



Course ID: HNM477	Course name: METHODOLOGY OF CHEMISTRY EDUCATION I		
Cycle: FIRST	Year: FOURTH	Semester: VII	ECTS credits: 7
Course status: MANDATORY	Total course hours: 105 Lectures: 45 Laboratory: 60		
Teaching participants:	Teachers and associates with expertise in the field to which the subject belongs		
Prerequisite for enrollment:	-		
Course aims:	Introduction to the characteristics of teaching chemistry in primary/middle school. Training students for successful integration and creative implementation of teaching process within teaching chemistry in primary/middle school education.		
Thematic course units:	<ol style="list-style-type: none">1. Development of chemistry with emphasis on the methodology of teaching chemistry2. The position of the methodology of teaching chemistry in the system of science and system of education. Relationship with other sciences and scientific disciplines.3. Chemistry as a science and as a course in education. Subject and tasks of teaching chemistry4. The main objectives of teaching chemistry in primary school5. Observation and experiment in chemistry teaching.6. The traditional and modern teaching process7. Educational strategies, methods, and procedures. Teaching methods in chemistry8. Heuristic teaching9. Programmed teaching10. Problem-based teaching11. Discovery-based learning strategy12. Teaching strategies in small groups13. Forms of teaching chemistry14. Leading the lesson in the classroom. Lesson plans.		
Learning outcomes:	Knowledge: <ul style="list-style-type: none">• Interpret basic chemical concepts in accordance with new		

	<p>scientific knowledge in the field of methodology of teaching chemistry;</p> <p>Skills:</p> <ul style="list-style-type: none"> Assess the effectiveness of different teaching strategies and methods in teaching chemistry, depending on the teaching content. <p>Competences:</p> <ul style="list-style-type: none"> Analyze modern theoretical and practical achievements of teaching methodology in general and chemistry teaching methodology; 																																																
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>Mandatory literature</p> <ol style="list-style-type: none"> Sikirica, M. (2003). <i>Metodika nastave kemije, Priručnik za nastavnike kemije</i>, Zagreb: Školska knjiga. Zejnilić-Hajrić, M., Ljubijankić, N., Čopra Jančićević, A., Vidic, D., Nuić, I. (2016). <i>Praktikum iz metodike</i> 																																																

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

nastave hemije, Sarajevo: Univerzitet u Sarajevu.

3. Udžbenici iz hemije za osnovne škole odobreni od nadležnog Ministarstva za obrazovanje i nauku.

Supplementary literature:

1. Dragić, R. (1974). *Metodika nastave hemije*, Sarajevo: Svjetlost.
2. Halaši, R., Kesler, M. (1976). *Metodika nastave hemije i demonstracioni ogledi*, Beograd: Naučna knjiga.
3. Mayer, V. (1991). *Eksperimentalna nastava kemije*, Zagreb: Školska knjiga.