SYLLABUS

1. Puni naziv nastavnog predmeta:

General chemistry with stoichiometry

2. Skraćeni naziv nastavnog predmeta / šifra:

3. Ciklus studija:

I

4. Bodovna vrijednost ECTS:

6

5. Status nastavnog predmeta:

☑ Obavezni ☐ Izborni

6. Preduslovi za polaganje nastavnog predmeta:

None

7. Ograničenja pristupa:

Cosmetology students

8. Trajanje / semest(a)r(i):

1 1

9. Sedmični broj kontakt sati i ukupno studentsko radno opterećenje na predmetu:

	Semestar (1)	Semestar (2)	(za dvosemestralne predmete)	Opterećenje: (u satima)	
9.1. Predavanja	3			Nastava:	67,5
9.2. Auditorne vježbe	1			Individualni rad:	103
9.3. Laboratorijske / praktične vježbe	2			Ukupno:	170,5

10. Fakultet:

Faculty of Farmacy

11. Odsjek / Studijski program :

Cosmetology

12. Nosilac nastavnog programa:

Dr.sci.Aida Crnkić, redovni profesor

13. Ciljevi nastavnog predmeta:

One of the main goals is to systematically train students to acquire basic chemical laws and phenomena, as well as stoichiometric calculations. The level of knowledge required of students is adjusted to the capabilities of first-year

students.

14. Ishodi učenja:

After completing and successfully passing the course, students should be able to perform stoichiometric calculations and master basic chemical knowledge that they will be able to apply in cosmetology.

15. Indikativni sadržaj nastavnog predmeta:

Chemistry as a natural science, Stoichiometric laws. Molar quantities, Mole and chemical formulas, Calculation using chemical equations, Electronic configuration and periodic table of elements, periodicity of properties of elements. Atomic structure, atomic models, quantum mechanical model of the atom. Chemical bonds, intermolecular and intramolecular. Dispersed systems (real, colloidal, suspensions), expression of concentrations and stoichiometry of solutions. Colligative properties of solutions. Osmosis and diffusion, osmotic pressure. Chemical reactions, types of chemical reactions. Electrolysis. Rate of chemical reaction and chemical equilibrium. Equilibrium in electrolyte solutions, hydrogen ion concentration and pH value of acid, base and salt solutions. Electrolytes of body fluids, hydrolysis, acid and base reactions, biological buffer systems. Energy changes in chemical reactions. Nomenclature of inorganic compounds. Hydrogen/hydrogen. Elements of the s and p-blocks of the PSE. Elements of the d- and f-blocks of the PSE.

16. Metode učenja:

Lectures and exercises. Active learning technique with active participation and discussions of students. Student activity in lectures and exercises is recorded. Laboratory and auditory exercises.

17. Objašnjenje o provjeri znanja:

Written and/or oral methods are used to assess the acquired knowledge in the course.
• As part of the pre-examination obligations, students are required to complete the planned experimental exercises and pass two midterms. For continuous activity in exercises throughout the semester, a student can earn a maximum of 10 points.
• Written methods: After half of the semester, students take the first written test, which includes the topics covered in lectures and exercises so far. A student can earn a maximum of 20 points on the first test. At the end of the semester, students take the second written test, on which a student can earn a maximum of 20 points. Both tests are taken by all students in the course at the same time. The dates of the tests will be announced to students at least 15 days in advance.
• The final exam is written/oral. All students have the right to take the final exam. On the final exam, the student answers questions from the curriculum of the course covered in lectures and exercises. The maximum number of points a student can achieve on the final exam is 45.
• Tests on all forms of knowledge are recognized as a cumulative exam if the achieved result is positive after each individual test and amounts to at least 50% of the total expected and/or required knowledge and skills.
• In order to pass the course, a student must achieve a minimum of 54 cumulative points, of which a minimum of 26 points on the final exam.

18. Težinski faktor provjere:

The exam grade is based on the total number of points that the student has earned by fulfilling the pre-exam requirements and taking the exam, and according to the quality of the acquired knowledge and skills, and contains a maximum of 100 points, and is determined according to the following scale:
Colloquium 10 points
Tests during the course 40 points (test I-20 points; test II-20 points)
Seminar paper-activity 5 points
Final exam 45 points

19. Obavezna literatura:

1.Aida Crnkić; Basics of General Chemistry, University of Tuzla 2008.
2. B.Ćatović, A.Crnkić; General Chemistry, Mit Alex 2017.
3. Milan Sikirica, Stoichiometry, School Book Zagreb, 1995.
4. Filipović, I., Lipanović, S. (2005): General and Inorganic Chemistry, Part I and II, Zagreb, School Book.
5. Cipurković, A., Hodžić, Z., Tanjić, I. (2010): Preparative Inorganic Chemistry, Tuzla, Bosanska rijec.

20. Dopunska literatura:

21. Internet web reference:

22. U primjeni od akademske godine:

23. Usvojen na sjednici NNV/UNV: