Course ID: HNMI03	**Course name: CHEMISTRY INSTRUCTION AND AN INTELLECTUAL DEVELOPMENT OF STUDENTS**		
Cycle: SECOND	**Year: FIRST**	**Semester: I**	**ECTS credits: 2**
Course status: ELECTIVE		**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:	Enabling students for focused thinking, critical construction and reconstruction of knowledge in their mental habits.		
Thematic course units:	1. Traditional and modern chemistry teaching 2. Development of intellectual skills through teaching chemistry 3. Piaget's theory of intellectual development 4. Students' reasoning and behavior at different stages of cognitive development. Implications to chemistry teaching 5. Models and modeling in chemistry teaching 6. Analogies in chemistry teaching 7. Intuitive knowledge 8. Visualization in chemistry teaching 9. Authentic thinking 10. Learning cycle in chemistry teaching 11. Improving students' cognitive abilities through experiments		
Learning outcomes:	Knowledge: • Recognize the characteristics and importance of intellectual development through chemistry teaching Skills: • Organize teaching process in chemistry in order to improve the critical thinking and reasoning skills Competences: • Create learning environment to develop students' intellectual skills • Compare and discuss ideas and attitudes related to chemistry teaching		
Teaching methodology:	Oral presentation		

<table>
<tr><td></td><td>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>20</td><td>11</td></tr>
<tr><td>4. Seminar</td><td>30</td><td>16</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>
</table>
</td></tr>
<tr><td>Literature[2]:</td><td>Supplementary literature:

1. Bain, K. (2004). What the best College Teachers Do. Cambridge, Massachusetts: Harvard University Press.
2. Bonwell, C.C., Eison, J.A. (1991). Active Learning: Creating Excitement in the Classroom. Washington: George Washington University Press
3. Lawson, A.E. (1995). Science Teaching and Development of Thinking. Belmont: Wadswordt Publishing Company.</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

[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