

SYLLABUS

1. Course title:

Introduction to chemical engineering and technologies

2. Code:

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3. Cycle of study:

1

4. ECTS credits:

4

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

No prerequisites

7. Class restrictions:

No class restrictions

8. Duration / semester:

1

1

9. Weekly contact hours:

9.1. Lectures:

3

9.2. Seminars:

0

9.3. Laboratory/Practice classes:

0

10. Faculty:

Faculty of Technology

11. Department/study program:

Chemical engineering/Chemical engineering and technologies

12. Lecturer:

Zehrudin Osmanović,assoc.pr;Sabina Begić,as

13. Lecturer's e-mail:

zehrudin.osmanovic@untz.ba; sabina.begic@

14. Web site:

www.tf.untz.ba

15. Course aims:

Mastering the basic concepts of chemical engineering, vocabulary and terminology. Adoption of elementary knowledge on technological processes, ie systematic approach to problem solving in the process industry. Adoption of basic knowledge related to the implementation of technological processes, from the use of raw materials, water, energy to the end product and the influence of chemical-technological processes on the environment.

16. Learning outcomes:

- Knowing a universal system approach in solving problems in chemical engineering.
- Adopted methods for quick search and obtaining information about process systems.
- Designing project tasks.
- Adopting knowledge about the basic characteristics and ways of carrying out the chemical-technological processes.

17. Course content:

Definition of chemical engineering, Historical development of chemical engineering, Basic concepts of chemical engineering, Approach of chemical engineering when setting up and solving problems. Basic technological operations in chemical engineering, Transfer of mass, heat and momentum in chemical engineering, Process apparatus and devices in chemical engineering.

Definition, division and development of chemical technology, Raw materials and energy for the chemical industry, Water in chemical-technological processes. Heterogeneous and homogeneous process systems, Catalytic processes, thermal processes, biotechnological processes. Typical methods for organizing technological processes (flow diagrams, technology connections, continuous and discontinuous processes). Examples of some of the technological processes in organic and inorganic technology. Impact of chemical technology on the environment. Development of new processes.

18. Learning methods:

- lectures,
- project assignment,
- seminar paper.

19. Assessment methods:

Prerequisites:

Test No.1 30 points

Individual project 10 points

Test No.2 30 points

Seminar paper 10 points

Exam obligations

Final exam 20 points

20. Assessment components:

Tests on prerequisites must have at least 50% points.

Attendance is obligatory for all students.

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

21. Required reading list:

- 1..Don W. Green, Perry's Chemical Engineers' Handbook, McGraw-Hill Professional; 8 edition (1 Dec 2007)
2. J.A. Moulijn, M. Makkee, A.E. Van Diepen, Chemical Process Technology, second edition, Delft University of Technology , WILEY, 2012.

22. Web sources:

- <http://www.chemistry2011.org/resources/StanfordUniversity/IntroductionToChemicalEngineering>
- <http://nptel.ac.in/courses/103107081/>

23. Applicable starting from the academic year:

2015-2016

24. Adopted in the Faculty/Academy session: