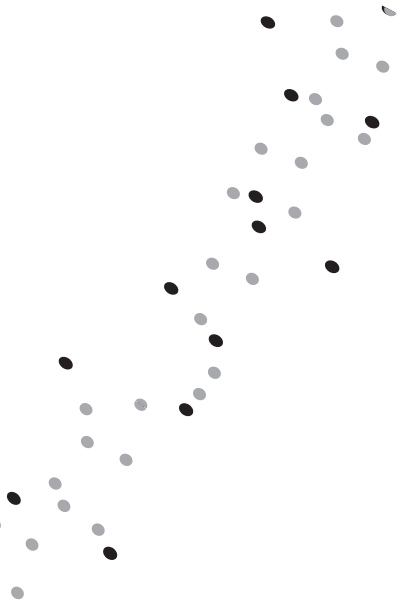
FACULTY OF ELECTRICAL ENGINEERING, MATHEMATICS AND COMPUTER SCIENCE (EEMCS)

> APPLIED MATHEMATICS (BACHELOR + MASTER LEVEL)

> BUSINESS & IT (BACHELOR + MASTER LEVEL)

> COMPUTER SCIENCE (BACHELOR + MASTER LEVEL)

> CREATIVE TECHNOLOGY |

INTERACTION TECHNOLOGY (BACHELOR + MASTER LEVEL)

> ELECTRICAL ENGINEERING (BACHELOR + MASTER LEVEL)

> EMBEDDED SYSTEMS (MASTER LEVEL)

> SYSTEMS & CONTROL (MASTER LEVEL)

APPLIED MATHEMATICS

BACHELOR'S PROGRAMME: APPLIED MATHEMATICS

Without a doubt, this programme will give you a very solid, broad basis in mathematics. You will learn from experienced teachers who are leaders in their own fields and will also benefit from the pleasant atmosphere typical of the University of Twente. We work in small groups and our teachers and students all know each other personally. The Applied Mathematics Bachelor's programme at UT offers you far more than just excellent maths: our strong focus on people, application and societal impact will also equip you for an important role in society.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
- Dynamical Systems (15 credits) – Block 1B
- Web Science (15 credits) – Block 1B
- Fields and Electromagnetism (15 credits) – Block 2A
- Discrete Structures & Efficient Algorithms (15 credits) – Block 2A
- Signals & Uncertainty (15 credits) – Block 2B

MASTER'S PROGRAMME: APPLIED MATHEMATICS

Specializations:
- » MATHEMATICAL SYSTEMS THEORY, APPLIED ANALYSIS AND COMPUTATIONAL SCIENCE
- » OPERATIONS RESEARCH
- » MATHEMATICS OF DATA SCIENCE

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

BUSINESS & IT

BACHELOR'S PROGRAMME: BUSINESS & IT

During the programme, you will look at process automation case studies that have failed or succeeded and use these examples to find out what it takes for software to make a difference in a business. We work in small classes that allow you to get to know all your fellow students well and to benefit from personal support from staff members.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
- Introduction to Business & IT (15 credits) – Block 1A
- (Finance for Engineers (15 credits) – Block 1A)
- Serious Gaming (15 credits) – Block 1A
- Software systems (15 credits) – Block 1B
- Web Science (15 credits) – Block 1B
- Cyber Physical Systems (15 credits) – Block 1B
- Business Intelligence & IT (15 credits) – Block 2A
- From Product Design to Online Business (15 credits) – Block 2A
- Data & Information (15 credits) – Block 2B
- Business Innovation through IT Project management (15 credits) – Block 2B
- Programming Paradigms (15 credits) – Block 2B

MASTER'S PROGRAMME: BUSINESS INFORMATION TECHNOLOGY

Specializations:
- » ENTERPRISE ARCHITECTURE & IT MANAGEMENT
- » DATA SCIENCE & BUSINESS

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

COMPUTER SCIENCE

BACHELOR'S PROGRAMME: TECHNICAL COMPUTER SCIENCE

Technical Computer Science is a challenging field of study that focuses on information and systems: think of automated searches through vast amounts of data. During this programme you'll not only be occupied with computers and the Internet: you'll also learn how people and systems – such as robots – interact. You'll become familiar with fundamental concepts and learn to apply them to basically anything that might occupy people, from transportation and business, to health, environment, politics or leisure time. Themes you'll come across will range from computer security and programming to wireless or mobile networks and the development of social robots. Projects play a pivotal role, so you'll often find yourself applying what you just learned to real-world problems.

### BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
- Pearls of Computer Science (15 credits) – Block 1A
- Computer Systems (15 credits) – Block 1A
- Smart Spaces (15 credits) – Block 1A
- Software System (15 credits) – Block 1B
- Cyber-Physical systems (15 credits) – Block 1B
- Web Science (15 credits) – Block 1B
- Network System (15 credits) – Block 2A
- Discrete Structures & Efficient Algorithms (15 credits) – Block 2A
- Data & Information (15 credits) – Block 2B
- Programming Paradigms (15 credits) – Block 2B

MASTER'S PROGRAMME: COMPUTER SCIENCE

Specializations:
- » CYBER SECURITY
- » DATA SCIENCE & TECHNOLOGY
- » INTERNET SCEINCE & TECHOLOGY
- » SOFTWARE TECHNOLOGY

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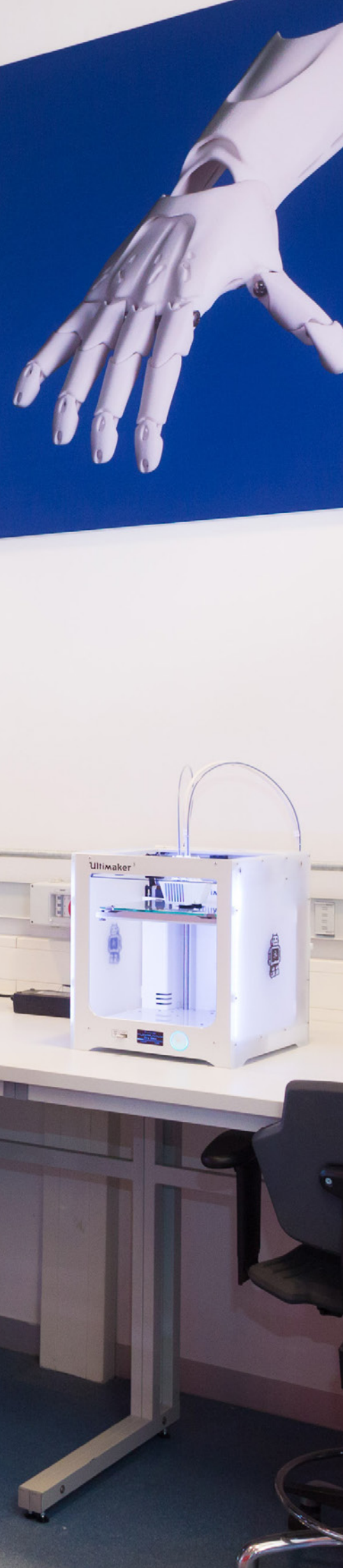
CREATIVE TECHNOLOGY | INTERACTION TECHNOLOGY

BACHELOR'S PROGRAMME: CREATIVE TECHNOLOGY

Throughout the Creative Technology programme, you'll learn to creatively combine computer science and electrical engineering technology in order to create new solutions with real impact on people. Are you eager to make a difference in society and daring and interested in smart technology, new media and design? Then Creative Technology could be perfect for you. Throughout the many hands-on projects typical of our programmes at the UT, you'll develop technical knowledge and skills, as well as the ability to understand how technology influences humans, design and creative processes. In our Smart Experience Laboratory (Smart XP) you'll have room to discover how to turn a question or an opportunity into an appealing prototype.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:

• We Create Identity (15 credits) – Block 1A
• Smart Technology (15 credits) – Block 1A
• Interactive Media (15 credits) – Block 1A
• Smart Spaces (15 credits) – Block 1A
• Smart Environments (15 credits) – Block 1B
• Web Science (15 credits) – Block 1B
• Innovation & Entrepreneurship (15 credits) – Block 2A
• Art, Impact & Technology (15 credits) – Block 2B
• Data; from the sources to the senses (15 credits) – Block 2B

MASTER'S PROGRAMME: INTERACTION TECHNOLOGY

Are you looking to combine your interest for the smartest and best interactive technologies, while also analysing human behaviour? This unique programme will take you to the cutting edge of science and technology. Depending on your talent and preferences, it will equip you for a role as either an entrepreneur, a researcher or a designer.

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"Studying at the UT was very different from my home university because of its big international community. The campus is marvellous, very peaceful, and has everything you need and there is a good mix of different cultures which makes it great. What stood out? The people, of course, for all the good times I had with friends from all over the world."

José, Portugal

ELECTRICAL ENGINEERING

BACHELOR'S PROGRAMME: ELECTRICAL ENGINEERING

This Bachelor's programme consists of four modules per year with interconnected subjects. You will get familiar with Electrical Engineering theory as well as gaining the necessary knowledge of mathematics and computer science. Every module has a project that brings all this knowledge together. In these challenging projects you use the knowledge you've acquired to come up with and realize different, new applications.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Introduction to Electrical Engineering & Electronics (15 credits) – Block 1A
• Computer Systems (15 credits) – Block 1A
• Electric Circuits (15 credits) – block 1B
• Systems & Control (15 credits) – Block 1B
• Cyber-Physical System (15 credits) – Block 1B
• Electronics (15 credits) – Block 2A
• Network Systems (15 credits) – Block 2A

MASTER'S PROGRAMME: ELECTRICAL ENGINEERING

Specializations:
» COMMUNICATION NETWORKS
» COMPUTER VISION & BIOMETRICS
» DEPENDABLE INTEGRATED SYSTEMS
» INTEGRATED CIRCUIT DESIGN
» INTEGRATED DEVICES & SYSTEMS
» INTEGRATED OPTICAL SYSTEMS
» LAB-ON-A-CHIP SYSTEMS FOR BIOMEDICAL & ENVIRONMENTAL APPLICATIONS
» NANO ELECTRONICS
» NEUROTECHNOLOGY & BIOMECHATRONICS
» ROBOTICS & MECHATRONICS
» TELECOMMUNICATION ENGINEERING

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EMBEDDED SYSTEMS

MASTER'S PROGRAMME: EMBEDDED SYSTEMS

Is it possible to design an exoskeleton controlled by your nervous system? Can we prove that an airbag inflates in time? How far are we in embedded software for maximizing the energy efficiency of power grid? This Master's programme focuses on the combination of hardware (electrical engineering) and software (computer science) for applications ranging from pacemakers, smart phones, anti-lock brakes on cars to set-top boxes for digital TVs and Ethernet switches for high-speed networking. You will focus on topics such as control engineering, integrated circuit design, computer architecture, communication networks and real-time operating systems. An multi-disciplinary attitude will therefore be stimulated.

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SYSTEMS & CONTROL

MASTER'S PROGRAMME: SYSTEMS & CONTROL

These days, we rely increasingly on intelligent devices to assist us, making our lives easier and creating a new human habitat. Think, for instance, of robots, drones, smart cars, high speed trains, smart factories, (biomedical) imaging devices, or high-tech rehabilitation. In this Master's programme you will focus on the design and realization of these devices by integrating multiple disciplines: mathematics, computer science, and electrical, mechanical and control engineering. In order to be able to accurately predict and control system behaviour, you will learn to develop and use physical and mathematical models, numerical methods, such as finite elements, and workable control strategies. You will realize examples of these devices in hardware to prove the validity of our approach. The knowledge you acquire will be highly useful in many different fields, from transport to robotics, automation, production and machining equipment and (bio)medical equipment.

Specializations:
» BIOMECHATRONICS
» CONTROL THEORY
» ROBOTICS & MECHATRONICS
» UNMANNED AERIAL VEHICLES

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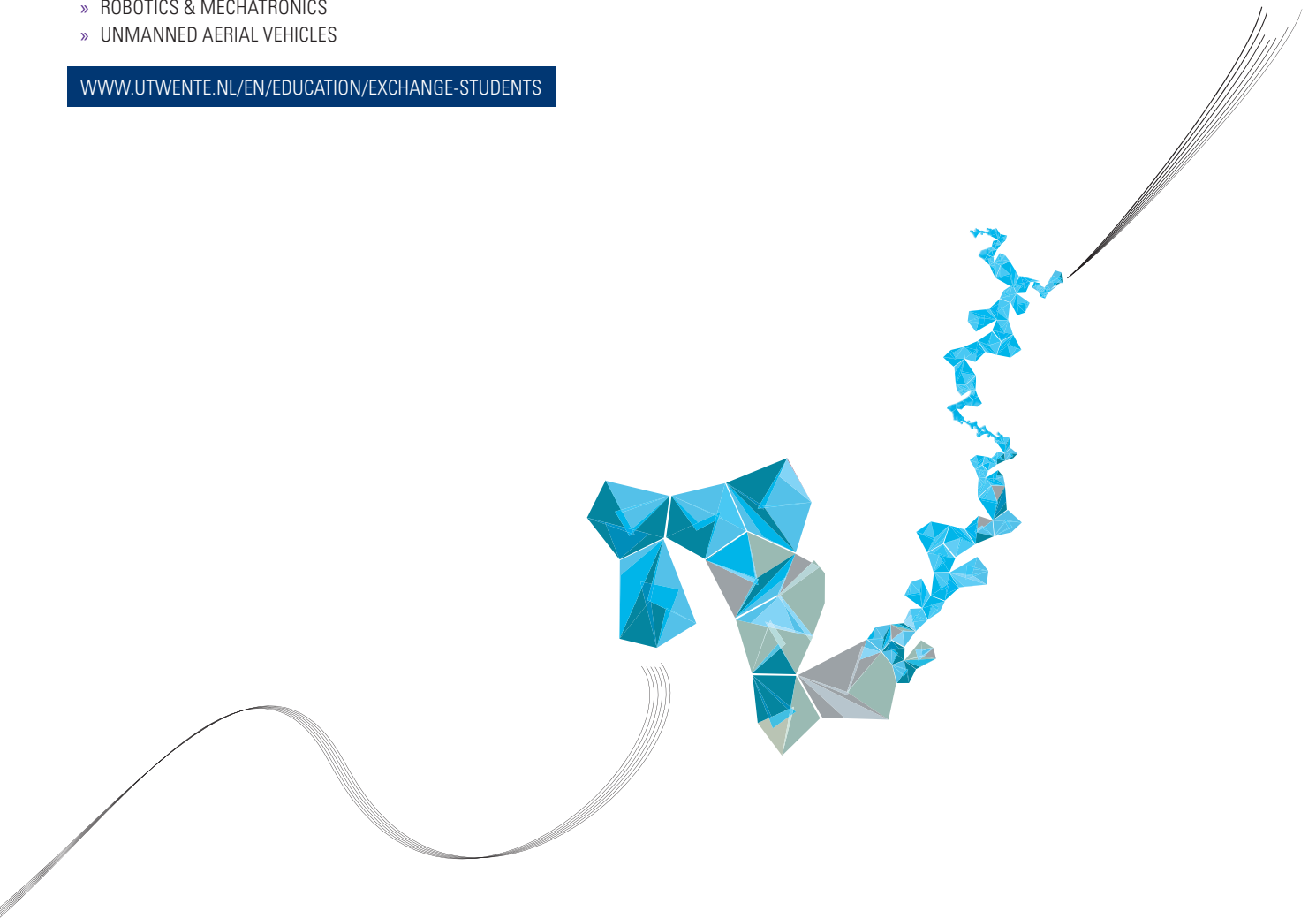
FACULTY OF ENGINEERING TECHNOLOGY (ET)

> CIVIL ENGINEERING (BACHELOR + MASTER LEVEL)

> INDUSTRIAL DESIGN ENGINEERING (BACHELOR + MASTER LEVEL)

> MECHANICAL ENGINEERING (BACHELOR + MASTER LEVEL)

> SUSTAINABLE ENERGY TECHNOLOGY (MASTER LEVEL)

CIVIL ENGINEERING

BACHELOR'S PROGRAMME: CIVIL ENGINEERING

The civil engineering programmes focus on three core themes: construction, transport and water. Upon graduation you have learned how to systematically map out complex problems, such as the possibility of flooding in a certain area, how to build models for predicting the effects certain measures will have and how to design complex projects, such as a subway junction in the heart of Amsterdam or an airport at sea. An important part of the programme is also dedicated to the management of these building processes for such designs.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:

• Safety in Risk in Delta's (15 credits) – Block 1A
• Water management (15 credits) – Block 1B
• Traffic and Transport (15 credits) – Block 2A
• Area Development (15 credits) – Block 2A

MASTER'S PROGRAMME: CIVIL ENGINEERING & MANAGEMENT

Specializations:
» INTEGRATED CIVIL ENGINEERING SYSTEMS
» CONSTRUCTION MANAGEMENT & ENGINEERING
» TRANSPORT ENGINEERING & MANAGEMENT
» WATER ENGINEERING & MANAGEMENT

MASTER LEVEL EXCHANGE STUDY PACKAGES

• Construction management & engineering (15 credits per block) – Block 1A, 1B, 2A, 2B
• Transport Engineering & Management (15 credits per block) - Block 1A, 1B, 2A, 2B
• Water Engineering & Management (15 credits per block) - Block 1A, 1B, 2A, 2B

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"I very much liked the combination of studies and social life where you go from your course directly to sport and party, all at the University."

Philip, Germany

INDUSTRIAL DESIGN ENGINEERING

BACHELOR'S PROGRAMME: INDUSTRIAL DESIGN ENGINEERING

The Industrial Design Engineering programmes combine design, engineering, technology and the social sciences. You will learn to design or improve products using technical insights, creativity and a feel for consumer behaviour. In this context, aspects such as safety, affordability and sustainability of products will be considered. You will get a firm grip on the entire design process, from developing ideas to market introduction, with the user experience as a key frame of reference.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:

- Human-Product Relations (15 credits) – Block 1A
- Consumer Products (15 credits) – Block 1B
- Designing for Specific Users (15 credits) – Block 2A
- Virtual Product Development (15 credits) – Block 2B

## MASTER'S PROGRAMME: INDUSTRIAL DESIGN ENGINEERING

Specializations:
  » HUMAN TECHNOLOGY RELATIONS
  » MANAGEMENT OF PRODUCT DEVELOPMENT
  » EMERGING TECHNOLOGY DESIGN

MASTER LEVEL EXCHANGE STUDY PACKAGES:

- Human Technology Relations (15 credits per block) - Block 1A, 1B, 2A, 2B
- Management of product development (15 credits per block) - Block 1A, 1B, 2A, 2B
- Emerging Technology Design (15 credits per block) - Block 1A, 1B, 2A, 2B

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! Please note that the Industrial Design Engineering programme offered at UT has a lot more 'engineering' content than many other industrial design programmes in the world. Therefore, the expected pre-knowledge for the courses/modules of the packages as mentioned above (BSc and MSc) include an extensive amount of 'engineering' and 'mathematical' basic skills. Having just 'design skills' is therefore not sufficient as pre-knowledge, even if you are a BSc graduate in Industrial Design Engineering. Please check the course catalogue Osiris for the assumed previous knowledge per course/module.
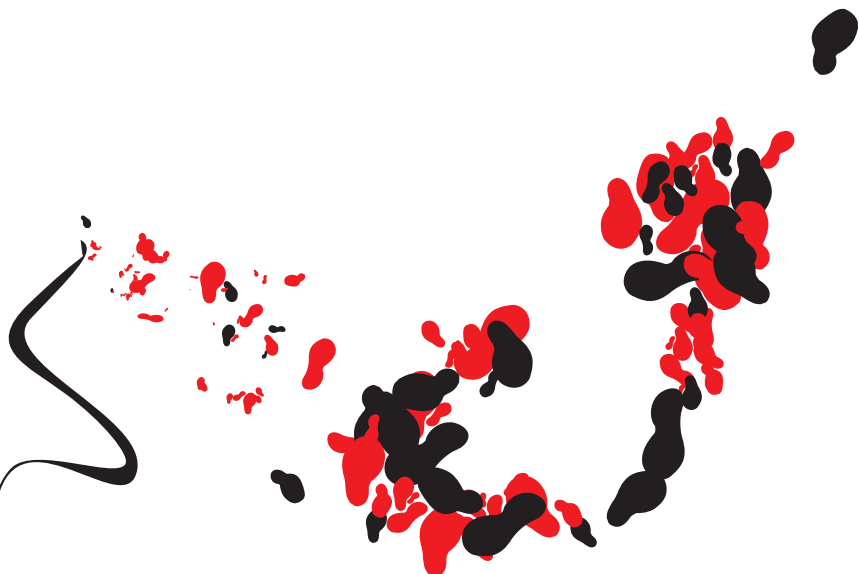
MECHANICAL ENGINEERING

BACHELOR'S PROGRAMME: MECHANICAL ENGINEERING

You'll learn how to devise, design and build new products, ranging from small appliances (such as a robotic arm for the production of car parts) to large installations (such as a power plant). Upon graduation you have gained thorough knowledge into the areas of mechanics, dynamics, energy and thermodynamics, production techniques, material science, aerodynamics and automation, in order to be able to e.g. optimise existing equipment, improve production processes or continue developing technologies such as 3D-printing.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Dynamic systems (15 credits) - Block 1A
• Fluid Mechanics & Heat Transfer (15 credits) – Block 2A
• Production Systems Engineering (15 credits) – Block 2A
• Design and Mechanics (15 credits) – Block 2B
• Research assignment (15 credits) – Block 2B

MASTER'S PROGRAMME: MECHANICAL ENGINEERING

Specializations:
  » BIOMECHANICAL ENGINEERING & ROBOTICS
  » DESIGN PRODUCTION & MANAGEMENT
  » MAINTENANCE ENGINEERING & OPERATIONS
  » MECHANICS OF SOLIDS, SURFACES & SYSTEMS
  » THERMAL & FLUID ENGINEERING

MASTER LEVEL EXCHANGE STUDY PACKAGES:
Currently only the maintenance specialisation offers pre-defined Exchange Study Packages of three courses per block, 5 credits each. For the other specialisations you can compose your own package of courses using the course catalogue.
• Maintenance Engineering and Operations (30 credits) – Block 1A + 1B
• Maintenance & Asset Management (30 credits) – Block 2A + 2B

ECIU MINOR PROGRAMME IN MECHANICAL ENGINEERING:
Within this programme the following Exchange Study Packages are offered (please read more about this special programme at: www.eciu.org/for-students/minor-programmes/mechanical-engineering):
• Aeronautical Engineering and Management (30 credits) – Block 1A + 1B
• Material & BioRobotics (30 credits) – Block 1A + 1B
• Maintenance Engineering an Asset Management (30 credits) – Block 2A + 2B
• Fluid & Heat Engineering (30 credits) – Block 2A + 2B

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SUSTAINABLE ENERGY TECHNOLOGY

## MASTER'S PROGRAMME: SUSTAINABLE ENERGY TECHNOLOGY

This programme offers you the possibility to gain in-depth understanding of energy technology and engineering. Upon graduation you will not only have expanded engineering knowledge, but also supplemented this with skills related to entrepreneurship and innovation. Building on this broad foundation, you will have risen above technology to play a role as enabler, leader and game changer in the transition towards sustainable energy systems.

MASTER LEVEL EXCHANGE COURSES
If you are interested in an exchange semester with courses in this area, you can choose one semester of courses from the regular programme.

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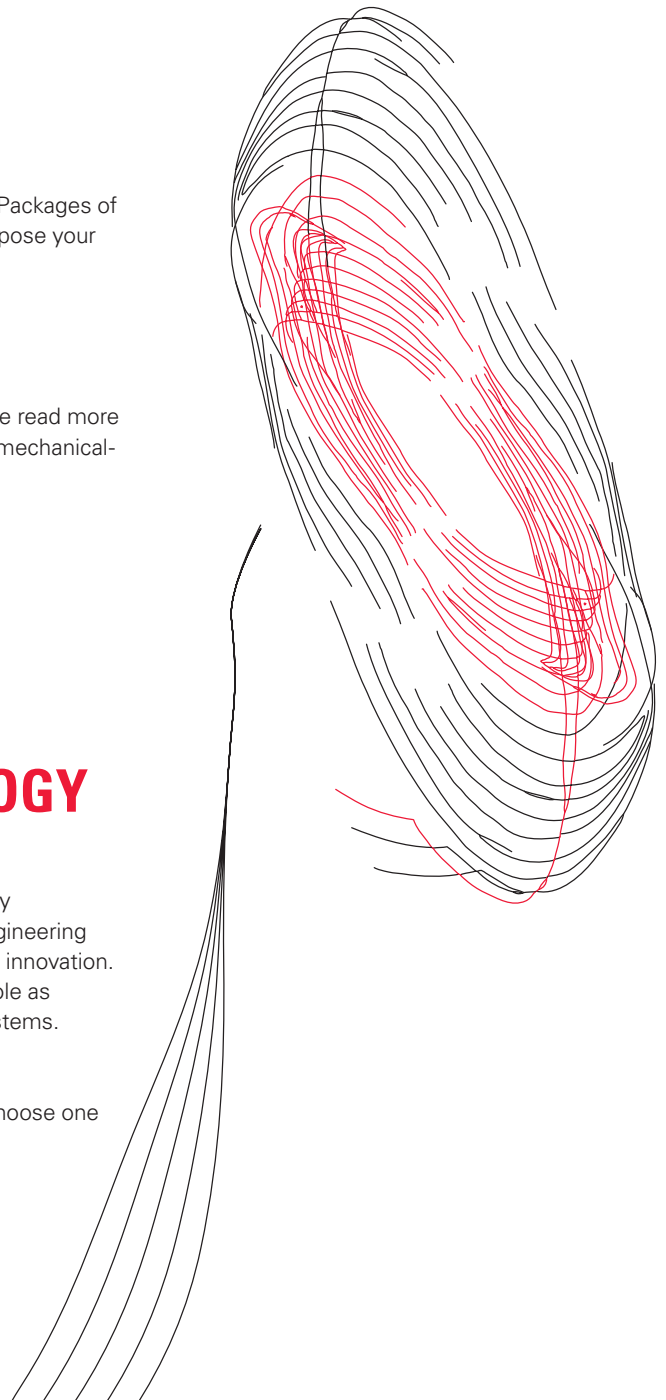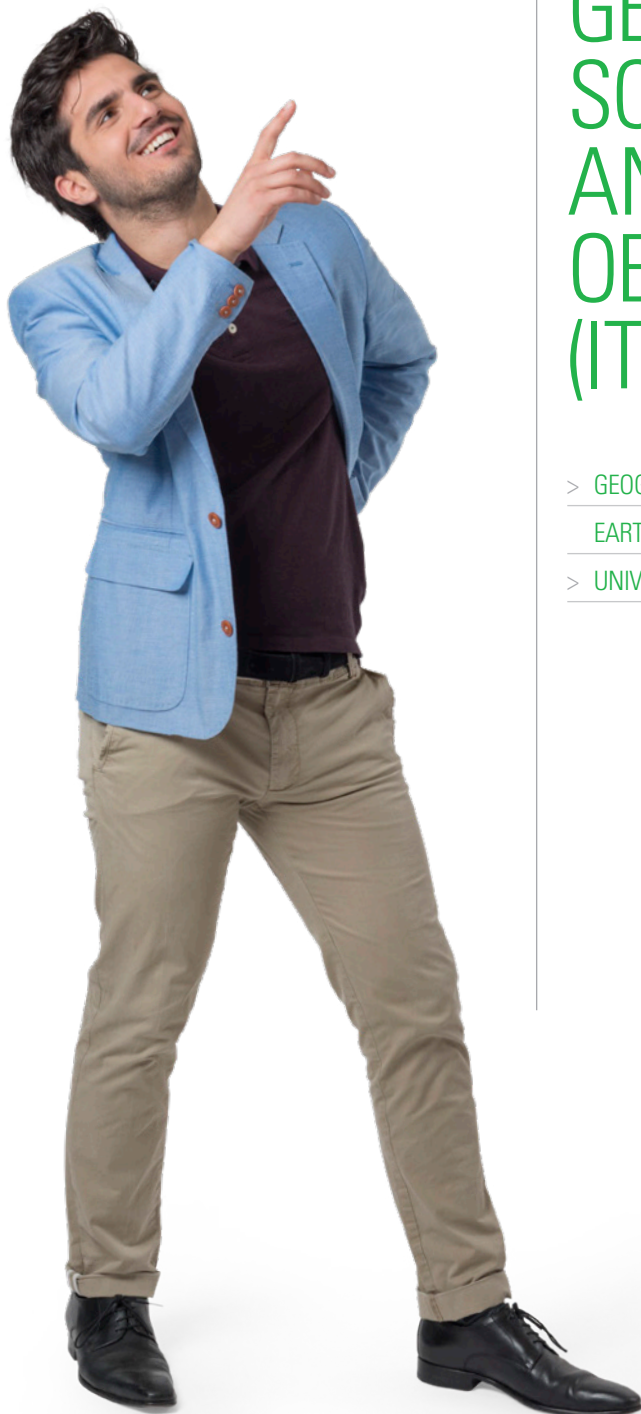
FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION (ITC)

> GEOGRAPHIC INFORMATION SYSTEM AND
  EARTH OBSERVATION (BACHELOR LEVEL)

> UNIVERSITY COLLEGE TWENTE (BACHELOR LEVEL)

INTRODUCTION

The Faculty of Geo-information and Earth Observation, also known as ITC, is a leading international knowledge hub in geospatial sciences, with an emphasis on collaborative educational and research activities in geo-information science and earth observation. The focus is on fundamental and problem-solving research and has a wide selection of courses in its degree, diploma and certificate programmes in geo-information science and earth observation. So far, the opportunities for incoming exchange at ITC are limited, but the available modules clearly represent the core knowledge domain of the faculty. More tailor-made opportunities for incoming exchange can be discussed on a case-by-case basis. In addition, the international Honours college of the University of Twente (the University College Twente (UCT)) – which organizationally is placed within the Faculty ITC, offers through its Technology and Liberal Arts & Sciences programme, ATLAS, various interesting exchange study packages at bachelor level.

GEOGRAPHIC INFORMATION SYSTEM AND EARTH OBSERVATION

An interdisciplinary exchange opportunity contains the core of our ITC faculty. The bachelor level package *GIS and Earth Observation* contains the modules Geographic Information System as well as a module on Earth Observation. Please see the final chapter of this brochure (INTERDISCIPLINARY EXCHANGE OPPORTUNITIES, p. 40-41) for details.

"Besides the great friendships I made, I think that the main thing I will take back home is the self-knowledge I acquired during these five months studying and living at the UT/Enschede. Thanks to all the experiences I got to live during this time, I was able to grow in a personal and academic way."

Antonio, Mexico

UNIVERSITY COLLEGE TWENTE

University College Twente (UCT; est. 2013) is the international Honours College of the University of Twente. The ATLAS (Technology and Liberal Arts & Science) curriculum is a three-year educational programme taught entirely in English. Your curriculum combines Engineering, Mathematics and Social Sciences. The programme comprises a common foundation with courses in these three domains as well as individualized specialization and deepening through elective courses. You will learn about these subjects in interactive courses and workshops and you will apply what you have learned in a project setting. Please check https://utwente.nl/go/atlas for more information

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Mechanics of materials (3 credits) - Block 2A
• Machine Learning (3 credits) - Block 2A
• Lasers (3 Credits) - Block 2B
• Innovation Dynamics (3 credits) - Block 2B
• Data Visualisation (3 credits) - Block 2B
• Design for Behavioural Change (3 credits) - Block 2B
• Team Leadership (3 credits) - Block 2
• Analysing Spatio-temporal data with Geographic Information Systems (3 Credits) - Block 2A
• Sensors & Sensibility (3 Credits) - Block 2B
• Trust, Crisis and Risk Perception (3 Credits) - Block 2B
• Intercultural Communication (3 Credits) - Block 2B

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Assessment: no grades
For each course, you will receive a V (pass), and for the full semester (30 ECTS credits) an 'ATLAS verdict'. The verdict is an integrative semester assessment, based on performance in classes, growth of academic and personal competences, and the achieved integration of knowledge and a verdict: pass with excellence (PX), pass with honours (PH), Pass (PA), or Hold (H). The table below relates UCT verdicts to Dutch grades, letter grades and 4.0 grade point system.

ATLAS verdict	Dutch grade	Letter grade	Grade point
PX Pass with excellence	9-10	A+	4.0
PH Pass with honours	7-8	B-A	3.0-3.9
PA Pass	6	C	2.0-2.9
H Hold	5	D	1.0-1.9
	0-4	F	0.0-0.9
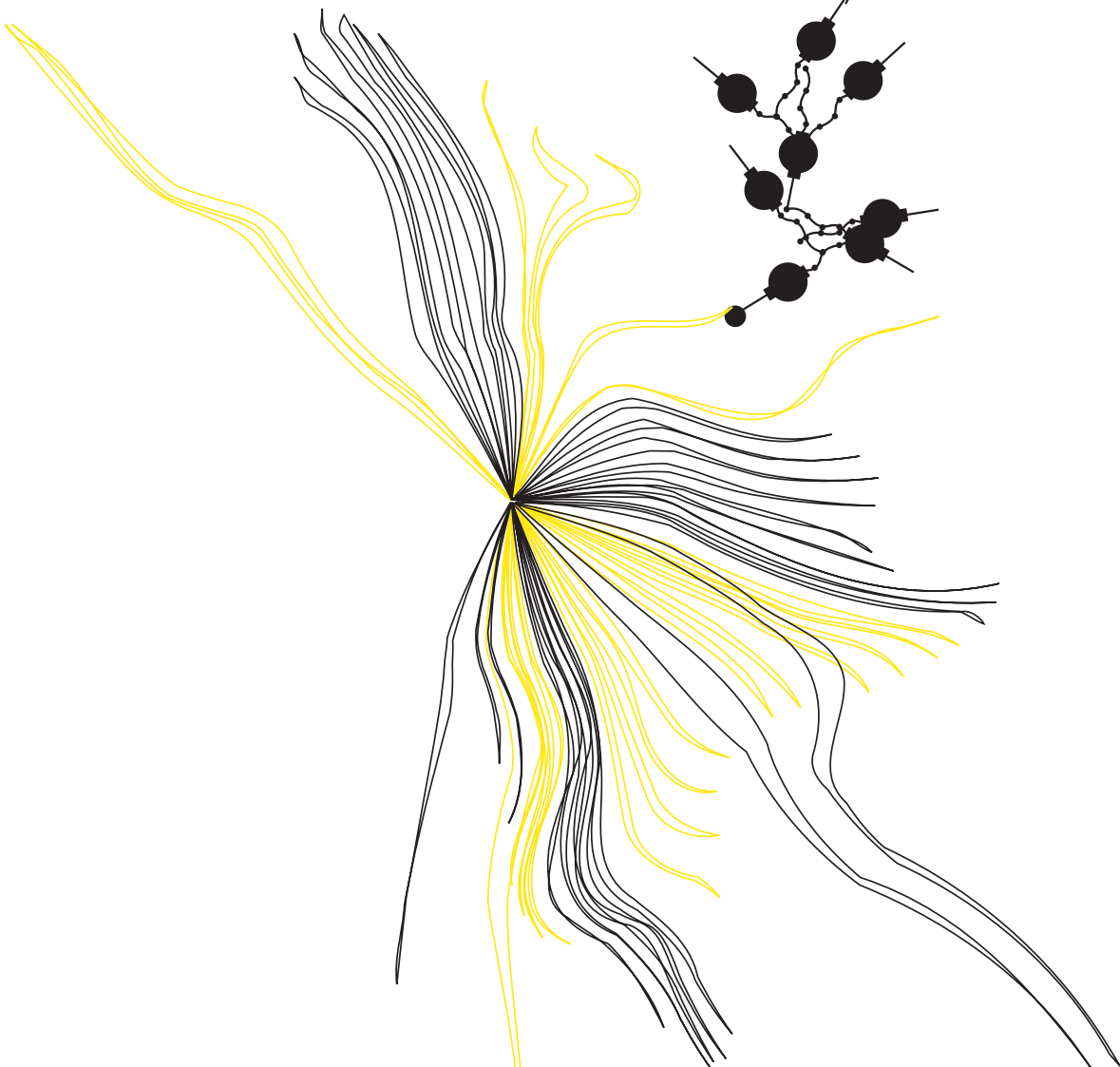
FACULTY OF SCIENCE AND TECHNOLOGY (S&T)

> ADVANCED TECHNOLOGY (BACHELOR LEVEL)

> APPLIED PHYSICS (BACHELOR + MASTER LEVEL)

> BIOMEDICAL ENGINEERING (MASTER LEVEL)

> CHEMICAL SCIENCE & ENGINEERING (BACHELOR + MASTER LEVEL)

> HEALTH SCIENCES (BACHELOR + MASTER LEVEL)

> NANOTECHNOLOGY (MASTER LEVEL)

ADVANCED TECHNOLOGY

BACHELOR'S PROGRAMME: ADVANCED TECHNOLOGY

We live in a rapidly changing world with unprecedented opportunities as well as complex problems – such as the need for energy-efficient transport or new sources of clean energy. In this programme, you will learn to create multidisciplinary solutions to these problems. You'll become familiar with various disciplines, including electrical engineering, mechanical engineering, chemical engineering, applied physics, and mathematics. You will also learn to combine them. In our hands-on team projects, we will challenge you and your fellow students to use your understanding of the theory for solving socially relevant technological problems. As an Advanced Technology student, you won't approach problem-solving from the point of view of one single discipline, but from the perspective of the problem itself.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Condensed Matter Physics (15 credits) – Block 1A
• Signals, Models & Systems (15 credits) – Block 1A
• Signals, Models & Systems (30 credits) – Block 1A+1B
• Materials Science and Engineering (15 credits) – Block 1B
• Fields & Waves (15 credits) – Block 2A
• Fundamentals of Materials (15 credits) – Block 2A
• Business & Society (15 credits) – Block 2B

APPLIED PHYSICS

BACHELOR'S PROGRAMME: APPLIED PHYSICS

Throughout the programme you will be developing your knowledge of mathematics and training your computational skills, as these are the language of applied physics. Your main tool is the experiment – experimenting is the gateway to new possibilities – so in this programme you will also spend a lot of time conducting experiments and learning how to work with all kinds of measuring devices. Physics experiments are becoming increasingly complicated and there is a growing need for applied physicists who combine in-depth knowledge with excellent practical skills. This is why we focus on application. In small group projects, we will challenge you to work together with fellow students on solving problems by applying your newly acquired knowledge and skills.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:
• Signals, Models and Systems (15 credits) – Block 1A
• Soft and Biological Physics (15 credits) – Block 1A

MASTER'S PROGRAMME: APPLIED PHYSICS

Applied Physics has its roots in the fundamental truths and basic laws that describe the world around us. The experiment is the primary means through which we discover more about that world. We focus on the utilization of scientific principles in practical devices and systems, and on the application of physics in other areas of science.

Specializations:
» PHYSICS OF FLUIDS
» MATERIALS PHYSICS
» OPTICS AND BIOPHYSICS

MASTER LEVEL EXCHANGE STUDY PACKAGES
• Fluid Physics (30 credits) – Block 1A + 1B
• Fluid Physics (15 credits) – Block 2B
• Materials Physics (30 credits) – Block 1A + 1B
• Optics and Biophysics (30 credits) – Block 1A + 1B
• Applied Physics (15 credits) – Block 2A
• Applied Physics (15 credits) – Block 2B

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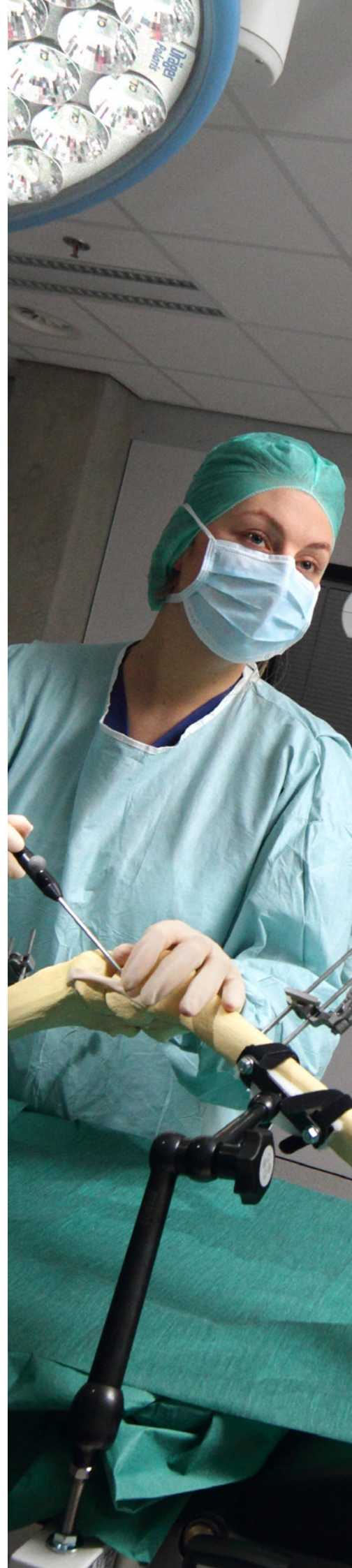
BIOMEDICAL ENGINEERING

MASTER'S PROGRAMME: BIOMEDICAL ENGINEERING

This engineering programme will enable you to research, design and develop innovative products and processes that will benefit the healthcare sector. You will develop medical innovations that really contribute to better care. This dynamic, interdisciplinary field combines engineering with natural and life sciences, such as biology, nanotechnology, physics, electrical engineering, chemistry and mechanical engineering.

Specializations:
- » IMAGING AND DIAGNOSTICS
- » PHYSIOLOGICAL SIGNALS AND SYSTEMS
- » BIOENGINEERING TECHNOLOGIES
- » BIOROBOTICS

MASTER LEVEL EXCHANGE STUDY PACKAGES:

Bioengineering Technologies
- Bioengineering Technologies (30 credits) – Block 1A + 1B
- Bioengineering Technologies (30 credits) – Block 1A + 1B - Physics-oriented
- BET Advanced Biomanufacturing (15 credits) – Block 1A
- BET Bionanotechnology and Advanced Biomanufacturing – Block 1B
- Bioengineering Technologies (30 credits) – Block 2A + 2B
- BET Biomedical Membranes & Artificial Organs (15 credits) – Block 2A
- BET Tissue Engineering (15 credits) – Block 2B

Physiological Signals and Systems
- Physiological Signals and Systems (15 credits) – Block 1A
- Physiological Signals and Systems (15 credits) – Block 1B
- Physiological Signals and Systems (15 credits) – Block 2A
- Physiological Signals and Systems (15 credits) – Block 2B

Imaging & In Vitro Diagnostics
- Imaging & In Vitro Diagnostics (15 credits) – Block 1A
- Imaging & In Vitro Diagnostics (15 credits) – Block 1B
- Imaging & In Vitro Diagnostics (15 credits) – Block 2A
- Imaging & In Vitro Diagnostics (15 credits) – Block 2B

Biorobotics
- Biorobotics (30 credits) – Block 1A + 1B
- Biorobotics (15 credits) – Block 1B
- Biorobotics (30 credits) – Block 2A + 2B

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"A desire to explore by going out of your comfort zone, builds confidence and makes learning much effective."

Anand, India

CHEMICAL SCIENCE & ENGINEERING

BACHELOR'S PROGRAMME: CHEMICAL SCIENCE & ENGINEERING

As a chemical engineer you are creative and inquisitive. In this programme you will learn to compose new materials and to subject them to in-depth research, or to design and optimize manufacturing processes, while also making them more sustainable. Chemical Science & Engineering involves a lot more than chemistry alone: physics and mathematics also play a vital role. This is why you must have a broad interest in the natural sciences as well as being technically minded. In this UT programme, theory and practice are interwoven. Every module involves a project, in which you join a team of fellow students in tackling a complex problem taken straight from the business world or society. This will give you a deeper understanding of the theory, help you to apply it and enable you to develop the skills needed to work on project teams.

BACHELOR LEVEL EXCHANGE STUDY PACKAGES:

Molecular and Materials Engineering
• Science (15 credits) – 1A
• Materials Science and Engineering (15 credits) – Block 1B
• Chemistry and Technology of Materials (15 credits) – Block 2B

Chemical & Process Engineering
• Industrial Processes (15 credits) – Block 1A
• Physical Transport (15 credits) – Block 1B
• Process design (15 credits) – Block 2B

MASTER'S PROGRAMME: CHEMICAL ENGINEERING

Specializations:
» MOLECULAR & MATERIALS ENGINEERING
» CHEMICAL & PROCESS ENGINEERING

MASTER LEVEL EXCHANGE STUDY PACKAGES:

Molecular and Materials Engineering
• Molecular Science (15 credits) – Block 1A
• Materials Science (15 credits) – Block 1B
• Molecular and Materials Science (30 credits) – Block 1A + 1B

Chemical & Process Engineering
• Process Technology (30 credits) – Block 1A + 1B
• Membrane Technology (30 credits) – Block 1A + 1B

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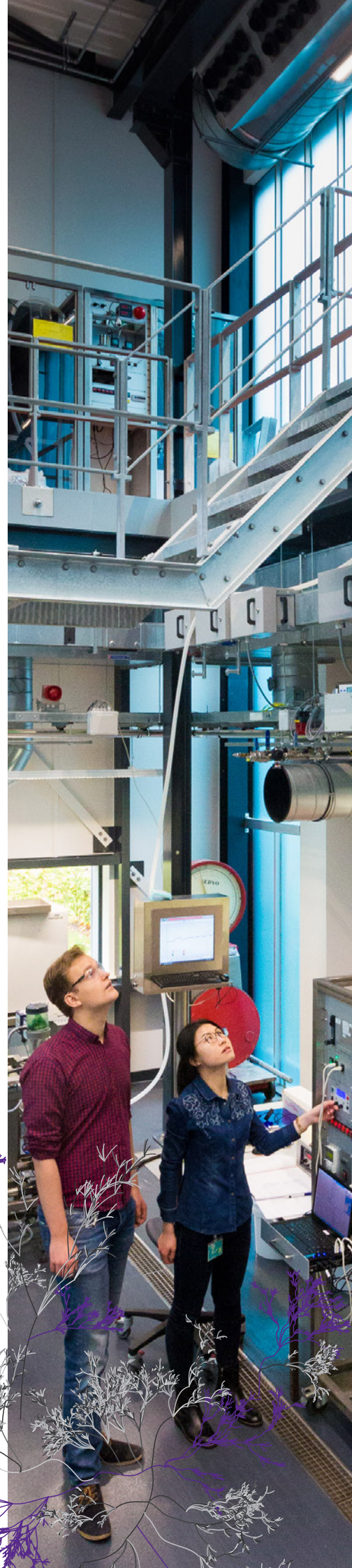
HEALTH SCIENCES

BACHELOR'S PROGRAMME: HEALTH SCIENCES

Health Sciences at the University of Twente stands out from other similar programmes by combining healthcare and technology. New technological developments are taking place at such a high pace that the healthcare sector is faced with many questions. If more technology is introduced into healthcare (say, a healthcare robot), what effects will that have on doctors, patients and the care process? These are the sort of questions you will tackle throughout this Bachelor programme. Health Sciences is not a technical degree. You will not go into the details of how technologies work or how you can develop them. Your focus, rather, will be on how to assess from different perspectives whether the use of technology can help improve healthcare. The University of Twente offers you a small-scale educational environment with an informal atmosphere. We will challenge you to team up with others and come up with solutions to real-life healthcare issues.

BACHELOR LEVEL EXCHANGE STUDY PACKAGE:
• Health Economics and Accounting (15 credits) – Block 1A

MASTER'S PROGRAMME: HEALTH SCIENCES

This Master's programme educates health scientists who are able to design solutions to the challenges presented by modern healthcare. You will learn how to convert the results of fundamental and applied clinical research into modern customized healthcare solutions. To this end you will be using new medical and information technologies including virtual reality, augmented reality, embodied monitoring, and pervasive and unobtrusive systems.

Specializations:
 » PERSONALIZED MONITORING AND COACHING
 » OPTIMIZATION OF HEALTHCARE PROCESSES
 » INNOVATION IN PUBLIC HEALTH

MASTER LEVEL EXCHANGE STUDY PACKAGES
• Health (15 credits) – Block 1A
• Innovation in Public Health (15 credits) – Block 1B
• Optimization of healthcare processes (15 credits) – Block 1B
• Personalized monitoring and Coaching (15 credits) – Block 1B

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NANOTECHNOLOGY

MASTER'S PROGRAMME: NANOTECHNOLOGY

Nanotechnology is all about studying the changes that the physical and chemical properties of a material undergo at nanoscale in order to design and develop functional materials, structures, devices and systems. Our programme is highly multidisciplinary, combining traditional disciplines, such as physics, chemistry, electrical engineering and biology. You will learn all about fabricating and characterizing nanomaterials and designing nanodevices. You can specialize in Solid State Matter, (Bio)Molecular Matter or Soft Matter combined with Systems.

MASTER LEVEL EXCHANGE STUDY PACKAGE:
• Characterization and Fabrication of Nanostructures (30 credits) – Block 1A + 1B

WWW.UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS
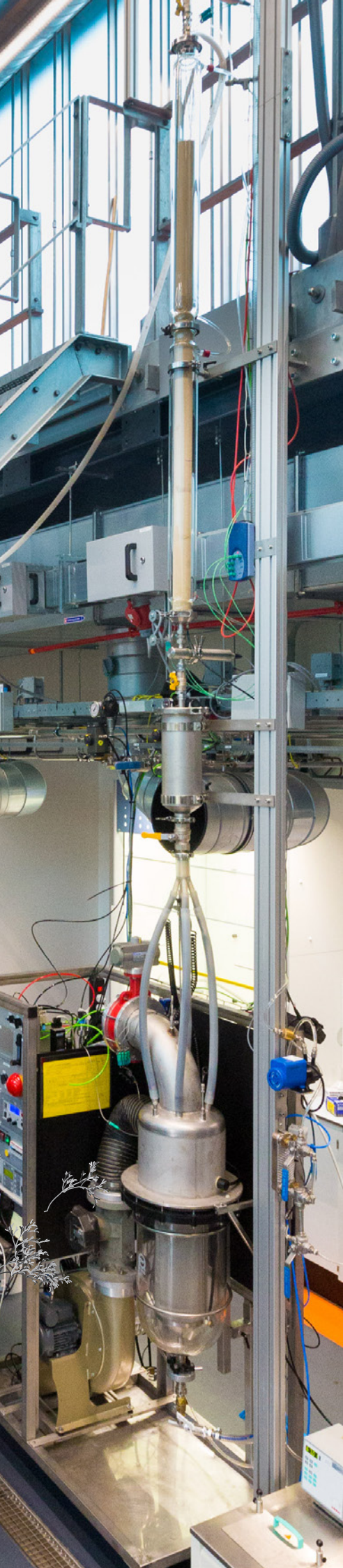
INTERDISCIPLINARY EXCHANGE OPPORTUNITIES

HIGH TECH HUMAN TOUCH

In an unpredictable and rapidly changing world, we focus all of our education and research on developing relevant answers for societal challenges.

UTWENTE.NL/RESEARCH

HTHT – MINORS

> AERONAUTICAL ENGINEERING AND MANAGEMENT

> BIOROBOTICS

> CYBERSECURITY & CYBERCRIME

> GIS AND EARTH OBSERVATION

> INNOVATION, ENTREPRENEURSHIP & BUSINESS DEVELOPMENT

> INNOVATIONS IN SUSTAINABLE CHAIN MANAGEMENT

> MATERIALS FOR THE DESIGN OF THE FUTURE

> PHILOSOPHY AND GOVERNANCE OF SCIENCE AND TECHNOLOGY

> SCIENCE TO SOCIETY

> SMART WAYS TO GET SMART CITIES SMARTER

INTERDISCIPLINARY EXCHANGE OPPORTUNITIES

An HTHT-minor fits within the UT profile: High Tech, Human Touch. The minor is offered in English and accessible for both our degree students as well as for our incoming exchange students. The goal of the HTHT-minor is to illuminate specific societal themes for which UT develops High Tech Human Touch solutions. These solutions are created by conducting high-quality research. Both the form and the content of the minors are High Tech Human Touch (multidisciplinary). UT offers most HTHT-minors in full semester packages (two blocks of 15 credits each). There are also HTHT minors of 15 credits. You can choose one of these minors and combine them with another one.

FIND MORE INFO: WWW.UTWENTE.NL/EN/EDUCATION/ELECTIVES/MINOR/OFFER/HTHT-MINORS

AERONAUTICAL ENGINEERING AND MANAGEMENT
The package Aeronautical Engineering and Management consists of two modules which form a complete package of 30 credits. Within the first module Aircraft Engineering, you get acquainted with aspects that play a role in the design of an airplane. The focus is on the history and application of the high tech (mechanics, structures and aerodynamics) as well as the human touch aspects (decision making, business case). Within the second module Aircraft Management and Operations, you get to know aspects that play a role in logistic processes and maintenance processes around aircraft transport. The focus is on the history and application of both the human and technological aspects of passenger and freight routing as well as safety, maintenance and the efficiency of the exploitation of aircraft.
2 X 15 credits, block 1A & block 1B.

BIOROBOTICS
Robotics deals with the design, construction, operation, and application of robots, as well as computer systems for their control, sensory feedback, and information processing. These technologies deal with automated machines that can take the place of humans in dangerous environments or manufacturing processes, or resemble humans in appearance, behaviour, or cognition. Worldwide scientific and industrial demand for skilled engineers with advanced systems and control knowledge of robotic systems that can apply this knowledge in biomedical or general high-tech systems is strongly increasing. The module Biorobotics applies high-tech systems & control knowledge of robotic design and construction to the biomedical interaction with the human body.
1 X 15 credits, block 1A.

CYBERSECURITY & CYBERCRIME

The Internet is one of the greatest technological achievements of humanity. However, this technological advancement has also paved the way for new forms of crime. This minor will introduce you to the fields of Cybersecurity and Cybercrime. Cybersecurity encompasses measures taken to protect a computer system, a network, or the Internet as a whole, against unauthorized access or attack. The spectrum of abuse is large: it ranges from cyberdeviance (a behaviour outside or at the edge of the formal norms of society, but not yet illegal) to real cybercrime (an activity that violates a set of legal norms). The Cybersecurity and Cybercrime minor is a multidisciplinary minor that will cover both high-tech and human-touch aspects of this discipline and combines them in a hands-on final project. The minor aims at providing a comprehensive, multi-faceted view of the interaction between Internet technology and crime. 1 X 15 credits, block 1A.

GIS AND EARTH OBSERVATION

The world is facing challenges on a global, national, local and individual level, and moves further into the information age. Availability of reliable and up to date information has become more and more important to make informed decisions. In many cases, data required to generate the information needed to tackle these grand challenges are geographical in nature. This HTHT package introduces you to Geographic Information Systems (GIS), Earth Observation (EO), digital image processing, visualization and cartography. It uses spatial data to support the processes of planning and informed decision making. The knowledge and skills you obtain during the module are applied in inter- and multi-disciplinary projects with an international flavour that are linked to various societal benefit areas (SBA's). The package consists of two modules of 15 credits each. The modules are designed such that they can be followed combined or separately.
2 X 15 credits, block 1A & block 1B.

INNOVATION, ENTREPRENEURSHIP & BUSINESS DEVELOPMENT

Innovation, Entrepreneurship & Business Development is aimed at creating your sensitivity and competencies for generating business on the basis of a single invention by transferring the rights to it to a commercialising company or by exploiting the technology in a start-up. A component strategy has to be developed on the basis of revenues gained from company results, licensing and/or largely outsourced operations. The base setting for applying the competency to gain from this module would be (large) companies and (public or private) technology research organizations that want to generate extra income by exploiting (or, valorising) their knowledge base to commercializing partners.
2 X 15 credits, block 1A & block 1B.

INNOVATIONS IN SUSTAINABLE CHAIN MANAGEMENT

This minor consists of two modules 'Analysis' (15 credits) and 'Design' (15 credits). that can be chosen either separately or as a package. The module 'Analysis' takes mapping of the interactions between materials, technology, economy and society as central theme and evaluates this in the 3P perspective. Societal, consumer and governmental preferences are mapped to elaborate impacts and the direction of needed innovations. The coordination and management of chains are then assessed to focus upon innovative actions. The module 'Design' takes the design of products and processes as central theme and elaborates options for improvement in an interactive design process. This is about understanding the user of the design, generating ideas for improvements, refining solutions by iteration, presenting visualizations and/or models and an outlook on adaptation. All aiming at improvements. The first teaching block concerns a number of sessions in which literature is reviewed. During the second block you work on individual knowledge and skills by writing a paper. During the third building block you work in a multidisciplinary team on an assignment related to a real-life case. You will learn the concepts, approaches and methodology on a generic level that enables you to apply it on other chains successfully.
2 X 15 credits, block 1A & block 1B.

MATERIALS FOR THE DESIGN OF THE FUTURE

The HTHT-module Materials for the Design of the Future deals with the basics of different selected materials based on polymers, e.g. thermoplastics and elastomers. Besides, the unique possibilities of combinations of materials for the design of new functionalities for the future will be discussed in this module. It fuses several objectives for material-, process- and design related programmes. The core of the ME-MS3 program is to develop technology for future manufacturing processes, innovative materials and new products by a science-based engineering approach focused on material- and system behaviour and robust optimization.
1 X 15 credits, block 1B.

PHILOSOPHY AND GOVERNANCE OF SCIENCE AND TECHNOLOGY

During the HTHT-package Philosophy and Governance of Science and Technology you will develop a basic understanding of how science and technology influence the human being and society. The focus will be placed on human behaviour, knowledge and values and on evaluating and governing social change. Insights and perspectives from philosophy, from science and technology studies and governance studies will be used and applied to projects in which you will work on concrete examples of technical and social innovations. The modules can each be chosen separately or as a package. It is therefore not obligatory for you to follow both modules from the package, but instead you can choose one module.
2 X 15 credits, block 1A & block 1B.

SCIENCE TO SOCIETY

Humanity is rushing towards a future, where technology will take over crucial parts of daily human living. This highlights the need for engineers and designers with a very broad skillset. Communicative skills can facilitate collaboration with the industry and various multi-disciplinary partners and users. Team player skills are highly valued within a research & development team. This two-part minor attempts to cultivate those increasingly important skills. It will achieve that by a combination of real-world problem solving, and a multidisciplinary team setting. The real-life problems will focus on societal challenges in diverse fields like energy, healthcare, learning and robotics. Creative design ideas and technological innovations in cooperation with different societal stakeholders are necessary to tackle these challenges. In the first module, you will work on generating novel ideas and design concepts and transforming the initial concept into a prototype. Taking both modules means you will play an important role in the full realization of your concept and will thoroughly deepen your understanding on the topic and the state-of-the-art in technological innovation. The stage for the Science 2 Society minor is the UT DesignLab, a creative ecosystem where faculty and students from all fields work together with companies and governments on the societal design challenges of our times, inspired by the newest scientific insights.
2 X 15 credits, block 1A & Block 1B.

SMART WAYS TO GET SMART CITIES SMARTER

Smart Cities are appealing to scientists, engineers, and city governors. But what are they, and how do they influence civil engineering practice? This course explores the concept through SC-theory and a domain-specific design project. Will you help civil engineers to become SC-proof? Current thinking about Smart Cities often results in the development of exciting blueprint images of futuristic cities, but it also raises fundamental questions, such as what are Smart Cities? And, how realistic are these concepts? This module demystifies the Smart City concept and designs solutions for supporting Civil Engineering processes in cities. In this course, you will study the Smart City concept from a multi-disciplinary perspective. You will learn how the construction of Smart Cities affects the physical urban built environment and – most importantly – you will get to know whether and how such Smart City solutions can be implemented in existing city space. After a mere analytical part that covers the Smart City concept from urban planning, management, and governance viewpoints, we address specific technology and engineering projects that aim to make cities smarter.
1X 15 credits, block 1B.
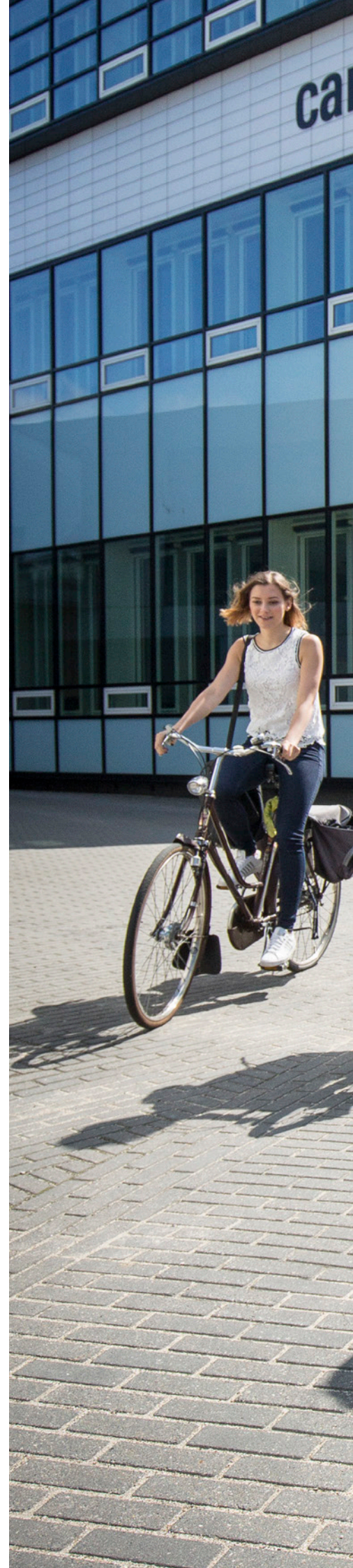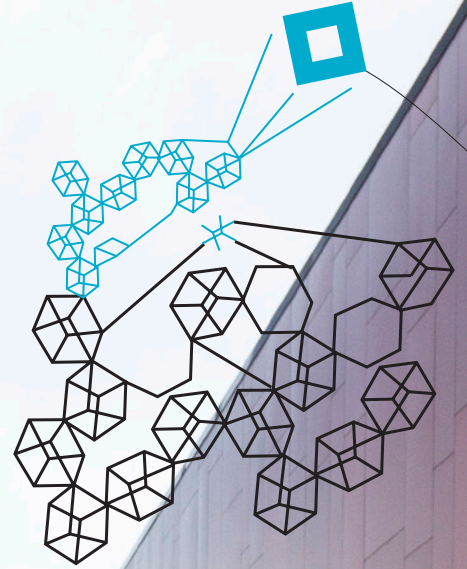
1,585 EXCELLENT SCIENTISTS & 372 LAB FACILITIES ON CAMPUS

Though small in scale, UT is a world-renowned top research university and home to no fewer than 1,585 scientists and 372 lab facilities. Here's just a glimpse of our facilities, faculties, and research institutes – and the many cross-links that make us standout as societal impactors.

DESIGNLAB
A creative & cross-disciplinary ecosystem, connecting science and society through design

NANOLAB
1,250 m^2 state-of-the-art infrastructure which forms the heart of cutting-edge research in micro- and nanotechnology.

FACULTY
ELECTRICAL ENGINEERING, MATHEMATICS AND COMPUTER SCIENCE

BRAM NAUTA:
INTEGRATED CIRCUIT DESIGN

RESEARCH
INTEGRATED CIRCUIT DESIGN
Plantenna - botanic sensor networks, towards an Internet of Plants.

UNIVERSITY OF TWENTE. | **MESA+ INSTITUTE**

UTWENTE.NL/MAG/MESAPLUS

RESEARCH
MARINE AND FLUVIAL SYSTEMS
Ground-breaking research into changes to the soil, banks, and shores of sandy rivers, coastal areas, and seas.

SUZANNE HULSCHER
MARINE & FLUVIAL SYSTEMS

RESEARCH
PHYSICS OF FLUIDS
Research in the field of fundamental processes in fluids, such as turbulence, sonoluminescence and droplet behaviour.

VIRTUAL REALITY LAB
High-tech environment to facilitate multi-stakeholder decision-making.

FACULTY
ENGINEERING TECHNOLOGY

DETLEF LOHSE:
PHYSICS OF FLUIDS

FACULTY
SCIENCE AND TECHNOLOGY

HIGH-PRESSURE LAB
For safe experiments with high pressures and temperatures.

RESEARCH
BIO-INSPIRED AND MOLECULAR MATERIALS
Developing artificial molecular materials that are capable of movement, often under the influence of light.

NATHALIE KATSONIS
BIO-INSPIRED & MOLECULAR MATERIALS

UNIVERSITY OF TWENTE. | DIGITAL SOCIETY INSTITUTE

UTWENTE.NL/MAG/DIGITAL-SOCIETY

RESEARCH
ITS4LAND
Developing tools to make land rights mapping faster, better, and cheaper.

TOM VELDKAMP
SPATIAL ENVIRONMENTAL QUALITY

RESEARCH
DE-ENIGMA PROJECT
Humanoid Zeno empowers autistic children playfully.

VANESSA EVERS
HUMAN MEDIA INTERACTION

FACULTY
GEO-INFORMATION SCIENCE AND EARTH OBSERVATION

RESEARCH
PHILOSOPHY OF TECHNOLOGY
The mediating role of technology in knowledge, ethics, and metaphysics.

GEOSCIENCE LABORATORY - UAVs
Improving the way drones navigate, communicate, and analyse their environment.

FACULTY
BEHAVIOURAL, MANAGEMENT AND SOCIAL SCIENCES

PETER PAUL VERBEEK
PHILOSOPHY OF HUMAN TECHNOLOGY RELATIONS

BMS LAB
High tech environment for innovative solutions to social challenges.

EXPERIMENTAL CENTRE FOR TECHNICAL MEDICINE
A simulated authentic professional environment in a high-tech and safe learning space.

OUR PARTNERS

FRAUNHOFER PROJECT CENTER
The Fraunhofer Institute, a European leader in applied scientific research, has 69 centres worldwide. One of those is located on our campus. The goal of 'FPC@UT' is to bridge the gap between science and smart industry.

UTWENTE.NL/FRAUNHOFER

UNIVERSITY OF TWENTE. | TECHMED CENTRE

UTWENTE.NL/MAG/TECHMED

MAX PLANCK CENTER
The Max Planck Society is a leading name in research with a role in over 2,500 projects and 5,000 international partners in over 100 countries. We collaborate with two Max Planck Institutes in the field of complex fluid dynamics.

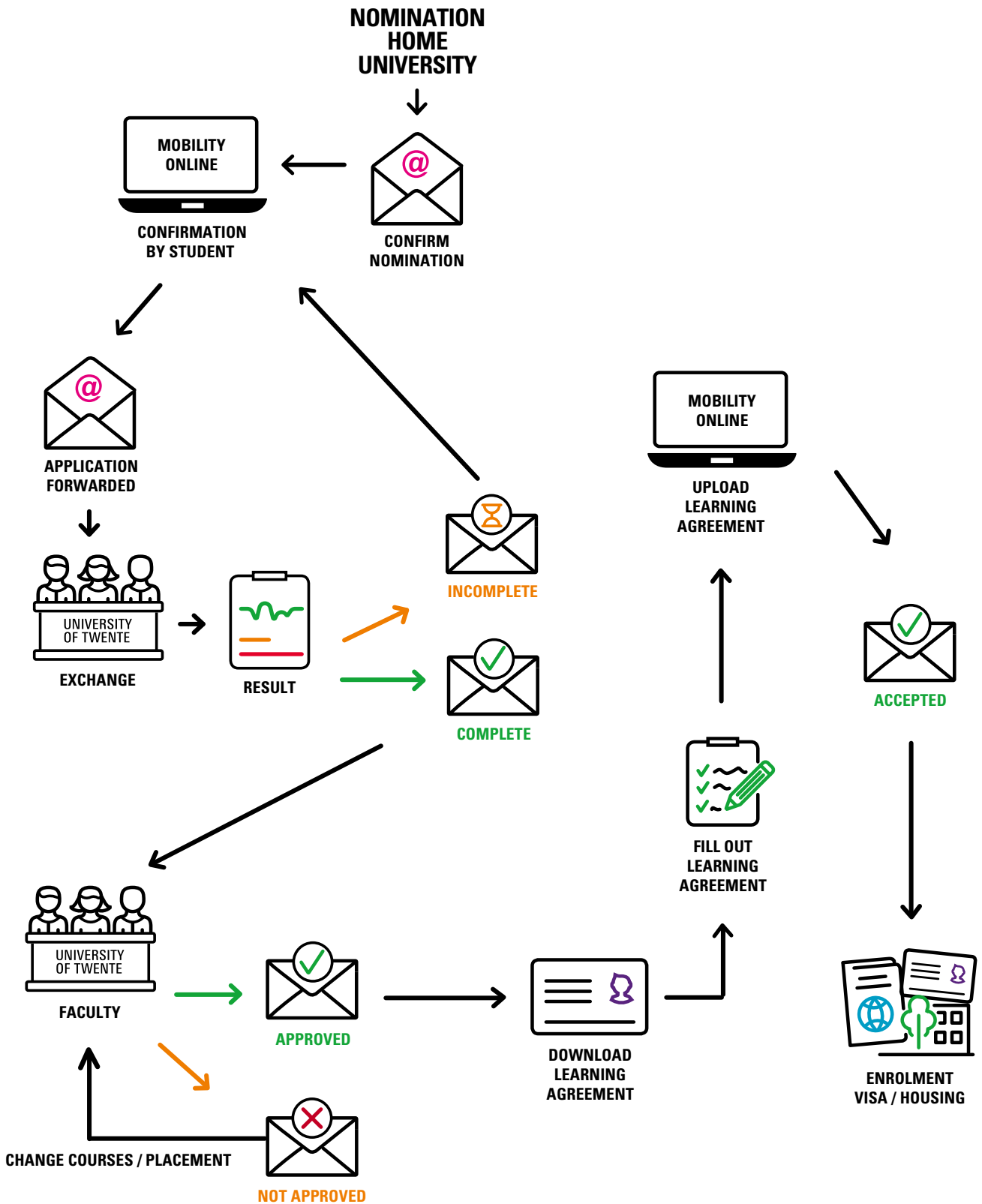UTWENTE.NL/MAX-PLANCK-CENTER

SARTHAK MISRA
SURGICAL ROBOTS

RESEARCH
SURGICAL ROBOTICS
Research on robotically guided, smart, and flexible surgical needles.

EXCHANGE APPLICATION PROCESS AT UNIVERSITY OF TWENTE

NOMINATION HOME UNIVERSITY

CONFIRM NOMINATION

MOBILITY ONLINE

CONFIRMATION BY STUDENT

APPLICATION FORWARDED

UNIVERSITY OF TWENTE

EXCHANGE

RESULT

INCOMPLETE

COMPLETE

UNIVERSITY OF TWENTE

FACULTY

APPROVED

CHANGE COURSES / PLACEMENT

NOT APPROVED

DOWNLOAD LEARNING AGREEMENT

FILL OUT LEARNING AGREEMENT

MOBILITY ONLINE

UPLOAD LEARNING AGREEMENT

ACCEPTED

ENROLMENT VISA / HOUSING

EXCHANGE APPLICATION PROCESS AT UNIVERSITY OF TWENTE

Are you nominated by your home university for an exchange programme at the University of Twente? If you are, you will receive confirmation by e-mail. In this email you will find a link to access Mobility Online, our student information system. In the scheme at the left you can see how the admission process is organized.

NOMINATION HOME UNIVERSITY

NOMINATION
Your home university has to nominate you for an exchange programme via our student information system Mobility Online.

MOBILITY ONLINE

REGISTRATION
Once you are nominated by your home university, you will receive a confirmation e-mail including guidelines on how to apply. You will be able to register in Mobility Online and upload all the documents and information necessary for your application.

CONFIRMATION OF APPLICATION
Immediately following your application, you will receive confirmation by e-mail so you know your application has been received.

UNIVERSITY OF TWENTE

ADMISSION
We first check whether we have all the information and documents needed to assess your application. You may be asked to send additional documents. The departmental coordinator will check the availability of the courses or the placement programme chosen, and determine your eligibility based on a review of your previous qualifications. You may be contacted by the departmental coordinator with suggestions for changes in the proposed programme.

INCOMPLETE
If we require additional document or information you will receive an e-mail with the information that is incomplete and instructions on what we need.

COMPLETE
When you complete a step, you will receive a confirmation of this by e-mail with information on how to proceed.

APPROVED
When your application is approved, you will receive an e-mail with information how to proceed.

NOT APPROVED
In some cases you may not meet the admission requirements for the programme of your choice and your application will be rejected. The departmental coordinator can guide you in finding alternatives.

LEARNING AGREEMENT
When your programme has been approved, you will receive an e-mail to download your Learning Agreement.

SIGN LEARNING AGREEMENT
When you have downloaded the Learning Agreement, you have to let it sign by your home university and yourself. After we have received your fully signed Learning Agreement, you will be able to proceed. Without this document you cannot complete your application.

MOBILITY ONLINE

MOBILITY ONLINE
Once you have registered in Mobility Online you can access your application and check the status of your application.

VISA / HOUSING
After you are accepted into our programme, you will be guided through various processes including visa, residence permit, insurance, housing and enrollment.
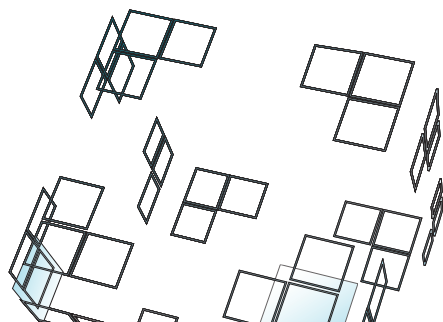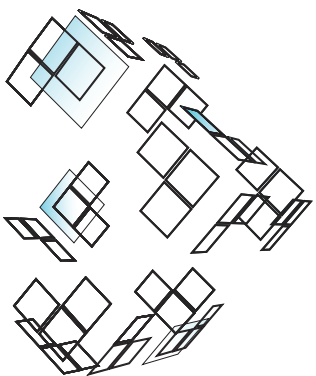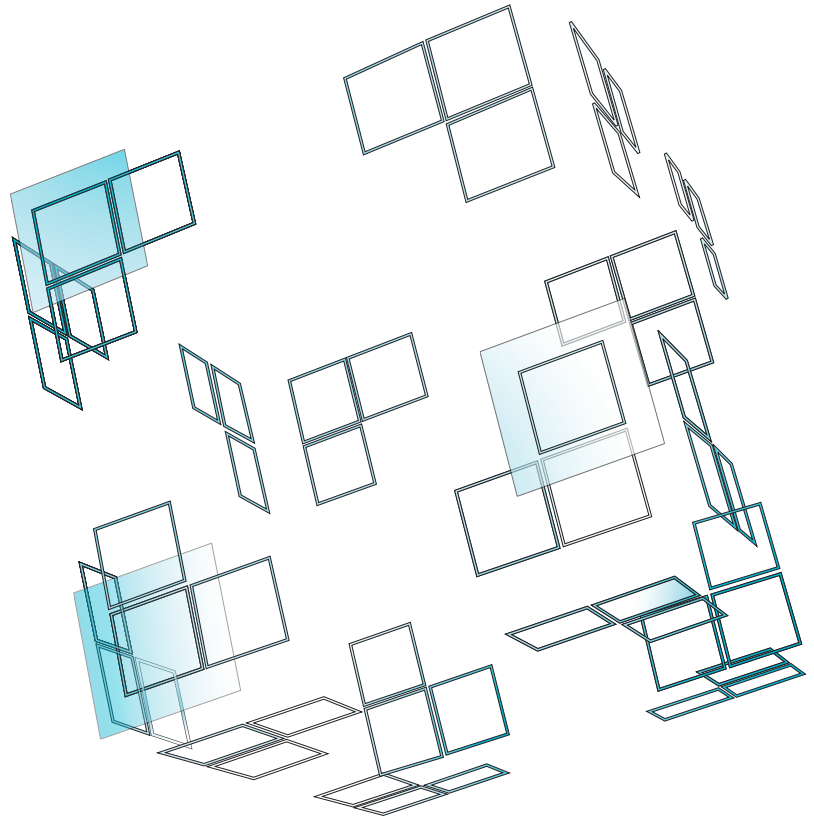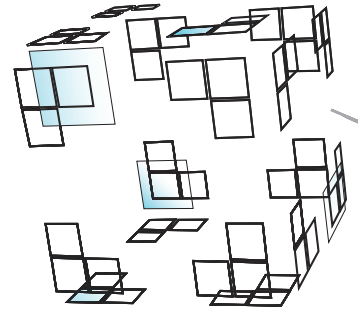
CAMPUS OVERVIEW

📍 ENSCHEDE, THE NETHERLANDS

AMSTERDAM

LONDON

BERLIN

UNIVERSITY
OF TWENTE.

PARIS

> BEAUTIFUL PARK-LIKE CAMPUS
  WITH ALL THE FACILITIES YOU NEED

> MOST ENTREPRENEURIAL
  UNIVERSITY IN THE NETHERLANDS

> A HIGHLY INTERNATIONAL
  COMMUNITY & PROFILE

> STATE-OF-THE-ART EDUCATION
  LINKED TO CUTTING-EDGE
  RESEARCH

> 'HIGH TECH HUMAN TOUCH'
  APPROACH

> BASED IN ENSCHEDE,
  THE NETHERLANDS

> 2 HOURS FROM AMSTERDAM

> A CITY-HOP FROM PARIS, LONDON
  OR BERLIN

UTWENTE.NL/EN/EDUCATION/EXCHANGE-STUDENTS

study in
holland
open to
international
minds

CAMPUS & EXPRESS COURIER ADDRESS
University of Twente
CES | SOIR
Vrijhof Building
Drienerlolaan 5
7522 NB Enschede
The Netherlands

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