

## SYLLABUS

**1. Course title:**

ORGANIC TECHNOLOGY

**2. Code:****3. Cycle of study:**

1

**4. ECTS credits:**

5

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

Previously attended lectures and exercises from the course: Organic chemistry

**7. Class restrictions:**

No class restrictions

**8. Duration / semester:**

1

7

**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 Technologies; Chemistry and Engineering of Materials

**12. Lecturer:**

Zoran Iličković, PhD., Associate professor

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

zoran.ilickovic@untz.ba

**14. Web site:**

www.tf.untz.ba

**15. Course aims:**

The main aim is to transfer to students the basic knowledge and acquired experiences in understanding and mastering modern and future technological processes. The course aims to familiarize students with the implementation of typical organic processes of the organic chemical industry. In addition, students need to master the individual processes of the organic chemical industry in laboratory conditions within laboratory exercises, with an overview of process flow, process parameters, as well as and product quality.

**16. Learning outcomes:**

By successfully mastering this course, students will have the knowledge to work on the conceptualization, monitoring and management of technological processes in the field of chemical technology. Acquiring integrated knowledge and understanding the basics for valorisation of natural values and resources. To describe the schemes of selected technological processes. To synthesize chemical-engineering knowledge on examples of industrial processes in the contemporary organic chemical industry.

**17. Course content:**

Introduction. Characteristics and significance of the organic chemical industry. Development of the organic chemical industry. Study and design of selected processes of the organic chemical industry (processing of oil, coal, wood, production of detergents, processes of production of raw material components for organic synthesis-methanol, ethanol, organic acids, aromatic etc.), which includes selection of raw materials and process equipment, alternative processes, technological parameters, balance of mass and energy, utilization, conversion, process modification, cleaner production, waste reduction and reuse, raw material and energy savings. Introducing students with basic processes of organic chemical technology to gain the basics for familiarizing with other industrial processes based on basic chemical industry products.

**18. Learning methods:**

The most important learning methods in the course are:

- Lectures with the use of multimedia resources, with active participation of students in the discussion.
- Independent preparation and presentation of seminar papers
- Laboratory exercises and visits to industrial plants

**19. Assessment methods:**

Examination will be carried out through two partial exams from the respective teaching units and the final exam. On the "Final Exam" students who have won the required number of points can enter the final passing grade. Students who have passed one partial part of the exam will take the second part and the final exam as integral (as a whole) on the "final exam". Students who have passed two partial exams, will take the remaining part of the exam on the "final exam". Students who did not pass any partial exam, on "final exam" take the whole exam, integrally.

- The same applies on terms of "correctional exam" and "additional correctional exam". Students who have not passed the exam in the academic year when they first attend the course, will take the remaining test assignments under the "Rules of study at the I cycle of the University of Tuzla". The examination score is based on the total number of points the student has obtained by fulfilling the prerequisites and passing the exam according to the quality of the acquired knowledge and skills, and it contains a maximum of 100 points.

**20. Assessment components:**

1. Prerequisites (18 to 30 points): attendance at lectures (3-5 points); experimental exercises (10-15 points); seminar work (5-10 points).
2. Exam results (36 to 70 points): I partial (10-20 points); II partial (16-30 points); final exam (10-20 points).  
The grade is based on the total number of points achieved at preliminary activities and the results of the partial exams (min.  $18 + 36 = 54$  and max.  $30 + 70 = 100$ ) and according to the approved Evaluation rules.

**21. Required reading list:**

1. J.Sadadinović, Organska tehnologija, Univerzitet u Tuzli, 2008;
2. J.A.Moulijn, M.Makkee, Chemical Process Technology, 2013
3. E. Bogoczek, E. Kociolek-Balawejder, Organic Chemical Technology, Wroclaw, 2005 ;

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

2015/2016

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