SYLLABUS

1. Course title:

Heat apparatus and equipments

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

(max. 110 characters)

7. Class restrictions:

(max. 150 characters)

8. Duration / semester:

1 VI

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Energy engineering

12. Lecturer:

dr.sc. Izet Alić, professor

13. Lecturer's e-mail:

izet.alic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

The aim of the course is to provide students with basic knowledge of apparatus, equipments and process technology, and to develop the ability to apply previously acquired theoretical knowledge from fundamentals.

16. Learning outcomes:

At the end of the semester / course successful students, who during the entire period of teaching continuously perform their duties, will be trained to independently solve simple problems in the field of process engineering, ie. will be able to design some simple processes.

17. Course content:

Calculation and design of industrial plants and processes.
Appliances in process engineering.
Pressure vessels.
Class of vessel and class of welded joint.
The material for pressure vessel.
Design and calculation of vessel.
Heat exchangers: recuperative, regenerative and mixing.
Thermal and hydraulic calculation of the exchanger.
Material and energy balance.
The basics of heat pumps.
Dryers, construction and division.
Columns and reactors, basic functions.
The basics of designing heaters in the process industry.

18. Learning methods:

The most important learning methods in the subject are:
- Lectures with the use of multimedia resources, active learning techniques and with active participation and discussion of students;
- Laboratory exercises

19. Assessment methods:

In the eighth week of the semester students take the writing test No. 1, which includes previously treated topics with lectures and exercises. The test consists of theoretical questions, where each issue contain the number of points that carries a specific question. The maximum score on the test is 20. In the fifteenth week of the semester students take the writing test number 2, which includes processed topics with lectures and exercises after the test the first test consists of theoretical questions, where each issue contain the number of points that carries a specific question. The maximum score on the test is 20. In the framework of pre-exam students are required to independently make two program tasks of the investigated area. Program task to a written submission concerned assistant and at the same time it is presented orally what has been done. The first programming task carries a maximum 10 points, while the other 15 points. The student must receive at least 50% of points on each test in order to apply for a points earned on the test. If not satisfied in one of the tests in the time of the final exam again lays nepoložen test. The final exam is taken orally (when laid continuously through tests) through a brief questioning. Be sure to achieve a minimum of 10 points on the final exam. Students who do not pass through the test, the time of the final examination shall take an integrated test, and when the same pass the theory lay in writing, if necessary, with an oral explanation.

20. Assessment components:

Rating exam is based on the total number of points a student earned by completing pre-exam requirements and exams, according to the quality of the acquired knowledge and skills, and contains a maximum of 100 points, and is determined according to the following scale:
The presence continues 5 points
2 tests x 20 = 40 points
Program tasks 10 + 15 = 25 points
Total pre-exam 70 points
Final exam 30 points

21. Required reading list:

1.S. Sebastijanović, S. Dobrosavljević: Procesna aparatura i prerada nafte, Banja Luka, 2001.
2. S. Rozogaj: Procesni aparati i uredjaji, Sarajevo 1980.god.
3. Grupa autora: Hemijsko inženjerstvo, Beograd 1987.god.

22. Web sources:

www.engineeringpage.com
www.processassociates.com

23. Applicable starting from the academic year:

2015/2016

24. Adopted in the Faculty/Academy session:

01.06.2015