# SYLLABUS

**1. Course title:**

ORGANIC CHEMISTRY I

**2. Code:**

**3. Cycle of study:**

1

**4. ECTS credits:**

6

**5. Type of course:**

(•) Mandatory ( ) Elective

**6. Prerequisites:**

none

**7. Class restrictions:**

Pharmacy students

**8. Duration / semester:**

1 3

**9. Weekly contact hours:**

9.1. Lectures: 3

9.2. Seminars: 0

9.3. Laboratory/Practice classes: 2

**10. Faculty:**

Faculty of Pharmacy

**11. Department/study program:**

Pharmacy (integrated 1st and 2nd cycles)

**12. Lecturer:**

dr.sc.Snježana Marić, Associated Professor

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

snjezana.maric@untz.ba

**14. Web site:**

www.untz.ba

**15. Course aims:**

Introducing students with the structure of organic compounds, types of reactions characteristic of the corresponding functional groups and intermediates that occur in the organic chemistry, with the addition and substitution reactions on the carbonyl group. Especially students will be familiar with cyclic, bicyclic and heterocyclic compounds, structures with oxygen, nitrogen and sulfur. This program will enable students to follow these mandatory and elective courses more easily.

**16. Learning outcomes:**

(max. 1500 characters)

**17. Course content:**

Development of organic chemistry
Formation of molecules atomic structure, bonding, covalent bonding, formal changes, ion bonding, representative molecules, drawing of three-dimensional structure
Simple hydrocarbon and roperties of hydrocarbonates, alkenes, structure of isomers, cycloalkanes, structures and formulas, ring stresses
The importance of organic chemistry
Atomic Orbitals and Hybridization in Organic Chemistry, sp, sp2, sp3 hybridization
Bonding in Organic Molecules
Bonding in alkanes, alkenes and alkynes.Formulas of Organic Compounds, Molecular Structure, Expanded and Condensed
Functional group in organic chemistry, Functional groups with C-C, π-bonds
Functional groups with halogens, Functional groups with oxygen
Functional groups with nitrogen, Alkyl groups, The alkyl models,Alkyl with 1 °, 2 °, 3 ° carbon. Newman's projection of organic molecules, alkane conformation, gauche and anti- conformations of ethane. Molecular models.
Stereochemistry

**18. Learning methods:**

Lectures, laboratory exercises (L), colloquia, consultations.

**19. Assessment methods:**

The exam was written (Test I and II) and oral (final). The final mark is based on the criteria presented in the table:

Knowledge assessment - criteria

| Criteria | Max points. | Points for passing |
|---|---|---|
| Teaching attendance | 10 | 10 |
| Activity in lab.exercises | 10 | 8 |
| Colloquia | 10 | 5 |
| Tests: | | |
| Test I | 20 | 11 |
| Test II | 20 | 11 |
| Final exam | 30 | 15 |
| Total | 100 | 60 |

**20. Assessment components:**

| Number of points scored | mark (BiH) | (ECTS mark) |
|---|---|---|
| < 60 | 5 | F |
| 60 – 68 | 6 | E |
| 68– 76 | 7 | D |
| 76 – 84 | 8 | C |
| 84– 92 | 9 | B |
| 92- 100 | 10 | A |

**21. Required reading list:**

1. Volhardt C., Shore E.: Organska hemija, Data status i Nauka, Beograd, 2004
2. Pine S.H.: Organska hemija, Školska knjiga Zagreb, 1994
3. Smith J.G. Organic Chemistry,McGraw-Hill; 3rd edition ( 2010)

**22. Web sources:**

(max. 687 characters)

**23. Applicable starting from the academic year:**

2012/2013

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