

ENROLLMENT APPLICATION REQUIREMENTS

For participating in MSc SEE program candidates have to be graduates from one of technical faculties (Mechanical, Electro, Civil, Metallurgy Engineering) or Faculty of Natural Sciences.

To register candidates have to submit the application (available at the web-site) and the other documents given below:

- CV
- Diploma of graduation
- List of all course grades during university studies
- Certificate for English language skills
- Statement of obligation of regular fee payments

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IN BRIEF

Master of Science Degree Program in Sustainable Energy Engineering (MSc SEE) is an international Master of Science Degree Program that includes a strong environmental focus: Sustainable Energy Utilization in the Built Environment and Sustainable Power Generation.

*The program is carried out by the **Department of Energy and Process Engineering**, at the **Faculty of Mechanical Engineering, University of Sarajevo**, within the **Tempus Joint European Project** in a close co-operation with the **Royal Institute of Technology, Stockholm, Sweden**, as well as with other consortium member universities: **University of Mostar, University of Banja Luka, Bosnia and Herzegovina; University of Dublin, Ireland and City University of London, United Kingdom.***

Consisting of introductory general courses followed by two majors with advanced courses, the MSc SEE program provides an advanced state-of-the-art education in the fields of power generation and energy utilization in the built environment by means of economically and environmentally sustainable systems and technologies. The program is focused on the technical and economic aspects of application of both conventional and advanced energy technologies as well as of relevant policies and practices with the final aim of providing and utilizing energy at the least financial, environmental and social costs. Advanced methods are to apply to the practical design and modeling of thermal systems, the construction of relevant devices, as well as to their performance evaluation during operation and the assessment of environmental impact. Through various project work assignments carried out in collaboration with experts from companies, services and enterprises, students will have an opportunity to obtain proficiency in solving real problems. The MSc SEE program includes a number of study visits to power and refrigeration plants, factories and other facilities relevant to the program objectives in both Bosnia and Herzegovina and neighboring countries. Advanced lecturing in terms of distance learning is arranged with the partner universities.

Total duration of the taught courses is 9 months corresponding to 60 ECTS credits (one week of part time studies corresponds to 1 ECTS credits) followed by six months reserved for thesis project work accounting for 30 ECTS credits. The program is offered to applicants from all over the world with a suitable academic background i.e. degrees equivalent to at least 8 semesters of study. The program language is English. Successful completion of the program leads to obtaining the degree of Master of Science.



***International
Master of Science
Program:***

***Sustainable Energy
Engineering
(SEE)***

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LABORATORIES



Gas Turbine



Reactor for Coal and Biomass Combustion



Solar testing station

COURSE PROGRAM

Semester I

No. Core modules

1. Basics of Energy Technology ECTS 6, Lectures 20h, Tutorials 24h, Study visit 4h
2. Sustainable Energy Generation ECTS 6, Lectures 20h, Tutorials 10h, Laboration 15h, Study visit 5h
3. Modern Energy Utilisation ECTS 6; Lectures 20h, Laboration 20h, Study visit 10h
4. Advanced and Renewable Energy Sources ECTS 6; Lessons 20h, Tutorials 22h, Study visit 8h

No. Elective modules

1. Applied Refrigeration and Heat Pump Technology ECTS 6, Lectures 20h, Tutorials 15h, Laboration 10h, Study visit 5h
2. Machines and Equipment in Power and Process Engineering ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h

Semester II

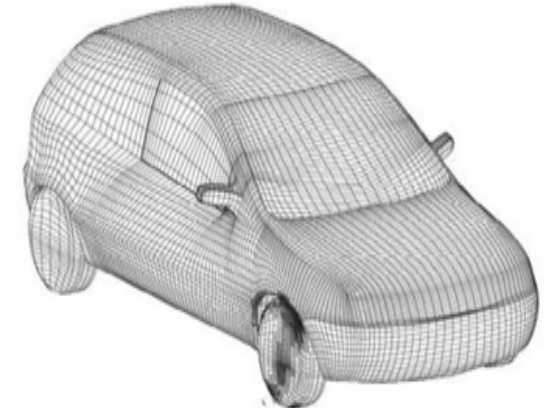
No. Core modules

1. Applied Energy Technology ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h
2. Energy Management ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h

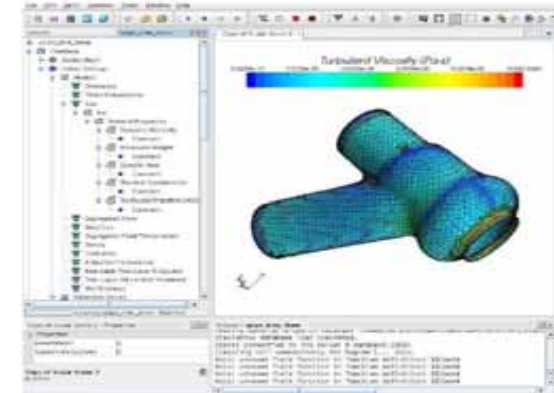
No. Elective modules

1. Climate Comfort ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h
2. Selected Topics in Nuclear Power Engineering ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h
3. Clean Coal Technology ECTS 6, Lectures 20h, Tutorials 15, Study visit 5h
4. Measurements in Power and Process Technology ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h
5. Computer Simulation and Modeling of Processes ECTS 6, Lectures 20h, Tutorials 30h
6. Energy and Environment ECTS 6, Lectures 20h, Tutorials 25h, Study visit 5h
7. Applied Heat and Power Technology ECTS 6, Lectures 20h, Tutorials 15h, Laboration 10h, Study visit 5h

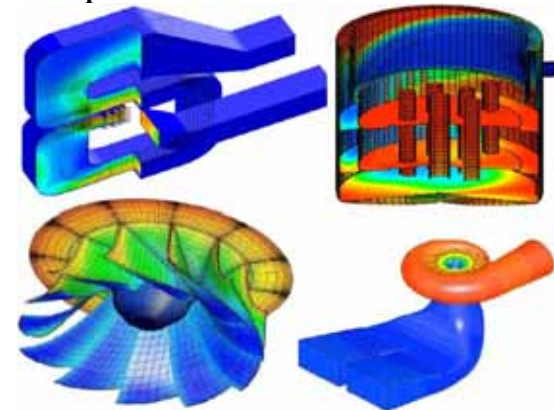
NUMERICAL SIMULATIONS IN PROCESS AND POWER ENGINEERING



Numerical mesh of a car



Example of a CFD software



Simulations of typical engineering applications