M.Sc. Computer Aided Conception and Production in Mechanical Engineering

Do you want to expand your expertise in computer-aided design?
This M.Sc. program specifically addresses the objectives of the practicing mechanical engineer and enables you to choose between two specializations, one design-oriented: “Conception of Machines” and one production-oriented: “Production of Machines”; whichever best fits your personal interests, educational background, and professional aspirations. If you choose “Conception of Machines”, you will develop and apply modern computer-aided methods focused on the construction and dimensioning of structures and systems according to functional requirements. Alternatively, if you feel “Production of Machines” suits you better, you will develop and use computer-aided systems in modern industrial production, which includes manufacturing technology, production systems, and production management.

Study at a top university in the heart of Europe!
Aachen provides the perfect backdrop to the dynamic academic and cultural environment of RWTH Aachen University. The safe, historical and multicultural student city is located right at the “Border Triangle”, where the borders of Belgium, the Netherlands, and Germany meet. There are plenty of opportunities for you to practice your favorite sport, get involved in academic or social projects, and try out a fun activity in one of the many student clubs.

Follow in the footsteps of RWTH Aachen's Institute of General Mechanics!
RWTH Aachen’s Institute of General Mechanics (IAM) is in charge of this M.Sc. program’s academic organization. IAM pursues a holistic approach to its research by combining expertise in theoretical, numerical, and experimental mechanics. Its research topics are manifold, ranging from modeling super-alloy turbine blades and lifetime assessment of high-speed train components to simulating degenerated human knee joints using bioreactors and a micro-CT scanner.

Get great career perspectives!
Graduates of this M.Sc. program land top jobs in research institutes or as engineering consultants; be it in traditional manufacturing companies, e.g. the mobility and energy sectors, in logistics and distribution firms, in construction or financial institutions, or in food, health care or medical establishments. Our graduates are so successful that half of them have already found a job by the first month after graduating.

Typical job positions our graduates fill are:
- CAE engineer
- CAD mechanical engineer
- stress engineer
- test engineer
- research assistant with the possibility of pursuing doctoral studies.
**Program Structure***

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<td>Continuum Mechanics</td>
<td>Computational Fluid Dynamics II</td>
<td>Industrial Internship</td>
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<td>Advanced Finite Element Methods</td>
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*the curriculum is tentative

**Extra compulsory courses for “Conception of Machines” specialization:** Nonlinear Structural Mechanics, Failure of Structures and Structural Elements, Machine Design Process and Practical Applications of Computer-Aided Engineering Tools

**Extra compulsory courses for “Production of Machines” specialization:** Quality Management, Simulation Techniques in Manufacturing Technology, Production Management A


**Key Facts**
- Entirely English-taught
- 2-year program (4 semesters)
- 120 credit points
- Degree: Master of Science - M.Sc. RWTH (awarded by RWTH Aachen University)
- Tuition fee: EUR 4,500 per semester
- Start: Every year in October
- Application Deadline: March 1 every year

**Contact**

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