SYLLABUS

1. Course title:

Energy processes

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

No

7. Class restrictions:

No

8. Duration / semester:

1 6

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 1

9.3. Laboratory/Practice classes: 0

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Mehatronics

12. Lecturer:

Dr.sc.Izudin Delić, assistant profesor

13. Lecturer's e-mail:

izudin.delic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

Getting basic theoretical knowledge in the field of energy. The aim of the course is to gain basic knowledge of thermal energy and monitoring the operation of power plants

16. Learning outcomes:

At the end of the course, the student is expected to know how to distinguish between renewable and non-renewable energy sources, to identify the energy image in the world and to us, to solve and analyze the simpler problems of thermal and hydropower processes in energy, to solve simpler problems of calculation and calculation of utilization coefficients in thermo-energy facilities , To connect basic knowledge with the energy mechatronics with monitoring and monitoring of parameters in energy plants.

17. Course content:

- Introduction to energy and energy.
- Renewable and non-renewable energy sources. Energy picture in the world.
- Forms of energy. Energy Conversions. Power characteristics of the power plant. Load diagrams
- Thermo power plants. Steam boilers.
- Turbine plants.
- Biomass power plants.
- Monitoring of the power plant.
- Seminar papers: monitoring of hydroelectric power plants, nuclear power plants, smart homes ...

18. Learning methods:

-Traveling with the use of multimedia resources, active learning techniques and with active participation and discussion of students;
- Preparation and presentation of group and individual seminar papers.
- Laboratory exercises: - visit to Thermoelectric power plant and visit the plant.

19. Assessment methods:

After half of the semester students write a test (first interviews) that covers the topic of lectures and exercises. The test consists of tasks as well as single theoretical questions without the equation being performed. The student can score up to 15 points in the first half. After completing the semester, the students write a written test (second interviews) that covers the topics covered by the lectures and exercises from the second part of the semester. The student on the other side can achieve a maximum of 15 points. Both tests put all the students on the subject at the same time, thereby achieving the level of knowledge that is being tested and the conditions under which the student takes the exam. As part of the pre-requisites, students are required to prepare individual or group seminar work that will cover a specific topic from the content of the subject. The seminar paper is submitted to the subject teacher in writing and reviewed and then presented orally. All group students whose participation is valued individually participate in the creation and presentation of group seminar work. For the seminar work, the student can achieve 0 to 10 points. Also, for a continuous activity on lectures and exercises throughout the semester, the student can achieve 0 to 6 points.
The final exam is oral. The right to go to the final exam are students who have received 50% of the total score from each individual check. On an oral exam, the student answers the three issues raised in the curriculum program dealt with in lectures and exercises. An oral exam can be passed if the student answers all three questions. The maximum number of points a student can earn on an oral exam is 50.

Checks on all forms of knowledge are recognized as a cumulative test if the result is positive after each individual check and is at least 50% of the total of the predicted and / or required knowledge and skills.

In order for a student to pass a subject, he must have a minimum of 54 cumulative points. For those who do not collect 50% of the pass rate through the checkout, they go out to the scheduled termination and correctional exams.

20. Assessment components:

The assessment of the exam is based on the total number of points the student has obtained by fulfilling the pre-requisites and passing the exam and contains a maximum of 100 points and according to the following scale
Student Obligations Points
Presentation of lectures 10
Test I 20
Test II 20
Total pre-exam 50
Final Exam 25 - 50

21. Required reading list:

1. Požar H.: Osnove energetike I i II, Zagreb 1978.god.
2. Smajević I., Hodžić N.: Kotlovi, ložišta i peći – izvodi iz teorije i zadaci, Univerzitetski udžbenik, MF Sarajevo, 2002.

22. Web sources:

http://powerlab.fsb.hr/enerpedia/

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

01.06.2016