Master in Mechanical Engineering M.Eng. - Hof University — Hof University

Source: https://www.hof-university.com/studying-at-hof-university/our-degree-programs/mechanical-engineering-meng.html

The demands in mechanical engineering lead to anincreased need for well-trained specialists.The degree program is divided into the specializations Simulation Technology and PowerEngineering:

Simulation Technology: In modern product development, fast and meaningful results are requiredto shorten development times. Calculations are an essential part of this development work and asuccess factor for the early validation of the functional requirements of the product. Complexsystems can be examined and tested by computer simulation, which reduces cost-intensive trialsand allows optimizations to be carried out in a targeted manner. A large number of companies inthe mechanical engineering sector already make targeted use of various simulation methods andare desperately seeking appropriately trained specialists.

Energy Technology: Climate change, limited supplies of fossil fuels and rising energy pricesare currently on everyone's lips and have brought double-digit growth rates to the energysector. This has resulted in many new attractive occupational fields in the area of energyproduction, distribution and the economic use of resources, where companies are dependent onhighly qualified know-how.

The three-semester Master's program in mechanical engineering is aimed at graduates who alreadyhave a first degree (Bachelor's or diploma) in a technical field of study and is divided intothe specializations Simulation Technology and Power Engineering.

The program consists of a commonbasic semesterwith the modules: Mathematics/Numerics/Matlab,Experimental Engineering/Validation, Advanced Methods in Energy Engineering, Simulation andOptimization, and an elective module.

In thesecond semester, a distinction is made between the two specializations. ForSimulationTechnology, you take the compulsory modules FEM, CFD, MKS as well as two elective modules.ForEnergy Technology, you take the compulsory modules Selected Renewable Energy Systems, PowerPlant Technology as well as three elective modules.

The Master's thesis is written in the3rd semester.

Methodological competence:

Analyzing, structuring and organizing problems

Abstracting complex technical issues and systems and communicating them in a target group-oriented manner

Independent model building and mathematical implementationAssigning technical systems to knowncalculation models, applying them and being able to critically question their resultsSystematicsolution finding in development and construction

In-depth knowledge of scientific and project-oriented work, documenting and lecturing

Ability to critically assess complex issues, to structure them clearly and to stimulatetransferred interdisciplinary thinking

Ability to apply acquired knowledge to new questions/problems/applications and to criticallyreflect on them

Ability to self-manage (time management, conflict management) as well as to organize and planteams, including taking responsibility when working as part of a team.

Professional competencies:

In-depth knowledge of mathematics for all areas of calculation and simulation methodsCalculation methods for complex machine systems, especially for their motion and vibrationbehavior.

Application-related knowledge in the field of fluid and thermodynamics

Simulation methods for the analysis of technical and engineering problems

Possible employers for graduates of this Master's program are mechanical engineering companies,manufacturers of components and plants, energy suppliers, suppliers of wind and solar plants,engineering offices and research institutes. The aim of the Master's program is to preparestudents for challenging activities in the field of energy or simulation technology so thatthey can competently take

on management and development tasks.

Summer semester: January 15

Winter semester: July 15

Info and services

Timetable

Here you find your timetable.

The campus is the management and administrative center of the university. Here you will findthe university library, high-tech laboratories and university sports facilities.

More about Campus Hof

Head of Program

Head of Examination Board

Student Affairs - Program manager

Prof. Dr.-Ing. Matthias Kilian

Thursday: 11:30 - 12:30

Prof. Dr. Jörg Krumeich

Tuesday: 13:00 -14:00

Michael Luft