Course ID: HOAI06	**Course name: CHEMISTRY OF ORGANOMETALLIC COMPOUNDS**		
Cycle: SECOND	**Year: FIRST**	**Semester: I**	**ECTS credits: 4**
Course status: ELECTIVE		**Total course hours: 60** Lectures: 45 Laboratory: 15	
Teaching participants:	**Teachers and associates with expertise in the field to which the subject belongs**		
Prerequisite for enrollment:	-		
Course aims:	Acquiring the necessary knowledge to understand the nature of organometallic compounds, their structure and stability, different criteria of classification, diversity and use.		
Thematic course units:	1. Historical development of organometallic chemistry 2. Nature and formation of metal-carbon bonds .. Hapticity. 3. Physical properties of organometallic compounds 4. Classification of organometallic compounds 5. Organometallic compounds of s- and p-block metals 6. Transition metals in organometallic compounds 7. Ionic organometallic compounds 8. Organometallic compounds with covalent bonds 9. Molecular orbitals of organometallic complexes. 16/18 electron rule. 10. Structure and reactivity of organometallic compounds 11. Stability of organometallic compounds 12. Metal carbonyls. More important π acceptor ligands 13. Organometallic compounds of transition metals with unsaturated organic molecules 14. Compounds with multiple metal-carbon bonds 15. Use of organometallic compounds of transition metals in catalysis.		
Learning outcomes:	*Knowledge*: 1. Interpret the structures of organometallic compounds 2. Classify organometallic compounds 3. Connect the structure / reactivity / function relationship in organometallics. *Skills*: 1. Demonstrate modern scientific knowledge in the field of organometallic chemistry 2. Apply the acquired chemical knowledge about organometallic compounds in scientific works *Competences*: 1. Independently monitor the scientific progress in the field of organometallic chemistry and give an expert opinion on their scope and possible applications.		

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<tr><td></td><td>2. Participate in interdisciplinary scientific research
3. Take responsibility for your own professional progress and professional development</td></tr>
<tr><td>Teaching methodology:</td><td>Method of oral presentation, method of conversation, practical exercises</td></tr>
<tr><td>Assessment methods and grading system[1]:</td><td>
<table>
<tr><td colspan="3">Grading criteria</td></tr>
<tr><td>Criteria</td><td>Maximal score</td><td>Required score</td></tr>
<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. Midterms</td><td>40</td><td>22</td></tr>
<tr><td>4. Final exam</td><td>40</td><td>22</td></tr>
<tr><td>Total</td><td>100</td><td>55</td></tr>
<tr><td colspan="3">Scores and grading</td></tr>
<tr><td>Score</td><td>Grade (B&H)</td><td>Grade (ECTS)</td></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>Mandatory literature:
1. Anthony F. Hill, Organotransition Metal Chemistry, Royal Society of Chemistry, Milton Road, Cambridge, UK, 2002.
Supplementary literature:
2. Gary O. Spessard and Gary L. Miessler, Organometallic Chemistry, Prentice Hall, New Jersey, 1996.
3. Ch. Elschenbroich, Organometallics, 3rd Ed., Wiley & VCH, Weinheim, 2006.</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