

## SYLLABUS

**1. Course title:**

Process Equipment

**2. Code:****3. Cycle of study:****4. ECTS credits:****5. Type of course:** Mandatory  Elective**6. Prerequisites:****7. Class restrictions:****8. Duration / semester:****9. Weekly contact hours:**

9.1. Lectures:

3

9.2. Seminars:

1

9.3. Laboratory/Practice classes:

2

**10. Faculty:**

Faculty of Technology

**11. Department/study program:**

Environmental Protection Engineering

**12. Lecturer:**

assoc. prof. Gordan Avdić, PhD

**13. Lecturer's e-mail:**

gordan.avdic@untz.ba

**14. Web site:**

www.tf.untz.ba

**15. Course aims:**

The aim of the course is to get to know students with the characteristics and the specifics of process equipment and devices for the purpose of protection at work, as well as the environment, through lectures and exercises.

**16. Learning outcomes:**

Knowledge and understanding of problems, engineering analysis of problems, engineering approach to problem solving, research in the field of protection at work in chemical engineering, engineering practice.

**17. Course content:**

Presentation of course syllabus. Process equipment. Standard equipment and features. Basic parts of the appliance. Basics of calculating appliances and devices in environmental protection. Pumps. Compressors. Fans. Pipeline and armature. Non-standard equipment and features. Tanks. Decanters. Evaporators. Crystallizer. Reactors. Basic parts of the appliance. Mantle. Dance and cover. The inside of the appliance. Appliance armor. Heavy construction. Constructive characteristics and calculation of the apparatus. Tanks. Decanters. Heat exchangers. Extractors. evaporators. Column type apparatus. Dryers. Reactors. Transport systems.

**18. Learning methods:**

Lectures using multimedia resources, techniques of active learning with active participation and discussion of students, calculating exercises, laboratory exercises on computers.

**19. Assessment methods:**

After half of the semester, students write a test (first inter-exam) that covers up to date topics from lectures and exercises and can reach up to 20 points. After completing the semester, the students write a test (second inter-exam) which covers the topics covered by the lectures and exercises and can achieve a maximum of 20 points. The final exam is written. On the final exam a student answers 10 questions from the program of the subject treated in lectures and exercises. Each correct answer is scored with 5 points. The final exam can be passed if the student has won 26 points. The maximum number of points a student can achieve at the oral exam is 50.

**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 (points):

Attendance at lectures 3  
Attendance at Exercises 4  
Student activity 3  
Tests 40  
Total prerequisites given 50  
Final Exam 26-50

**21. Required reading list:**

Žarko Olujić, Franc Šef: Projektiranje procesnih postrojenja  
Coulson & Richardson, R.K. Sinnott: Chemical Engineering, Volume 6, Chemical Engineering Design  
Eduard Beer: Priručnik za dimenzioniranje uređaja kemijske procesne industrije

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

2015/16

**24. Adopted in the Faculty/Academy session:**