<table>
<tr><td>Course code</td><td></td></tr>
<tr><td>Type and description</td><td>EC</td></tr>
<tr><td>ECTS credit</td><td>1</td></tr>
<tr><td>Course name</td><td>Physical Organic Chemistry part III</td></tr>
<tr><td>Course name in Polish</td><td>Chemia fizyko-organiczna, cześć 3</td></tr>
<tr><td>Language of instruction</td><td>English</td></tr>
<tr><td>Course level</td><td>8 PRK</td></tr>
<tr><td>Course coordinator</td><td>Piotr Kaszyński</td></tr>
<tr><td>Course instructors</td><td>Piotr Kaszyński</td></tr>
<tr><td>Delivery methods and course duration</td><td>
<table>
<tr><th></th><th>Lecture</th><th>Tutorials</th><th>Laboratory</th><th>Project</th><th>Seminar</th><th>Other</th><th>Total of teaching hours during semester</th></tr>
<tr><td>Contact hours</td><td>0</td><td>0</td><td>0</td><td>15</td><td></td><td>0</td><td>15</td></tr>
<tr><td>E-learning</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td></td></tr>
<tr><td>Assessment criteria (weightage)</td><td>0,00</td><td></td><td></td><td></td><td></td><td>0,00</td><td></td></tr>
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<tr><td>Course objective</td><td>To give students an understanding of organic reaction on molecular level. The students understand relationship between the molecular structure and reactivity of organic compounds, understand chemical processes on the molecular level and is capable of investigation of chemical reactions using modern physical organic methods.</td></tr>
<tr><td>Learning outcomes</td><td>After the course a PhD student is able to:
1. understand relationships between the molecular structure and reactivity of organic compounds – effects W4, U4, K1
2. understand chemical processes on the molecular level – effects W4, U4, K1
3. investigation of chemical reactions using modern physical organic methods.– effects W4, U4, K1</td></tr>
<tr><td>Assessment methods</td><td>Effects W4, U4, K1

Assigned projects and written and oral assessment

The final evaluation is based on:

attendance - 35%
projects - 25%
assessment - 40%</td></tr>
<tr><td>Prerequisites</td><td>Sophomore-level Organic Chemistry I and II</td></tr>
<tr><td>Course content with delivery methods</td><td>LECTURE
1. Elements of Thermochemistry and Conformational Analysis
2. Study and Description of Organic Reaction Mechanisms
Elements of a Chemical Reaction
Thermodynamic Data
Kinetic Data
Linear Free energy Relationships</td></tr>
</table>

	Basic Mechanistic Concepts Kinetic isotope Effects
Basic reference materials	1. Lecture notes, provided. *2. Modern Physical Organic Chemistry,* Anslyn E. V. and Dougherty, D. A. University Science Book, 2006
Other reference materials	1. *Advanced Organic Chemistry, Part A: Structure and Mechanisms.* (5th Edition) Carey, F. A., and Sundberg, R. A.; Springer, 2007. (an electronic version is available on line). 2. *Perspectives on Structure and Mechanism in Organic Chemistry* Felix A. Carroll (Brooks/Cole, 1998) 3. *Advanced Organic Chemistry. Reactions, Mechanisms, and Structures,* (5th Edition) Smith and March; J. Wiley & Sons 2001.
Average student workload outside classroom	25 h
Comments	
Last update	March 15, 2023