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Finances

- **23%** External national public grants
- **19%** External national private grants
- **54%** Research and education subsidies (government funding)
- **1%** External international private grants
- **3%** External international public grants

**DKK 220.4 million**
Education

Completed Bachelor projects, Masters Projects and PhD theses 2019

Year

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8
---|---|---|---|---|---|---|---|---

**Entry requirements:**
Upper secondary education/high school

**BEng**
3½-year programme

**BSc Eng**
3-year Bsc

**Msc Eng**
2-year Msc

**PhD**
3-year PhD

**Completed Bachelor projects, Masters Projects and PhD theses 2019**

- BEng: 21 Theses
- BSc Eng: 102 Theses
- MSc Eng: 190 Theses
- PhD: 34 Theses
Education in figures 2019
Courses and full-time study equivalents

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>246</td>
<td>Number of course units</td>
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<tr>
<td>663</td>
<td>STÅ production (full-time study equivalents)</td>
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<tr>
<td>11</td>
<td>STÅ per faculty</td>
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<tr>
<td>4</td>
<td>Course units per faculty</td>
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</tbody>
</table>
Research in figures

307
Scientific articles in WoS-indexed journals

150
Scientific contributions to conferences

11.3
Citation impact

40
Publications with industrial partners

34
No. of PhD theses

1
No. of Doctoral theses
Selected awards and distinctions

Researchers and students at DTU Mechanical Engineering were acknowledged for their contributions during 2019. Below you see a selection of these.

**Doctoral dissertation**
Ulrik Dam Nielsen sheds in his doctoral dissertation new light on the measurement of wave energy and the impact ships are exposed to during voyages at sea.

**Dual International Recognition**
Professor Marcel A.J. Somers has been awarded the IFHTSE medal and invited to give a Lakhtin lecture for his unique contribution to the understanding and application of metal-gas reactions in thermochemical processes, as well as hardening through cryogenic treatments.

**Grøn Dyst 1st Prize**
The students Anders Daniel Rovsing, Jia Jue Johannes Chen and Christoffer Søholm Kristensen won the first prize with their project “Eco-redesign of snowboard by incorporation of recycled ‘ocean plastics’.”
First place at Shell ECO-marathon
Once again, the DTU Roadrunners won the international student competition for fuel efficiency.

InnoEnergy PhD school
Valentin Salgado Fuentes has been accepted at the coveted InnoEnergy PhD school under the European Institute of Innovation and Technology (EIT).

MADE Award second prize
Nikolaos Giannekas is the winner of the Otto Mönstedt Foundation’s MADE Award 2019 second prize.

Two students won SDG micro grant
Christoffer Cady and Anas Mehdawi won the SDG micro Grant at the Danish Entrepreneurship Award.

DTU PhD of the Year
Fabian Bühler received the PhD Dissertation of the Year Award at the annual DTU PhD reception for his work on energy efficiency in the industry.
Selected grants and activities

A large number of project applications were granted during 2019. A selection of grants and specific activities is presented below.

New green fuel for ships
Anders Ivarsson directs a research project on more climate-friendly gas for the shipping-traffic produced from bio-waste and wind. The project is partly funded by Danish Ministry of Foreign Affairs and includes Chinese partners, Maersk Line, Alfa Laval, Green Hydrogen and Danfoss.

Poul Due Jensen Foundation grants
David Bue Pedersen received a grant to optimise the processes underlying the 3D printing technologies and publish the results on open platforms. Clara Marika Velte received a grant to build a laboratory that will contribute to the development of a new turbulence theory.

Electronic Systems Manufactured for Climate
The Innovation Fund Denmark has invested in the ELMAC-project which will use big data on climate to reduce the number of bugs in electronics. Rajan Ambat is in head of the project which also includes Danish companies as e.g. Danfoss, Grundfos and Vestas.
HAV-TEK
Erik Damgaard Christensen will research in new technological solutions for marine farming in a project funded by GUDP, The Danish Environmental Protection Agency.

Digital twins
Digital twins for large heat pump and refrigeration systems is the topic for a research project granted by EUDP, which Brian Elmegaard directs.

REPOWDER
The Independent Research Fund Denmark is funding a research project on design of metal powders for 3D printing. Dorte Juul Jensen is head of the project.

MicronCrash
A grant from Villum Experiment makes it possible for Kim Lau Nielsen to research in Micron scale Crashworthiness of metal components.

Dental implants soon to be completely white
Innovation Fund Denmark has invested in a project which will use new technology to make the surface of titanium used for dental implants white. Morten Stendahl Jellesen is in head of the research.

DIGIMAN
DIGItal MANufacturing Technologies for Zero-defect Industry 4.0 Production is founded by Horizon 2020. Guido Tosello is head of the project.