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**TU/e at a glance**

**Top-ranking Dutch university**

**At the heart of the Brainport region**

**Strong technology heritage in Eindhoven**

Accounts for 23.1% of total Dutch private R&D expenditure*.

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**Student growth**

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSc</td>
<td>5,591</td>
<td>7,588</td>
</tr>
<tr>
<td>MSc</td>
<td>3,608</td>
<td>4,397</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9,199</td>
<td>11,985</td>
</tr>
</tbody>
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x 1,000

Facts and figures are based on the year 2018

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**Engineers for the future**

- More than 80 nationalities
- 11,985 total number of students (+54% compared to 2012)
  - 84% Dutch
  - 16% International
- 95% of the graduated students find a job within 6 months
- 2,951 total degrees awarded
  - 1,240 BSc / 1,318 MSc
  - 129 PDEng / 264 PhD
- 45,976 Alumni
  - 84% Male, 16% Female

* in 2016
The TU/e campus covers an area of 75 hectares

Ecosystem and characteristics

- Ultra-modern cleanroom
- Living labs
- Knowledge institutes: 28
- Patents: 47
- Scientific publications: 2,590
- New start-ups and spin-offs: 27
- Large research labs: 15
- Smaller research facilities: 50

International working environment

- Total staff (fte): 3,025
- Research staff (fte): 1,972
- Dutch: 65%
- International: 35%
- Male: 62%
- Female: 38%

Rankings:

- CWTS Leiden Ranking 2019: TU/e no. 3 in industry cooperation
- Times Higher Education (THE) World University Ranking 2020: TU/e no. 186 out of >1000
- QS-Ranking 2019: TU/e no. 102 out of 900
In the 1950’s the plan and lobby for a second University of Technology in the Netherlands (TU/e) was concocted in the kitchen of the Van Doorne family (DAF) jointly with Frits Philips (Philips) and the Queen’s commissioner at the time.

In 1956, a law was passed enabling the foundation of the Technische Hogeschool Eindhoven, which later became Eindhoven University of Technology (TU/e).

Our university connects students, researchers and entrepreneurs
Spirit of collaboration
Eindhoven University of Technology is a young university, founded in 1956 by industry, local government and academia. Today, their spirit of collaboration is still at the heart of the university community. We foster an open culture where everyone feels free to exchange ideas and take initiatives.

Personal attention and room for talent
Eindhoven University of Technology offers academic education that is driven by fundamental and applied research. Our educational philosophy is based on personal attention and room for individual ambitions and talents. Our research meets the highest international standards of quality. We push the limits of science, which puts us at the forefront of rapidly emerging areas of research.

Scientific curiosity with a hands-on mentality
Eindhoven University of Technology combines scientific curiosity with a hands-on mentality. Fundamental knowledge enables us to design solutions for the highly complex problems of today and tomorrow. We understand things by making them and we make things by understanding them.

TU/e and Brainport: a thriving ecosystem
Our campus is in the centre of one of the most powerful technology hubs in the world: Brainport Eindhoven. Globally, we stand out when it comes to collaborating with advanced industries. Together with other institutions, we form a thriving ecosystem with one common aim – to improve quality of life through sustainable innovations.

We educate students and advance knowledge in science & technology for the benefit of humanity. We integrate education and research to enable our students and scientists to become thought leaders and to design and achieve the unimaginable. In close collaboration with our public and private partners, we translate our basic research into meaningful solutions.
Organization
Students and staff

Being a student or employee at TU/e means that you live and study or work in one of the most promising, fast-developing high-tech regions of Europe. Our region has a unique environment in the Netherlands and is a breeding ground for innovation and home to excellent businesses, universities and research institutes.

Students in numbers
11,985 total number of students
- 7,588 Students Bachelor
- 4,397 Students Master
- 76% Male
- 24% Female
- 84% Dutch
- 16% International

Our international students in both the Bachelor College and Graduate School come from 80 different nationalities. The number of international students attending our Bachelor College is increasing every year.

Staff in numbers
3,025 fte
- 1,972 Research staff
- 62% Male
- 38% Female
- 65% Dutch
- 35% International
Our mission with respect to education is to educate responsible engineers for the future who are prepared to address societal, technical and scientific challenges such as the United Nations sustainable development goals.

Society in general and business in particular are desperately in need of enthusiastic and entrepreneurial young engineers. Engineers, who are able to build bridges between technology and the needs of society. Each with their own unique talents: from specialists to managers and from designers to entrepreneurs. Engineers who know how to flourish in an innovative and intercultural environment. At TU/e, students learn how to combine deep disciplinary knowledge and expertise with the ability to address complex challenges that require multidisciplinary collaboration. A solar-powered family car, a heart valve that grows with you, care robots, an energy-producing house, biosensors to monitor your own health: all real world challenges that are addressed by TU/e scientists and TU/e students with groundbreaking innovations.
Bachelor College
Dean: Professor Lex Lemmens

In the Bachelor College, students can design their own program and learn how to take responsibility for their own learning, at the university but also for life. This unique concept allows students the freedom to compose a personal education program that is as broad or as deep as they want. Our mentors guide students in making decisions, and the Bachelor College’s basic courses, the major, courses on user, society and enterprise and electives create engineers who can look beyond their own fields and engage with society.

Education at TU/e

<table>
<thead>
<tr>
<th>Undergraduate program</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Mathematics</td>
<td>- Applied Mathematics</td>
</tr>
<tr>
<td>Applied Physics</td>
<td>- Applied Physics</td>
</tr>
<tr>
<td>Architecture, Urbanism and Building Sciences</td>
<td>- Architecture, Urbanism and Building Sciences</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>- Biomedical Engineering</td>
</tr>
<tr>
<td>- Medical Sciences and Technology</td>
<td></td>
</tr>
<tr>
<td>Chemical Engineering and Chemistry</td>
<td>- Chemical Engineering and Chemistry</td>
</tr>
<tr>
<td>Computer Science and Engineering</td>
<td>- Computer Science and Engineering</td>
</tr>
<tr>
<td>Data Science</td>
<td>- Data Science</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>- Automotive</td>
</tr>
<tr>
<td>- Electrical Engineering</td>
<td></td>
</tr>
<tr>
<td>Industrial Design</td>
<td>- Industrial Design</td>
</tr>
<tr>
<td>Industrial Engineering</td>
<td>- Industrial Engineering</td>
</tr>
<tr>
<td>Innovation Sciences</td>
<td>- Psychology &amp; Technology</td>
</tr>
<tr>
<td>- Sustainable Innovation</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>- Mechanical Engineering</td>
</tr>
</tbody>
</table>

All undergraduate programs are structured in the same way

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>90</td>
</tr>
<tr>
<td>Basic Courses</td>
<td>30</td>
</tr>
<tr>
<td>USE (User, Society and Entrepreneurial perspective courses)</td>
<td>15</td>
</tr>
<tr>
<td>Free Electives</td>
<td>45</td>
</tr>
</tbody>
</table>

Our Bachelor College offers the following programs

All undergraduate programs are taught in English, except for Biomedical Engineering and Medical Sciences and Technology.
Graduate School

Dean: Professor Paul Koenraad

A graduate program within our Graduate School consists of one or more master's programs with the possibility to continue with a PDEng or a PhD program in the same field of research. A PDEng program is a two-year salaried program in the field of technological design. The program leads to a Professional Doctorate in Engineering degree.

Graduate programs in the TU/e Graduate School are developed in cooperation with leading research groups at TU/e, and consist of several degree programs. Each graduate program offers you opportunities for in-depth specialization or multidisciplinary collaboration. TU/e education is always up-to-date with ongoing research, and has an intrinsic focus on collaboration with industry. Our excellent fundamental research and relationships with industry make a TU/e graduate program a great start for a varied, challenging and lucrative career.

Education at TU/e

Graduate programs in the TU/e Graduate School are developed in cooperation with leading research groups at TU/e, and consist of several degree programs. Each graduate program offers you opportunities for in-depth specialization or multidisciplinary collaboration. TU/e education is always up-to-date with ongoing research, and has an intrinsic focus on collaboration with industry. Our excellent fundamental research and relationships with industry make a TU/e graduate program a great start for a varied, challenging and lucrative career.

For more information about TU/e’s PhD programs, please visit our website at www.tue.nl/en/education/graduate-school/phds-at-tue/
Industrial Master’s degree programs
- Innovation Management
- Operations Management and Logistics

Industrial Master’s degree programs
- Innovation Sciences
  - Human-Technology Interaction
  - Innovation Sciences

Industrial Master’s degree programs
- Life Sciences and Engineering
  - Biomedical Engineering
  - Medical Engineering
  
PDEng programs
  - Qualified Medical Engineer
    (in Dutch)

Industrial Master’s degree programs
- Mechanical Engineering
  - Mechanical Engineering
  - Systems and Control (4TU)
  - Sustainable Energy Technology (4TU)

Science Education and Communication Master’s degree programs
- Science Education and Communication (4TU) (in Dutch)

Computer Science

Master’s degree programs
- Computer Science and Engineering
- Embedded Systems (4TU)

PDEng programs
- Software Technology

Electrical Engineering

Master’s degree programs
- Electrical Engineering

PDEng programs
- Design of Electrical Engineering Systems / track Information and Communication Technology
- Design of Electrical Engineering Systems / track Health Care Systems Design

Industrial and Applied Mathematics

Master’s degree programs
- Industrial and Applied Mathematics

Industrial Design

Master’s degree programs
- Industrial Design

PDEng programs
- User-System Interaction

For more information about TU/e’s PhD programs, please visit our website at www.tue.nl/en/education/graduate-school/phds-at-tue/
Off-site programs in Data Science

**Master’s degree program**
- Data Science and Entrepreneurship

**PDEng programs**
- Data Science

1 We will offer this Master’s degree program jointly with Tilburg University in ’s-Hertogenbosch.

All graduate programs are taught in English, except for Science Education and Communication.

For more information about TU/e’s PhD programs, please visit our website at www.tue.nl/en/education/graduate-school/phds-at-tue/
The National Student Survey (NSE) is an annual large-scale national survey in which nearly all the students in higher education are invited to give their opinion about their study programs through different themes.

Everything has been evaluated on the following scale:

Very dissatisfied 1 2 3 4 5 Very satisfied

3,789 Students
30.6% Response

Rating study in general
4.12

Would recommend the education to friends, family or colleagues
4.21

NSE Results 2019

7 themes above national average of universities

General Skills 3.99
Study Coaching 3.71
Testing and Rating 3.87
Study Schedule 4.02
Quality Assurance 3.56
Challenging Education 3.84
Learning Facilities 3.85
Established in the 1950’s, TU/e has always had strong values: optimism, collaboration and a dedication to society. These values helped Brainport Eindhoven flourish, and resulted in our university being ranked number 3 by CWTS Leiden Ranking for collaboration with industry. 16% of our scientific publications are created in collaboration with industry, and we have the highest number of part-time professors from industry in the Netherlands.

Our publications have high citation scores, consortia we are part of have won prestigious grants and our researchers receive scientific accolades on a regular basis. This distinguishing excellence is based on our three-pillar strategy: attracting talent, using a multidisciplinary approach and providing a stimulating research environment.
Departments and their research

Department of Biomedical Engineering
Dean: Professor Peter Hilbers

Chemical Biology
- Biomedical Materials and Chemistry
- Biomaterials
- Chemical Biology
- Molecular Biosensing for Medical Diagnostics
- Precision Medicine
- Biomedical NMR
- Protein Engineering
- Bio-organic Chemistry

Regenerative Engineering & Materials
- Soft Tissue Engineering and Mechanobiology
- Biointerface Science
- Orthopaedic Biomechanics

Cluster Biomedical Imaging and Modelling
- Cardiovascular Biomechanics
- Computational Biology
- Medical Image Analysis

Society’s challenges are the driving force for our research: the strategic areas of Health, Energy and Smart Mobility. Our research centers and our institutes, TU/e High Tech Systems Center, TU/e Data Science Center, the Institute for Complex Molecular Systems and the Institute for Photonic Integration combine the strengths of our university with industry needs and government strategy. TU/e researchers play an important role in new products and companies in the Brainport area and all over the world.

Brainport Eindhoven

Forty percent of all Dutch spending on research & development takes place in this region. So it’s no surprise that Eindhoven and the surrounding region is officially referred to as ‘Brainport’. Its location on major transport routes and the presence of Eindhoven airport make the region an important crossroads.

Brainport fact: More than 40% of the annual patent applications are from Brainport.
**Department of the Built Environment**
Dean: Professor Theo Salet

**Three research themes**
- Smart Living Environments
- Quality of Life
- Sustainable Transformation

SCP/e (Smart Cities Program) connects the themes.

**Four research programs**
- Building Physics and Services
- Design and Decision Support Systems
- Living Cities
- Structural Design

**Department of Electrical Engineering**
Dean: Professor Bart Smolders

**Research can be attributed to one of three societal themes:**
- The Connected World
- Care and cure
- Smart and Sustainable Society

**The four centers of EE**
- CWTe: Center for Wireless Technology Eindhoven
- C3Te: Center for Care & Cure Technology Eindhoven
- CEETSe: Center for Electrical Energy Technology and Systems Eindhoven
- CAI: Center for Astronomical Instrumentation

**Core research activities**
- Control Systems
- Electro-optical Communication
- Electrical Energy Systems
- Electromagnetics
- Electromechanics and Power Electronics
- Electronic Systems
- Integrated Circuits
- Photonic Integration
- Signal Processing Systems

**Institute**
- Institute for Photonic Integration (IPI)

**Department of Industrial Design**
Dean: Professor Lin-Lin Chen

**Two research clusters**
- Future Everyday Designing for a Connected Everyday Experience
- Systemic Change Data-Driven Design for Societal Impact

The group Future Everyday has its basis in the existing research and education of the department, but will, also in the future, form a strong and solid pillar of the department. The group Systemic Change is seen as an area with a strong potential for growth, now and in the future.
**Department of Chemical Engineering and Chemistry**

**Dean:** Professor Emiel Hensen

**Thematic Clusters**

**Molecular Systems and Materials Chemistry (MSMC)**
- Self-Organizing Soft Matter
- Stimuli-responsive Functional materials & Devices
- Materials and Interface Chemistry
- Physical Chemistry
- Bio-Organic Chemistry
- Molecular Materials and Nanosystems
- Macro-Organic Chemistry
- Supramolecular Polymer Chemistry

**Research groups Chemical and Process Technology (CPT)**
- Sustainable Process Engineering
- Inorganic Materials & Catalysis
- Membrane Materials and Processes
- Multi-scale Modeling of Multiphase Flows
- Chemical Process Intensification

**Department of Applied Physics**

**Dean:** Professor Gerrit Kroesen

**Nano, Quantum and Photonics**
- Molecular Biosensing for Medical Diagnostics
- Theory of Polymers and Soft Matter
- Molecular Materials and Nanosystems
- Physics of Nanostructures
- Photonics and Semiconductor Nanophysics

**Plasmas and Beams**
- Plasma and Materials Processing
- Coherence and Quantum Technology
- Science and Technology of Nuclear Fusion
- Elementary Processes in Gas Discharges

**Fluids, Bio and Soft Matter**
- Turbulence and Vortex Dynamics
- Transport in Permeable Media

**Centers of Applied Physics**
- Center for Computational Energy Research (CCER)
- Center for Quantum Materials and Technology Eindhoven (QT/e)

**Institutes**
- Institute for Photonic Integration (IPI)
- School of Medical Physics and Engineering (SMPE/e)

**Department of Industrial Engineering and Innovation Sciences**

**Dean:** Prof. dr. Ingrid Heynderickx

**Four cross-disciplinary research themes**
- Sustainability
- Logistics and its interfaces
- Value of Big data
- Humans and Technology
Industrial Engineering
- Human Performance Management
- Operations, Planning, Accounting and Control
- Information Systems
- Innovation, Technology Entrepreneurship and Marketing

Innovation Sciences
- Human-Technology Interaction
- Philosophy and Ethics
- Technology, Innovation and Society

Department of Mechanical Engineering
Dean: Professor Philip de Goey
The department of Mechanical Engineering is built around three knowledge pillars which are designed to reflect the department’s long-term fundamental research themes.

Energy and Flow
- Power & Flow
- Energy Technology

Materials and Mechanics
- Mechanics of Materials
- Polymer Technology
- Microsystems

Systems Dynamics and Control
- Control Systems Technology
- Dynamics and Control

Department of Mathematics and Computer Science
Dean: Professor Johan Lukkien
Sections
- Analysis, Scientific Computing and Applications
- Discrete Mathematics
- Stochastics
- Algorithms and Visualizations
- Information Systems
- Model Driven Software Engineering
- Security and Embedded Networked Systems

Focus areas
- Data Science
- High-Tech Systems
- Cybersecurity
- Complex Networks
- Computational Science

Rankings
- Times Higher Education (THE) World University Ranking 2020
  TU/e no. 186 out of >1000

- QS-Ranking 2019
  TU/e no. 102 out of 900

- CWTS Leiden Ranking 2019
  TU/e no. 3 in industry cooperation
Distinctions and grants

University professors
TU/e’s university professors are the ambassadors of our university. They are appointed for a term of five years. That period can be extended with another period of five years. There is no specific learning assignment associated with these university professorships. The Board can decide, in consultation with the Doctoral Degree Board, to commission the university professor to (further) develop a new field.

Our university professors are:
- Prof. dr. E.W. (Bert) Meijer
- Prof. dr. ir. R.A.J. (René) Janssen
- Prof. dr. ir. A.W.M. (Anthonie) Meijers
- Prof. dr. ir. M. (Maarten) Steinbuch

National grants

Academy Professor Program
The Academy Professor Program was founded by the Royal Netherlands Academy of Arts and Sciences (in Dutch KNAW) and is geared to excellent professors that are part of the absolute scientific elite. The aim of the program is to free up these professors for top quality research and to educate researchers. TU/e professor Bert Meijer is an Academy Professor.

NWO Spinoza Prize
The NWO Spinoza Prize is the highest award in Dutch science. Each year, the Netherlands organization for Scientific Research (in Dutch NWO) awards the Spinoza Prizes to three or four researchers working in the Netherlands, who according to international standards, belong to the absolute top of science. The NWO Spinoza Laureates conduct outstanding and ground-breaking research with a great impact on society. They are an inspiration for young researchers. The prize was first awarded in 1995.

The Spinoza award winners of TU/e are:
2015 Prof. dr. ir. Rene Janssen
2001 Prof. dr. Bert Meijer

Simon Stevin Masters
The Simon Stevin Master is an honorary title awarded by the NWO Domain Applied and Engineering Sciences (TTW, previously Technology Foundation STW) since 1998, to very prominent engineering scientific researchers at Dutch universities and para-university institutes. This prestigious Dutch award in technology is given to the best engineering-scientific researchers that have submitted research applications to TTW.

The following TU/e researchers are Simon Stevin Masters:
2016 Prof. dr. ir. Maarten Steinbuch
2010 Prof. dr. Philip de Goey
2006 Prof. dr. ir. Jaap Schouten
2004 Prof. dr. ir. Arthur van Roermund
Gravitation Program
With the Gravitation program, the Dutch Government aims to encourage research by consortia of top researchers in the Netherlands. Researchers must be carrying out innovative and influential research in their field. The Netherlands organization for Scientific Research is realizing the selection procedure for this program with respect to direct government funding at the request of the Ministry of Education, Culture and Science.

2016 Materials-driven regeneration
(Eindhoven, Utrecht, UMCU, Hubrecht)
2014 Netherlands Center for Multiscale Energy Conversion (Eindhoven, Utrecht, Enschede)
2014 Networks (Eindhoven, Amsterdam, Leiden, CWI)
2014 Research Center for Integrated Nano-Photonics (Eindhoven)
2013 Research Center for Functional Molecular Systems (Eindhoven, Nijmegen, Groningen)

Innovational Research Incentives Scheme
In 2000, the Netherlands organization for Scientific Research, the Royal Netherlands Academy of Arts and Sciences and the Dutch universities established the Innovational Research Incentives Scheme (IRIS). The aim of the program is to give an extra boost to innovative research. The IRIS is a personal grant, offering talented, creative researchers the opportunity to perform their chosen research and to give them a better chance of advancement in academic research institutions.
The scheme consists of three parts:

**Veni**
Open to applications from recent PhD holders, enabling them to further develop their ideas over a three-year period.

**Vidi**
For researchers to develop their own innovative research line and appoint one or more researchers.

**Vici**
For senior researchers to create their own research group.

Our latest* TU/e Vici winners are:

2019 Prof. dr. Rembert Duine
2018 Prof. dr. Nikhil Bansal
2017 Prof. dr. Jaime Gómez Rivas
2016 Prof. dr. Jan Draisma, dr. ir. Servaas Kokkelmans
2015 Prof. dr. Bert Zwart, prof. dr. ir. Luc Brunsvedl
2014 Prof. dr. ir. Emiel Hensen

Our latest TU/e Vidi winners are:

2019 Dr. ir. Richard Lopata, dr. Lorenzo Albertazzi
2018 Dr. Sandra Hofmann Boss, dr.ir. Pieter Harpe, dr. Oliver Tse
2017 Dr. Daniël Lakens, dr. Alex Alvarado, prof. dr. Patricia Dankers, dr. ir. Tom de Greef, dr. Björn Baumeier, dr. ir. Tom Oomen, dr. ir. Job Beckers
2016 Dr. ir. Rob Maaskant
2015 Prof. dr. Maaike Kroon, dr. Ilja Voets, dr. Timothy Noël
2014 Dr. Peter Zijlstra, dr. Krist Vaessen

Our latest TU/e Veni winners are:

2016 Dr. ir. Joachim Arts, dr. Marcos Guimarães, dr. ir. Danqing Li, dr. ir. Hanneke Gelderblom
2015 Dr. Kevin Verbeek

* from 2014
International grants and awards

Nagoya Gold Medal of Organic Chemistry
In 2017, Japan’s highest award for chemistry scientists, the Nagoya Gold Medal of Organic Chemistry, was presented to Bert Meijer, TU/e professor of Organic Chemistry. Meijer thus joins an illustrious group of 22 predecessors, including several winners of Nobel Prizes, Franklin Medals and Wolf Prizes.

ERC grants
Europe offers funding to excellent researchers, who want to undertake pioneering research. A special agency, the European Research Council (ERC), has been established to carry out this program. The ERC has four programs that offer financial support for such pioneering research: the ERC Starting Grant, the ERC Consolidator Grant, the ERC Advanced Grant and the ERC Synergy Grant. Researchers of every nationality and age are entitled to submit research projects.

The following TU/e researchers have been awarded an ERC grant:

**ERC Advanced Grant (from 2014)**
2016  Prof. Jan van Hest
2015  Prof. Paul van den Hof
2014  Prof. Dick Broer

**ERC Consolidator Grant (from 2014)**
2018  Prof. Willem Mulder
2017  Cecilia Sahlgren
2016  Dr. E.A. Pidko
2014  Dr. Ageeth Bol

**ERC Starting Grant (from 2014)**
2018  Dr. ir. Sandra Loerakker, dr. Jurjen Tel, dr. Bart Jansen, dr.ir. Yoeri van de Burgt
2017  Dr. Lorenzo Albertazzi, dr. Richard Lopata, dr. Alex Alvarado
2016  Dr. ir. Roland Tóth
2015  Dr. ir. Rudie Kunnen, dr. ir. Tom de Greef
2014  Prof. Ilja Voets
Groundbreaking research attracts outstanding scientific talent

**Strategic Areas**

Our strategic research areas are Energy, Health and Smart Mobility

<table>
<thead>
<tr>
<th>Energy</th>
<th>Health</th>
</tr>
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<tbody>
<tr>
<td>- Chemergy</td>
<td>- Bio-molecular Health</td>
</tr>
<tr>
<td>- Solar PV</td>
<td>- Image-guided Health</td>
</tr>
<tr>
<td>- Urban energy</td>
<td>- Participatory Health and Wellbeing</td>
</tr>
<tr>
<td>- Nuclear fusion</td>
<td>- Data science in Health</td>
</tr>
</tbody>
</table>

**Smart Mobility**

| - Safer Mobility - focus on preventing accidents|
| - Clean and energy efficient mobility         |
| - Less congestion, efficient logistics       |
| - Solving space problems for mobility        |
| - Ensuring and extend accessibility of mobility|

**Centers and Institutes**

| - High Tech Systems Center |
| - TU/e Data Science Center |
| - Institute for Complex Molecular Systems |
| - Institute for Photonic Integration |
| - Eindhoven AI Systems Institute |
| - Institute for Renewable Energy Storage   |
Research labs

Center for Multiscale Electron Microscopy (CMEM)
The CMEM offers unique facilities for the study of soft materials and uses the knowledge gained to develop synthetic materials.

Center for Wireless Technology (CWTe Lab)
The CWTe facilitates research on wireless systems and antennas, raising the Internet of Things to a higher level.

Atlas Living Lab
In Atlas Living Lab we conduct and partake research into intelligent lighting and climate systems to contribute to a sustainable and comfortable working environment.

Darcy Lab
The Darcy Lab offers unique MRI facilities specially equipped for researching the properties of technological porous materials.

Equipment and Prototype Center (EPC)
The Equipment and Prototype Center (EPC) makes custom experimental setups and prototypes for various fields of research.

Future Fuels Lab
In the Future Fuels Lab, scientists are researching green fuels and cleaner combustion methods for engines.

High Capacity Optical Transmission Lab
The High Capacity Optical Transmission Lab facilitates research on innovative optical fibers and signal processing techniques to enable transmission of ultra-high capacity.

Institute for Complex Molecular Systems Laboratory (ICMS/lab)
The Institute for Complex Molecular Systems Laboratory (ICMS/lab) facilitates the development and characterization of innovative materials from a molecular perspective.

Laboratory for Cell and Tissue Engineering
The Laboratory for Cell and Tissue Engineering facilitates culturing of autologous tissues across the full spectrum of the research field.

Microfab/Lab
The Microfab/Lab facilitates the development of new micro-manufacturing technologies for use in life sciences applications.

Multiscale Lab
The Multiscale Lab facilitates research on the deformation and failure behavior of composite materials. The insights gained lead to innovative materials.
**NanoLab@TU/e**
The NanoLab@TU/e offers a unique combination of equipment for developing optical chips and other applications based on compound semiconductor technology.

**NanoAccess**
Makes it possible to produce, process and analyze innovative materials with nanometer accuracy, without releasing the necessary vacuum.

**SolarLab**
With the facilities of the SolarLab, atomic layers can be applied to solar cells in a quick, controlled manner, making solar cells even more efficient.

**Wind tunnels**
The wind tunnels on the campus of TU Eindhoven facilitate aerodynamic and boundary layer research on static and moving objects, at both small and large scale.

In addition to the fifteen larger labs, the TU/e also has some fifty smaller research labs.
Entrepreneurship

TU/e is world leader in publications created together with industry, and has a proven track record in research collaborations with industry and in creating spin-offs, start-ups and patents. Entrepreneurship and valorization are very important to us. We turn theories and promising technological concepts into projects and products with direct impact on, for example, patient care, road safety or CO$_2$ reduction.

We are constantly looking for TU/e research findings with market potential. If the timing is not right for a company to market our technological concepts, we do it ourselves. In recent years, TU/e produced an impressive number of spin-offs and start-ups.

Within STARTUP/eindhoven, our entrepreneurial student community, we provide advice to students starting their own company. Every year, we incubate more than 30 knowledge-intensive start-ups. Within the TU/e campus, the Living Labs test sites for technological concepts play an important role. New technologies are introduced in these ‘testing grounds’ and turned into valuable applications through valorization.

2019 Figures

110 Patents
34 Pending licenses or transfers
31 Transferred via a transfer or license
32 In the business development process
13 Photonics patents (strategic)

53 Current spin-off companies in TU/e Holding
From 1995 to 2019 a total of 172

From foundation of STARTUP/eindhoven in 2014 till June 2019:
- 134 Companies started up by 231 students
- 198 Projects in preparation by 375 students

One student may work on more than one project or company. Vice versa is more common; more students who are working on one project or company.

5 New companies
Founded by student teams: **Team Fast** (Fast) / **Lightyear** (STE) / **Amber** (TU/ecomotive) / **Spike** (STORM) / **Inmotion** (Inmotion)
Strategic partnerships

TU/e responds to our changing world by creating connections on an international scale: between researchers, companies, students, science institutes and the government. Through our many collaborations, we can create global impact and relevance.

National scientific:
- Eindhoven University of Technology/Utrecht University/
  Utrecht Medical Center/Wageningen University & Research
- Eindhoven University of Technology/TU Delft/
  University of Twente/Wageningen University (4TU)
- Eindhoven University of Technology/Tilburg University

International scientific:
- Ecole Polytechnique de Paris en Technion (Haifa)/
  Eindhoven University of Technology/Danmarks Tekniske
  Universitet/École Polytechnique Fédérale de Lausanne/
  Technion, Israel Institute of Technology/Technische
  Universität München (Eurotech)
- Eindhoven University of Technology/Zheijang University

International academic networks:
- CLUSTER (Consortium Linking Universities of Sciences
  and Technology for Education and Research)

Bustling start-up community

Every year, the university delivers more than thirty knowledge-intensive start-ups. Set up by inventive employees or enterprising students, jointly with external parties if possible. In order to help the technology start-ups through their tender initial stages, we, together with our partners, such as Brainport Development and Brabant Development Agency, provide an adequate business development process. In addition, for the provision of the indispensable seed capital there are financiers such as the regional alliance Bright Move, and the Brabant Startup Fund.

Apart from advice, coaching and budget, we offer technology start-ups (originating from inside as well as outside the TU/e) spaces to work and conduct research. This results in a bustling start-up community on the site.
Innovation clusters:
- Brainport Eindhoven

Industrial partnerships:
- Sabic
- Nouryon
- Royal Philips
- Signify
- ASML
- KPN
- NXP Semiconductors
- Shell
- DAF Trucks
- DSM
- Océ
- VDL
- NTS
- SME supplier companies (too many to mention by name; often in partnerships such as High Tech NL and KIEN Innovatiemeesters, MKB Eindhoven and Metaalunie.)
Student teams have a special place at TU/e since they embody the engineers of the future with their innovative projects. The number of student teams has grown significantly in the recent years. TU/e regards these teams as an excellent opportunity for entrepreneurial students to further develop themselves, as the work within the team provides both subject content and organizational challenges. The student team projects are more and more part of applied research and challenge based learning.
<table>
<thead>
<tr>
<th>Team</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blue Jay</strong></td>
<td>Developing your future drone assistant. <a href="http://www.bluejayeindhoven.nl/">www.bluejayeindhoven.nl/</a></td>
</tr>
<tr>
<td><strong>Tech United</strong></td>
<td>Developing autonomous football playing robots and a service robot that can reduce the workload of nurses. <a href="http://www.techunited.nl/">www.techunited.nl/</a></td>
</tr>
<tr>
<td><strong>Team iGem</strong></td>
<td>Pioneers in engineering biology. <a href="http://www.tue.nl/universiteit/community/igem/">www.tue.nl/universiteit/community/igem/</a></td>
</tr>
<tr>
<td><strong>T.E.S.T.</strong></td>
<td>Striving to transform healthcare by creating an instant laboratory at home and developing innovative biosensors to participate in the SensUs competition. <a href="http://www.tuetest.nl/">www.tuetest.nl/</a></td>
</tr>
<tr>
<td><strong>InMotion</strong></td>
<td>Charging ahead by reducing the charging time to the same amount of time it takes to refuel a car with petrol which will be proven during the 24h of Le Mans. <a href="http://www.inmotion.tue.nl/">www.inmotion.tue.nl/</a></td>
</tr>
<tr>
<td><strong>TU/ecomotive</strong></td>
<td>A glimpse into the automotive future by creating a circular car made of sugar. <a href="http://www.tuecomotive.nl/">www.tuecomotive.nl/</a></td>
</tr>
<tr>
<td><strong>Solar Team Eindhoven</strong></td>
<td>Participating in the Bridgestone World Solar Challenge in Australia with a solar-powered family car. <a href="http://www.solarteameindhoven.nl/home/">www.solarteameindhoven.nl/home/</a></td>
</tr>
<tr>
<td><strong>University Racing Eindhoven</strong></td>
<td>In one year, design, build and test an electric and autonomous -race car. participate in the Formula Student Competition. <a href="http://www.universityracing.tue.nl/">www.universityracing.tue.nl/</a></td>
</tr>
<tr>
<td><strong>SensUs</strong></td>
<td>Advancing bio sensing innovations and education by organizing the annual international SensUs competition. This year’s aim is ‘Managing rheumatic disease, by measuring with ease’. <a href="http://www.sensus.org/">www.sensus.org/</a></td>
</tr>
<tr>
<td><strong>Team VIRTUe</strong></td>
<td>To design, build and operate a sustainable innovative home. <a href="http://www.teamvirtue.nl/">www.teamvirtue.nl/</a></td>
</tr>
<tr>
<td><strong>SOLID</strong></td>
<td>Enabling clean, renewable energy for everyone at any time by developing a circular storage system to enable sustainable energy storage in iron powder. <a href="http://www.teamsolid.org/">www.teamsolid.org/</a></td>
</tr>
<tr>
<td><strong>CASA</strong></td>
<td>Core</td>
</tr>
</tbody>
</table>
After their graduation or promotion, our alumni remain an important group within the TU/e community. They can make use of the various services and activities offered to them by the university, for example in the area of life-long learning.

In recent years, TU/e has renewed the alumni program by means of a customized approach for alumni at different stages in life: young, mid-career and senior alumni. We offer the different groups diverse activities and events. Furthermore, the alumni associations organize meetings for the alumni and their department.

Alumni are important ambassadors and they are therefore actively involved in the university, for example by providing the prospective students a glimpse of the professional businesses and by coaching students with respect to their career orientation. Alumni also play an important role with respect to the cooperation between industry and the university and the financial support of the university.
Alumni Facts

Geography
Our alumni can be found over the entire world, but mostly in
1 The Netherlands
2 Germany
3 United States of America
4 Belgium
5 United Kingdom
6 Italy
7 Spain
8 France
9 Switzerland
10 China

Degrees
Most of our alumni leave our university with an MSc degree (more than 75). Less than 3% leave after they have obtained their bachelor’s degree. The rest of the students finish their PhD or PDEng before leaving our university.

Jobs
82% of our alumni are an employee, temporary worker, self employed or freelancer. 17% is pursuing a PhD trajectory. The other students commence another study or are looking for a job. Our alumni mainly find jobs in industry/trade/transport (32%) and within universities (15%).

Top 10 employers
1 ASML
2 Eindhoven University of Technology
3 Philips
4 DAF Trucks NV
5 TNO
6 Shell
7 Vanderlande
8 Océ
9 DSM
10 Fontys Hogeschool

More than half of our alumni (51%) works in large companies with more than 1000 employees.

The average income of our alumni is € 2,884 per month. Nationally, new graduates earn a gross salary of € 2,649 per month. Nationally, new graduates earn a gross salary of € 2,565 per month.

Sources: Nationale Alumni Enquête 2017, LinkedIn and TU/e.
The TU/e campus is both a physical and a virtual place: a living lab that connects people with each other and the world. The TU/e campus is home to more than 60 businesses and welcomes more than 15,000 people every day. Our lively campus community facilitates connections between brilliant minds, in an open, friendly, vibrant environment that welcomes, inspires, motivates and supports.
We encourage everyone, students and staff, to play an active part and be actively involved in this TU/e community, because we believe that when we are personal, passionate, curious and connected, our community is the place where innovation truly starts. Everybody is welcome, regardless of gender, sexual orientation, religion, age or cultural background.

Characteristics of our community:
- Personal development
- Entrepreneurial attitude
- A healthy work and study climate
- Vitality
- Sustainability

The TU/e Campus is not only a place of study and work, but also a home for hundreds of students and staff from different nationalities who are resident here, turning our green, riverside campus in the heart of Eindhoven into a lively and very dynamic place.

On-campus facilities:
- Two small supermarkets
- A daycare center
- A Student Sports Centre which offers 70 sports, fitness, courses and is home to 39 student sports associations. All backed by a team of (professional) sports teachers
- A film house and grand café
- An extensive library, open for everyone

Students at Eindhoven University of Technology can join various student associations, for example:
- 7 Career associations
- 12 Student teams
- 4 General associations
- 14 Cultural associations
- 7 International associations
- 5 Philosophical associations
- 42 Sport associations
- 14 Study associations

Events

Our campus hosts a few well-known events, for example:
- MomenTUm (the academic celebration of the year)
- Light festival GLOW
- Foodstock (foodtruck festival)
- Science Festival (our campus’ open day)
The city of Eindhoven

Eindhoven has a surface of 8.887 ha and a population of over 231,469 (April 2019), making it the largest city of the south of the Netherlands. Eindhoven is centrally located in Europe and easy accessible via Eindhoven Airport (or three other airports within 1.5 hour drive). Eindhoven is a bustling city in transition, with a constant flow of new developments in the fields of creativity, innovation, technology, design and knowledge.

When in Eindhoven, you might as well:
- Find soulmates at the Holland Expat Center South
- Go to the city center for some shopping and dining
- Visit one of the museums
- Listen to music in the Muziekgebouw or Effenaar
- Watch a play in the Parktheater
- Watch a soccer game in the Philips Stadium
- Play a sport yourself at one of the many sports locations Eindhoven offers
- Wander through Eindhoven’s technological past and future at Strijp-S
- Enjoy the King’s Day festivities on 27 April
- Be part of the Dutch Technology Week in June
- Run the Eindhoven Marathon the second weekend of October
- Take a sneak peek into the future at the Dutch Design Week in October
- Walk the light festival Glow route in November

Sustainability

TU/e leads by example towards a sustainable society
The TU/e campus is well underway to become even more sustainable in the future. In 2018 the TU/e was awarded the most sustainable higher education institution of the Netherlands. At the TU/e sustainability is actively integrated and combined in our education, research and business management. We call this Living Labs.

Sustainability themes in the coming years are:
Abundant clean renewable energy / Circular & restorative resources / Green oasis / Smart and green mobility / Vibrant community & inspiring campus.
In 2015, TU/e was climate neutral, and the aim is to be fifty percent energy neutral in 2030.

Total Primary Energy in Gigajoule

This graph converts electricity and natural gas into primary energy so that these can be counted up
TU/e closed the financial year 2019 with a positive result of 11.0 million euros.
## Core figures

### Income and expenditure

(amounts shown in millions of euros)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
</tr>
<tr>
<td>Government funding</td>
<td>218.2</td>
<td>205.4</td>
<td>197.4</td>
<td>188.6</td>
<td>185.7</td>
</tr>
<tr>
<td>Tuition and examination fees</td>
<td>28.9</td>
<td>28.2</td>
<td>26.5</td>
<td>23.3</td>
<td>19.6</td>
</tr>
<tr>
<td>Work commissioned by third parties</td>
<td>103.9</td>
<td>99.2</td>
<td>98.4</td>
<td>95.7</td>
<td>96.3</td>
</tr>
<tr>
<td>Other income</td>
<td>27.1</td>
<td>19.7</td>
<td>19.6</td>
<td>20.1</td>
<td>18.3</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>378.1</td>
<td>352.5</td>
<td>341.9</td>
<td>327.7</td>
<td>319.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
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</thead>
<tbody>
<tr>
<td><strong>Expenditure</strong></td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
<td>EUR</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>234.5</td>
<td>226.7</td>
<td>214.7</td>
<td>204.1</td>
<td>202.6</td>
</tr>
<tr>
<td>Depreciations</td>
<td>24.2</td>
<td>24.0</td>
<td>22.9</td>
<td>23.5</td>
<td>20.7</td>
</tr>
<tr>
<td>Housing expenses</td>
<td>29.0</td>
<td>18.4</td>
<td>22.9</td>
<td>24.6</td>
<td>22.1</td>
</tr>
<tr>
<td>Miscellaneous expenses</td>
<td>74.5</td>
<td>72.5</td>
<td>69.0</td>
<td>63.7</td>
<td>69.0</td>
</tr>
<tr>
<td><strong>Total miscellaneous expenses</strong></td>
<td>127.7</td>
<td>114.9</td>
<td>114.8</td>
<td>111.8</td>
<td>111.8</td>
</tr>
</tbody>
</table>

### Total expenditure

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td><strong>Total expenditure</strong></td>
<td>362.2</td>
<td>341.6</td>
<td>329.5</td>
<td>315.9</td>
<td>314.4</td>
</tr>
</tbody>
</table>

### Balance of income and expenditure

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Financial income and expenditure</strong></td>
<td>-4.6</td>
<td>-4.5</td>
<td>-4.9</td>
<td>-4.2</td>
<td>-3.9</td>
</tr>
<tr>
<td>Result before taxes</td>
<td>11.3</td>
<td>6.4</td>
<td>7.5</td>
<td>7.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Taxes</td>
<td>-0.3</td>
<td>-0.6</td>
<td>0.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Result after taxes</strong></td>
<td>11.0</td>
<td>5.8</td>
<td>7.9</td>
<td>7.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Third party share in result</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Net result</strong></td>
<td>11.0</td>
<td>5.8</td>
<td>7.9</td>
<td>7.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>
## Financial position

(amounts shown in millions of euros)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Liquidity position</strong></td>
<td>55.5</td>
<td>45.8</td>
<td>84.9</td>
<td>66.8</td>
<td>47.3</td>
</tr>
<tr>
<td><strong>Net working capital</strong></td>
<td>-48.2</td>
<td>-45.4</td>
<td>-11.9</td>
<td>-19.5</td>
<td>-29.1</td>
</tr>
<tr>
<td><strong>Current ratio</strong></td>
<td>0.72</td>
<td>0.70</td>
<td>0.92</td>
<td>0.85</td>
<td>0.76</td>
</tr>
<tr>
<td><strong>Solvency ratio</strong></td>
<td>0.36</td>
<td>0.36</td>
<td>0.36</td>
<td>0.36</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Average credit term in days</strong></td>
<td>28</td>
<td>24</td>
<td>25</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td><strong>Group equity after consolidation of result</strong></td>
<td>166.1</td>
<td>155.1</td>
<td>149.3</td>
<td>141.4</td>
<td>133.8</td>
</tr>
</tbody>
</table>

### Provisions

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Provisions</strong></td>
<td>35.8</td>
<td>28.9</td>
<td>27.3</td>
<td>23.4</td>
<td>21.1</td>
</tr>
</tbody>
</table>

---

1. Net working capital = liquid assets - short-term debts  
2. Current ratio = liquid assets/short-term debts  
3. Solvency ratio = group equity/total equity
Visiting address

De Zaale
5612 AJ Eindhoven
The Netherlands
T: +31 (0)40 247 4009
E: info@tue.nl

Colophon

Production  Communications Expertise Center
Design      Wapenfeit, Eindhoven
Fotografie  Bart van Overbeek