SYLLABUS

1. Course title:

GENERAL CHEMISTRY WITH STEHIOMETRY

2. Code:

Do not fill-in

3. Cycle of study:

1

4. ECTS credits:

7

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

The student is not obligated to have an earlier passed exam

7. Class restrictions:

Regulated by UNTZ Statute

8. Duration / semester:

1 1

9. Weekly contact hours:

9.1. Lectures:	3
9.2. Seminars:	1
9.3. Laboratory/Practice classes:	1

10. Faculty:

Faculty of Technology

11. Department/study program:

Chemical Engineering and Technologies (all study directions)

12. Lecturer:

D. Sc. Zorica Hodžić, Associate professor

13. Lecturer's e-mail:

zorica.hodzic@untz.ba

14. Web site:

www.tf.untz.ba

15. Course aims:

• transfer students basic knowledge and acquired experience in understanding the general field of general chemistry and stoichiometry
• Improve their communicative skills in written and verbal form
• Improve their skills related to individual or team/group experimental work
• improve student skills related to continuous work throughout the year

16. Learning outcomes:

At the end of the semester, successful students, who continued to perform their duties throughout the academic year, will be trained to:
- Use the available literature to address the various problems of the course
- solve problems of different complexity, individually and in the team, and present them in written or verbal form
- Place tests and final exams in regular exam periods.

17. Course content:

Teaching units studying at the course during the semester:
Natural sciences and chemistry. Atomic structure of matter. Chemical bonds. Molecular orbital and molecular geometry. Stehiometry and stoichiometric calculations. Disperse systems. Types of chemical reactions and stoichiometry of the solution. Thermochemical reactions. Introduction to thermodynamics. Redox processes and redox reactions. Chemistry kinetics. The chemical equilibrium. Balance in homogeneous systems. Coligative properties of solution. Electrolytic Dissociation Methods in Electrolyte Water Solutions. Ionization of water and iodine water. Hydrogen-ion concentration and pH value of the acid base and salt solution. Buffers

18. Learning methods:

• Lectures
• Theoretical (auditor) exercises
• laboratory exercises
• preliminary exam

19. Assessment methods:

- Written methods: tests after certain areas of the curriculum or the written part of the exam.
The first part of the examination/written examination includes the continuation of the post-graduate tests and/or the end of the semester. In order to prepare adequately, the terms of the test will be told to students at least 15 days in advance. Students who pass tests during the semester will be exempt from the written exam at the end of the semester. Students who do not pass the first part of the test exam are placed at the end of the semester with mandatory registration with the teacher/assistant.
- The second, final part of the exam: written or verbal examination of knowledge.
In order for a student to undertake the final exam, he or she must pass the written part of the exam or the tests and have at least 50% of the total score.

20. Assessment components:

Attendence 0/3
Laboratory exercises and preliminary tests 3/5
Theoretical exercises 0/2
I test (stoichiometry) 5/10
II test (general chemistry) 10/20
III test (stoichiometry) 5/10
IV test (general chemistry) 10/20
Final Exam 20/30
Total 53/100

21. Required reading list:

I. Filipović, S. Lipanović, General and Inorganic Chemistry, Part I and Part II, School Book, Zagreb, 1995.
2. A. Cipurković, Z. Hodžić, I. Tanjić, Preparatory Inorganic Chemistry, Bosnian Word, Tuzla, 2010.
3. N. Perišić, General Chemistry, Nauka, Belgrade,

22. Web sources:

23. Applicable starting from the academic year:

2015/2016

24. Adopted in the Faculty/Academy session: