



Subject card

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|---|--|---|-------------------------------------|------------|--|---------|-----|
| Subject name and code | Organic Chemistry, PG_00036272 | | | | | | |
| Field of study | Green Technologies | | | | | | |
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | | | 2022/2023 | | |
| Education level | first-cycle studies | Subject group | | | Obligatory subject group in the field of study Subject group related to scientific research in the field of study | | |
| Mode of study | Full-time studies | Mode of delivery | | | at the university | | |
| Year of study | 2 | Language of instruction | | | Polish | | |
| Semester of study | 4 | ECTS credits | | | 4.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Department of Organic Chemistry -> Faculty of Chemistry | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | prof. dr hab. inż. Krystyna Dzierzbicka | | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 0.0 | 0.0 | 60.0 | 0.0 | 0.0 | 60 |
| | E-learning hours included: 0.0 | | | | | | |
| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | | Self-study | SUM | |
| | Number of study hours | 60 | 5.0 | | 35.0 | 100 | |
| Subject objectives | Familiarization with laboratory sets for typical activities performed in the laboratory, independent implementation of planned syntheses. | | | | | | |
| Learning outcomes | Course outcome | Subject outcome | | | Method of verification | | |
| | [K6_W02] has a basic knowledge of chemistry including general chemistry, inorganic, organic, physical, analytical, including the knowledge necessary to describe and understand the phenomena and chemical processes occurring in the environment; measurement and the determination of the parameters of these processes. | Student classifies organic reaction mechanisms of organic compounds. Student assembles laboratory sets for typical activities performed in the laboratory. | | | [SW1] Assessment of factual knowledge | | |
| | [K6_U01] is able to obtain information from literature, databases and other sources, is able to integrate the information obtained, to make their interpretation, as well as draw conclusions and formulate and justify opinions, take part in the discussion | Student draws a correct structural formulas of organic compounds. Student identifies separate class of organic compounds. | | | [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject | | |

| Subject contents | Specification of preparations: 1. Oxidation and reduction reactions 2. Aldehydes and ketone, 3. Carboxylic acids and their derivatives IV. Diazonium salts in organic synthesis V. Applications of reactions of magnesium organic compounds (<i>Grignard reagents</i>) | | | | | | | | | | | |
|---|---|-------------------------------|--|--------------------------|---|-------------------------------|---|---|--------|----------------------|----------------------------------|--|
| Prerequisites and co-requisites | Basic inorganic chemistry. Knowledge of the symbols of elements, the valence and ability to perform simple stoichiometric calculation. | | | | | | | | | | | |
| Assessment methods and criteria | <table border="1" data-bbox="448 618 1489 786"> <thead> <tr> <th data-bbox="448 618 798 651">Subject passing criteria</th> <th data-bbox="802 618 1142 651">Passing threshold</th> <th data-bbox="1147 618 1489 651">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="448 658 798 786">Implementation of the planned syntheses. Collecting the appropriate number of points in accordance with the laboratory regulations.</td> <td data-bbox="802 658 1142 786">60.0%</td> <td data-bbox="1147 658 1489 786">100.0%</td> </tr> </tbody> </table> | | | Subject passing criteria | Passing threshold | Percentage of the final grade | Implementation of the planned syntheses. Collecting the appropriate number of points in accordance with the laboratory regulations. | 60.0% | 100.0% | | | |
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| Recommended reading | <table border="1" data-bbox="448 792 1489 1487"> <tbody> <tr> <td data-bbox="448 792 798 1182">Basic literature</td> <td colspan="2" data-bbox="802 792 1489 1182"> 1. D. Witt, K. Dzierzbicka, J. Rachoń – <i>Syntezy i transformacje związków organicznych</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2007. 2. K. Dzierzbicka, G. Cholewiński, J. Rachoń – <i>Aparatura i procesy jednostkowe stosowane w laboratorium chemii organicznej</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2018. 3. A.I. Vogel - <i>Preparatyka Organiczna</i>, WNT Warszawa 2006. </td> </tr> <tr> <td data-bbox="448 1189 798 1447">Supplementary literature</td> <td colspan="2" data-bbox="802 1189 1489 1447"> 1. K. Dzierzbicka, D. Witt, J. Rachoń – <i>Preparatyka związków organicznych. Ćwiczenia laboratoryjne</i>. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2011. 2. B. Bochwic (tłum) – <i>Preparatyka Organiczna</i>, PWN Warszawa 1971. </td> </tr> <tr> <td data-bbox="448 1453 798 1487">eResources addresses</td> <td colspan="2" data-bbox="802 1453 1489 1487">Adresy na platformie eNauczanie:</td> </tr> </tbody> </table> | | | Basic literature | 1. D. Witt, K. Dzierzbicka, J. Rachoń – <i>Syntezy i transformacje związków organicznych</i> . Wydawnictwo Politechniki Gdańskiej, Gdańsk 2007. 2. K. Dzierzbicka, G. Cholewiński, J. Rachoń – <i>Aparatura i procesy jednostkowe stosowane w laboratorium chemii organicznej</i> . Wydawnictwo Politechniki Gdańskiej, Gdańsk 2018. 3. A.I. Vogel - <i>Preparatyka Organiczna</i> , WNT Warszawa 2006. | | Supplementary literature | 1. K. Dzierzbicka, D. Witt, J. Rachoń – <i>Preparatyka związków organicznych. Ćwiczenia laboratoryjne</i> . Wydawnictwo Politechniki Gdańskiej, Gdańsk 2011. 2. B. Bochwic (tłum) – <i>Preparatyka Organiczna</i> , PWN Warszawa 1971. | | eResources addresses | Adresy na platformie eNauczanie: | |
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| Example issues/ example questions/ tasks being completed | 1. Synthesis of benzoic acid from toluene. 2. Preparation of phenol from aniline. 3. Synthesis of 1,1-diphenylethen. | | | | | | | | | | | |
| Work placement | Not applicable | | | | | | | | | | | |