Course ID: HMH235	**Course name: HISTORY OF CHEMISTRY**		
Cycle: FIRST	**Year: THIRD**	**Semester: V**	**ECTS credits: 2**
Course status: MANDATORY		**Total course hours: 30** Lectures: 30 Laboratory: -	
Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs**		
Prerequisite for enrollment:	-		
Course aims:	Introduction to the origins and stages of development of chemistry as a natural and exact science, necessary for the application of acquired knowledge in various fields of chemistry.		
Thematic course units:	1. The inception of chemistry as a science. Chronology of the development of chemistry. 2. Beginnings of civilization. Ancient period. The era of alchemy. 3. Iatrochemistry. Pneumatic Chemistry. 4. Technical chemistry. Phlogiston theory. 5. Antoine Laurent Lavoisier 6. The beginnings of crystallography 7. Period of quantitative laws 8. Atomic-molecular theory. Amedeo Avogadro. Mikhail Vasilyevich Lomonosov. 9. The development of organic chemistry 10. The development of inorganic chemistry 11. The development of biochemistry 12. Periodic Table of the Elements 13. The development of physical chemistry 14. Radioactivity. Structure of the atom.		
Learning outcomes:	Knowledge: • Recognize the contribution of selected scientists to the development of chemistry as a science • Describe the emergence and development of the main ideas and concepts fundamental to chemistry; • Recognize the scientific principles within which basic		

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<tr><td></td><td>chemical concepts have emerged;
Skills:
• Construct a timeline of significant events in the history of chemistry
• Assess the contribution of some outdated theories (alchemy, phlogiston theory) to the development of chemistry as a science;
• Assess the connection between the development of chemistry as a science and the development of society as a whole;

Competences:
• Explain the development of experimental verification and its importance in evaluating proposed theoretical assumptions
• Analyze the importance of experimental evidence in different periods of chemistry development
• Apply the knowledge of the history of chemistry in teaching chemistry as a tool to improve the understanding of chemistry.</td></tr>
<tr><td>Teaching methodology:</td><td>Oral presentation
Discussion
Research</td></tr>
<tr><td>Assessment methods and grading system[1]:</td><td>
<table>
<tr><th colspan="3">Grading criteria</th></tr>
<tr><th>Criteria</th><th>Maximal score</th><th>Required score</th></tr>
<tr><td>1. Class attendance</td><td>5</td><td>3</td></tr>
<tr><td>2. Class activities</td><td>5</td><td>3</td></tr>
<tr><td>3. Midterm</td><td>30</td><td>17</td></tr>
<tr><td>4. Seminar</td><td>20</td><td>10</td></tr>
<tr><td>5. Final exam</td><td>40</td><td>22</td></tr>
<tr><td>Total</td><td>100</td><td>55</td></tr>
<tr><th colspan="3">Scores and grading</th></tr>
<tr><th>Score</th><th>Grade (B&H)</th><th>Grade (ECTS)</th></tr>
<tr><td>< 55</td><td>5</td><td>F, FX</td></tr>
<tr><td>55–64</td><td>6</td><td>E</td></tr>
<tr><td>65–74</td><td>7</td><td>D</td></tr>
<tr><td>75–84</td><td>8</td><td>C</td></tr>
<tr><td>85–94</td><td>9</td><td>B</td></tr>
<tr><td>95–100</td><td>10</td><td>A</td></tr>
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[1] The grading structure for each subject is determined by the Council of the organizational unit before the beginning of the academic year in which the subject is taught as per Article 64, paragraph 6 of the Law on Higher Education of Sarajevo Canton

Literature[2]:	Mandatory literature: 1. Janković, M. (1999). *Historija hemije/ Povijest kemije. Sarajevo*: Univerzitetska knjiga 2. Gutman, I., Zejnilagić-Hajrić, M., Nuić, I. (2010). *Izabrana poglavlja iz istorije hemije*. Kragujevac: Prirodno-matematički fakultet u Kragujevcu. Supplementary literature: 1. Asimov, I. (1968). *Kratka istorija hemije.* Beograd: Naučna knjiga. 2. Grdenić, D. (2001). *Povijest kemije*. Zagreb: Novi Liber & Školska knjiga.

[2] The Senate of the higher education institution, as an institution, or the Council of the organizational unit of the higher education institution, as a public institution, determines by a special decision, which is published on its website before the beginning of the academic year obligatory, mandatory and recommended textbooks and manuals, as well as other recommended literature based on which exams are prepared and taken as per Article 56, paragraph 3 of the Law on Higher Education of the Sarajevo Canton