Welcome to Soest

All classes take place in Soest, Germany. The Soest campus is a nationwide renowned and highly awarded example of a successfully refurbished former military barracks. In combination with the attractive medieval city of Soest, it provides a perfect atmosphere for serious studies.

The Soest university division is a rather small but efficient set-up. Consequently, students enjoy very close supervision by their professors with whom they have an almost family-like relationship.

Double Degree in Bolton

The course has undergone an international accreditation and validation process as a joint MSc programme of South Westphalia University of Applied Sciences and the University of Bolton in the UK. Hence, a Master’s Degree can be awarded by both Universities. This dual award option requires one semester to be studied at the University of Bolton, the semester fee for this is currently about £ 2,165.

General Information

Teaching Language
- English

Beginning of course
- summer term (March) and winter term (September)

Course length
- standard period of study 3 semesters

Degree
- Master of Science (M.Sc.)
  optional:
  - Master of Science (M.Sc.) in Bolton, UK

Location of Study

Soest campus of South Westphalia University of Applied Sciences
Department of Electrical Engineering
Lübecker Ring 2, D-59494 Soest

Further Information about the Master Degree course
Systems Engineering and Engineering Management
Department of Electrical Engineering
Lübecker Ring 2
D-59494 Soest
Phone +49 2921 378-3401
Fax +49 2921 378-3409
mse-info@fh-swf.de
www.fh-swf.de/mse

Living Expenses
Average cost of living in Soest is approximately 600 euros per month, including accommodation. For the course duration of 18 months, approx. 13,000 euros for living expenses, etc. are to be calculated.

Further Information about the South Westphalia University of Applied Sciences and their campuses in Hagen, Iserlohn, Meschede, Soest, Lüdenscheid
www.fh-swf.de

Application:
- Applicants from Germany, members of EU countries or Iceland, Liechtenstein and Norway:
  www.fh-swf.de/studieninteressierte/bewerbung
- All other applicants: Online via Uni-Assist at www.uni-assist.de
Deadline for winter semester:
30.06. (EU students), 15.05. (Non EU students)
Deadline for summer semester:
31.12. (EU students), 15.11. (Non EU students)

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Updated to: August 2017
The programme aims to deepen and broaden the research potential and the knowledge base of graduate engineers and provides research education in systems engineering and engineering management for them. The programme builds on B.Eng. (or Diploma) courses like Electrical, Mechanical and Mechatronics engineering. These engineering courses are regarded as a foundation and the Master’s Programme will provide advanced and special education from this base.

The different pathways of the course: Electronic, Mechatronic and Mechanical Systems provide a flexible programme that is responsive to the needs of students and industry and science. The course comprises systems engineering and management subjects as well as engineering ones. It combines these strands as important aspects of modern industrial and engineering practice. Five systems engineering and management modules are core modules while different engineering modules can be selected to focus on a specific discipline.

The graduates of the course will be able to deal with complex issues both systematically and creatively and have the qualities and transferable skills necessary for employment requiring these aspects.

Objectives

The programme seeks to deepen and broaden the research potential and the knowledge base of graduate engineers and provides research education in systems engineering and engineering management for them. The programme builds on B.Eng. (or Diploma) courses like Electrical, Mechanical and Mechatronics engineering. These engineering courses are regarded as a foundation and the Master’s Programme will provide advanced and special education from this base.

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Programme Structure

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<th>Semester</th>
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<th>Mechanical Systems</th>
<th>Mechatronic Systems</th>
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Modules

- Advanced Control Technology
  Modern control techniques and principles of Computational intelligence like Fuzzy Systems, design, development and application of control systems for industrial automation.

- Advanced Production Engineering
  Modern methods and control of the production environment and production system design. Performance analysis and optimisation of manufacturing processes.

- Business in Engineering
  Essential elements of management for developing and marketing of technologies. Entrepreneurial management processes such as setting of targets, planning and marketing.

- Integrated Management
  Total Quality Management, Environmental Management Systems and Innovation and Technology Management. TQM techniques and implementation aspects.

- Systems Engineering
  Theory, design, tools and shells of real-time expert systems and neural networks for research projects and applications in industry.

- Microprocessor Based Systems
  Selection and application of appropriate microprocessor hardware and software to solve real-time embedded system monitoring and control design problems.

- Monitoring of Mechanical Systems
  Monitoring and monitoring of mechanical systems. Data acquisition, processing and feature extraction for evaluation of manufacturing processes.

- International Project Management
  Modern project management approaches for product development projects, which is essential for engineers from all disciplines.

- Signal Processing
  Development and application of digital systems for processing and analysing signals.

- Technical Publications and Presentations
  Enabling the student to plan, compose and present scientific publications.

- Master’s Project
  The module enables students to bring together the knowledge and skills attained in the taught modules. Industrial based or research topics can be chosen. Results have to be presented in seminars and prepared for publication.

Career Opportunities

Graduates from the Master’s course are eligible for the German Higher Civil Services and for PhD studies which can also be done at the Electrical Engineering Faculty within its joint PhD programme with the University of Bonn. In the world of globalisation, the international degree opens a wide range of opportunities in regional and international companies dealing with complex engineering projects which require a systematic approach on the one hand and application-oriented management skills on the other.

Entrance Requirements

The necessary qualification for the course Systems Engineering and Engineering Management has to be proven by:

- having successfully completed a) a degree (bachelor or diploma) in a course of studies of at least seven semesters
  b) or a bachelor’s degree in a course of studies of six semesters PLUS the semester of additional qualification according to the conditions of the Board of Examiners. Enrolment at the Fachhochschule Südwestfalen during the additional qualification is limited to one semester,

- with a final grade of at least »Good« or the equivalent ECTS-grade »A« or »B«

- Proof of English language proficiency: current TOEFL score of at least 57 (paper-based), 213 (computer-based), 90 (internet based), IELTS band 6.5 or English language proficiency exam at FH Südwestfalen.