



<b>Course ID:</b> HNM404	<b>Course name: PROGRAMMED INSTRUCTION IN CHEMISTRY</b>		
<b>Cycle: FIRST</b>	<b>Year: FOURTH</b>	<b>Semester: VIII</b>	<b>ECTS credits: 3</b>
<b>Course status: ELECTIVE</b>	<b>Total course hours: 45</b> Lectures: 30 Laboratory: 15		
<b>Teaching participants:</b>	<b>Teachers and associates with expertise in the field to which the subject belongs</b>		
<b>Prerequisite for enrollment:</b>	-		
<b>Course aims:</b>	Introduction to the application of programmed instruction in teaching chemistry for individualization, rationalization, and increasing the efficiency of the process of teaching chemistry in the middle, secondary and high schools.		
<b>Thematic course units:</b>	<ol style="list-style-type: none"><li>1. Introduction to programmed instruction in chemistry</li><li>2. Psychological bases of programmed teaching</li><li>3. Models of programmed teaching</li><li>4. E-learning and distance learning</li><li>5. Procedures in programmed and semi-programmed teaching</li><li>6. Programmed text and textbook</li><li>7. Programmed worksheets</li><li>8. Evaluation of the efficiency of programmed teaching</li><li>9. Advantages and disadvantages of programmed instruction in chemistry</li><li>10. Possibilities and examples of the application of programmed teaching in chemistry</li></ol>		
<b>Learning outcomes:</b>	Knowledge: <ul style="list-style-type: none"><li>• Compare the advantages and disadvantages of programmed teaching in chemistry;</li></ul> Skills: <ul style="list-style-type: none"><li>• Develop programmed material and apply it in teaching selected topics in chemistry</li></ul> Competences: <ul style="list-style-type: none"><li>• Assess the effectiveness of the application of programmed materials in teaching chemistry.</li></ul>		
<b>Teaching methodology:</b>	Oral presentation Discussion		

	<p>Developing programmed material Research Practical exercises</p>																					
<b>Assessment methods and grading system<sup>1</sup>:</b>	<b>Grading criteria</b>																					
	<table border="1"> <thead> <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> </tbody> </table>	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
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<b>Literature<sup>2</sup>:</b>	<p>Supplementary literature:</p> <ol style="list-style-type: none"> <li>Poljak, V. (1980). <i>Didaktika</i>, Zagreb: Školska knjiga.</li> <li>Mužić, V. (1968). <i>Programirana nastava</i>, Zagreb: Školska knjiga.</li> <li>Vilotijević, M., Vilotijević, N. <i>Programirana nastava</i>. Interna skripta</li> <li>Pocztar, J. (1972). <i>The theory and practice of programmed instruction</i>, Paris: UNESCO.</li> </ol>																					

<sup>1</sup> 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

<sup>2</sup> 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