SYLLABUS

1. Course title:

CHEMISTRY OF NATURAL COMPOUNDS

2. Code:

3. Cycle of study:

1

4. ECTS credits:

3

5. Type of course:

○ Mandatory ◉ Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 5

9. Weekly contact hours:

9.1. Lectures:	2
9.2. Seminars:	0
9.3. Laboratory/Practice classes:	1

10. Faculty:

Faculty of Technology

11. Department/study program:

Food Quality and Safety

12. Lecturer:

Dr.sc. Jasmin Suljagić, Assistant professor

13. Lecturer's e-mail:

jasmin.suljagic @untz.ba

14. Web site:

www.tf.untz.ba

15. Course aims:

The introductory part describes the division and biogenetic origins of natural compounds as primary and secondary metabolism products. Particular attention has been paid to secondary metabolites within the following chapters: terpenoids, alkaloids, polyphenols, prostaglandins, pheromones and flavonoids. Their biosyntheses, their biological or ecological effects and their natural material identification procedures are shown.

16. Learning outcomes:

After successfully mastering the course students will be able to:
- distinguish, classify and identify natural compounds
- to demonstrate knowledge and understanding of basic biomolecules and secondary metabolites (terpenoids, alkaloids, lignans, polyphenols, prostaglandins, pheromones and flavonoids)
- Apply the learned theories and methods to solve the problem of isolation or identification of natural compounds from natural material
- apply your knowledge and understanding in new situations in the multidisciplinary context related to the subject area

17. Course content:

- Introduction to natural compounds chemistry;
- Terpenoids;
- Alkaloids and steroids;
- Polyphenols;
- Protein hydrocolloids
- Sikimic acid and related compounds (melanin, indica, lignin).
- Natural antioxidants.
- Prostaglandins
- Pheromones and flavonoids.

18. Learning methods:

The most important learning methods in the subject are:
- Lectures with the use of multimedia resources, active learning techniques and with active participation and discussion of students;
- Use software for two-dimensional and three-dimensional representation of structures;
- Solving problem tasks.

19. Assessment methods:

Activity - for activity in lectures and exercises students can obtain 0-5 points.
Colloquium: colloquium of experimental work which consists of a theoretical basis and conducted experimental exercises. For the colloquium student can obtain a maximum of 15 points, the minimum number of points that a student must achieve is 5.
Colloquium and completion of the experimental work is a prerequisite for obtaining a signature.
Written assessment during the semester (Test I and II) - Test I and Test II include problem-solving tasks. The maximum number of points on each test is 15th
Final exam - assessment implies the unification of the entire matter handled.
In order to pass the courses, student must achieve a minimum of 51 points, of which a minimum of 25 points on the final exam.

20. Assessment components:

Rating exam is based on the total number of points a student has obtained by completing pre-exam requirements and exams, according to the quality of the acquired knowledge and skillsand contains a maximum of 100 points. It is determined according to the following scale:

Obligations	Points
Presence in classes	0-5
Experimental work	5-15
Test I	0-15
Test II	0-15
Final Exam	25-50

21. Required reading list:

1. S. H. Pine, Organska kemija (prijevod I. Bregovec, V. Rapić), Školska knjiga, Zagreb, 1994.
2. V. Rapić, Postupci priprave i izolacije organskih spojeva, Školska knjiga, Zagreb, 1994

22. Web sources:

23. Applicable starting from the academic year:

2015/2016

24. Adopted in the Faculty/Academy session: