

SYLLABUS

1. Course title:

Design of apparatus and devices

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course: Mandatory Elective**6. Prerequisites:**

Hydro-mechanical operations. Thermal Operations. Diffusion operations.

7. Class restrictions:

(max. 150 characters)

8. Duration / semester:

1

8

9. Weekly contact hours:

9.1. Lectures:

3

9.2. Seminars:

0

9.3. Laboratory/Practice classes:

2

10. Faculty:

Faculty of Technology

11. Department/study program:

Chemical Engineering and Technology

12. Lecturer:

prof.dr.sc. Zehrudin Osmanović

13. Lecturer's e-mail:

zehrudin.osmanovic@untz.ba

14. Web site:

untz.ba

15. Course aims:

The course objectives are that students master the basic knowledge of designing appliances and devices and their application. Modern software tools (mathcad) are used in the design and dimensioning of technological equipment. It is also intended that students should master individual and team solving industrial problems in this area.

16. Learning outcomes:

At the end of the semester, successful students, who continued to perform their duties throughout the academic year, will be trained to:

- Use available available literature to address different problems of this course,
- resolve problems of different complexity and present them in written or verbal form,
- Understand the basics of designing appliances and devices,
- understand the significance of the course in solving various problems in practice.

17. Course content:

Fluid flow. Single-phase flow. Two-phase flow. Regulatory valves. Flow measurement. Pumps. Compressors. Vacuum systems. Design of pneumatic transport. Design of heat exchanger. Process furnaces. Heat transfer in mixing vessels. Design of the distillation column. Absorption and desorption. Design of separators and collecting vessels. Auxiliary plants.

18. Learning methods:

- lectures,
- presentation,
- individual and team projects.
- visits industrial plants.

19. Assessment methods:

- Part 1.
- Test No.1 30 points
 - Test No.2 30 points
 - Teaching activity 5 points
 - Individual Project 5 points
 - Team Project 5 points
 - Activity on exercises 5 points

- Part 2.
- Final exam 20 points

20. Assessment components:

Tests on the pre-exam should have at least 50% points. Presence of lectures is compulsory.

Score points

0 - 53	5
54 - 63	6
64 - 73	7
74 - 83	8
84 - 93	9
94 - 100	10

21. Required reading list:

1. Žarko Olujić, Franc Šef: Projektiranje procesnih postrojenja
2. Eduard Beer: Priručnik za dimenzioniranje uređaja kemijske procesne industrije

22. Web sources:**23. Applicable starting from the academic year:**

2015-2016

24. Adopted in the Faculty/Academy session:

(max. 10 char.)