

**(Table 5.2) Course unit description**

Study program : Chemistry			
Type and level of studies: PhD in chemistry			
<b>Course unit: Reaction mechanisms in organic chemistry</b>			
<b>Teacher in charge : Prof. Dr Zorica Bugarčić</b>			
Language of instruction: English			
ECTS: 10			
Prerequisites: entered the second or the third year of study program			
Semester: Winter semester (3rd year of study program) or summer semester (2nd year of study program)			
<b>Course unit objective</b>			
The aim of this course is to give students a better insight into the modern knowledge about the reaction mechanisms in organic chemistry, as well as to enable them to predict reaction mechanisms depending on compounds structures and reaction conditions.			
<b>Learning outcomes of Course unit</b>			
After completing this course students will be able to apply knowledge gained in scientific research through the lectures, independent seminar papers and tests.			
<b>Course unit contents</b>			
<i>Theoretical classes:</i> Classification of organic reactions. Bond breaking in organic reactions. Bond energies. Types of chemical reagents. Chemical energetics and kinetics. Methods for determination of reaction mechanism. Reaction intermediates. Nucleophilic substitutions. Electrophilic substitutions. Radical substitution. Electrophilic additions. Nucleophilic additions. Radical additions. Eliminations. Rearrangement reactions. Oxidation and reduction.			
<b>Literature</b>			
1. Mechanism in organic chemistry, Peter Sykes, Longman Scientific and Tehnical, 1986.			
<b>Number of active teaching hours</b>			<b>Other classes</b>
Lectures: <b>5</b>	Practice:	Other forms of classes	Independent work: / /
<b>Teaching methods</b>			
Lectures, seminars, colloquiums			
<b>Examination methods ( maximum 100 points)</b>			
<b>Exam prerequisites</b>	<b>No. of points:</b>	<b>Final exam</b>	<b>No. of points:</b>
Student's activity during lectures	<b>10</b>	oral examination	<b>15</b>
practical classes/tests		written examination	<b>15</b>
Seminars/homework	<b>20</b>	.....	
Project			
Other (colloquiums)	<b>40</b>		
<b>Grading system</b>			
<b>Grade</b>	<b>No. of points</b>	<b>Description</b>	
<b>10</b>	<b>91-100</b>	Excellent	
<b>9</b>	<b>81-90</b>	Exceptionally good	
<b>8</b>	<b>71-80</b>	Very good	
<b>7</b>	<b>61-70</b>	Good	
<b>6</b>	<b>51-60</b>	Passing	
<b>5</b>	<b>&lt;51</b>	Failing	