



Course ID: HNM351	Course name: CHEMISTRY EXPERIMENTS FOR MIDDLE AND HIGH SCHOOL STUDENTS		
Cycle: FIRST	Year: THIRD	Semester: V	ECTS credits: 4
Course status: MANDATORY		Total course hours: 45 Lectures: 15 Laboratory: 30	
Teaching participants:	Teachers and associates with expertise in the field to which the subject belongs		
Prerequisite for enrollment:	-		
Course aims:	Teaching students to acquire experimental approach in learning chemistry. Enabling students for adequate selection of chemical experiments appropriate to chemistry instruction in middle and high school		
Thematic course units:	<ol style="list-style-type: none">1. Experiment in chemistry education and its tasks2. Types of school experiments3. Originality in the selection of experiments4. Organization of teaching process in chemistry5. The role of the teacher's attitude in conducting school experiments6. Performing experiments and their applicability in teaching7. Evaluation of students' knowledge and skills through school experiments8. Everyday life chemistry through experiments9. Motivational experiments		
Learning outcomes:	<p>Knowledge:</p> <ul style="list-style-type: none">• Explain real-life situations using knowledge of chemistry• Use appropriate chemical terms and symbols to explain chemical processes <p>Skills:</p> <ul style="list-style-type: none">• Analyze the selected experiment, adjust it to school conditions if necessary and perform it with a smaller amount of chemicals;• Provide precautionary measures during the performance of the selected experiment;• Demonstrate the importance of the teacher's attitude		

	<p>when conducting the experiment.</p> <p>Competences:</p> <ul style="list-style-type: none"> • Search various sources of information to find adequate examples of experiments • Anticipate risks during experimental work in chemistry teaching; • Argue the importance of chemistry in everyday life; 																																																
Teaching methodology:	<p>Oral presentation Discussion Research Practical exercises</p>																																																
Assessment methods and grading system¹:	<table border="1"> <thead> <tr> <th colspan="3">Grading criteria</th> </tr> <tr> <th>Criteria</th> <th>Maximal score</th> <th>Required score</th> </tr> </thead> <tbody> <tr> <td>1. Class attendance</td> <td>5</td> <td>3</td> </tr> <tr> <td>2. Class activities</td> <td>15</td> <td>8</td> </tr> <tr> <td>3. Midterm</td> <td>25</td> <td>14</td> </tr> <tr> <td>4. Seminar</td> <td>15</td> <td>8</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> </tbody> </table>	Grading criteria			Criteria	Maximal score	Required score	1. Class attendance	5	3	2. Class activities	15	8	3. Midterm	25	14	4. Seminar	15	8	5. Final exam	40	22	Total	100	55	Scores and grading			Score	Grade (B&H)	Grade (ECTS)	< 55	5	F, FX	55-64	6	E	65-74	7	D	75-84	8	C	85-94	9	B	95-100	10	A
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Literature²:	<p>Supplementary literature:</p> <ol style="list-style-type: none"> 1. Dragić, R. (1974). <i>Metodika nastave hemije</i>, Sarajevo: Svjetlost. 2. Mayer, V. (1991). <i>Eksperimentalna nastava kemije</i>, Zagreb: Školska knjiga. 3. Sikirica, M. (2011). <i>Zbirka kemijskih pokusa</i>. Zagreb: Školska knjiga. 																																																

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

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