| **Course title**<br>Preparatyka organiczna / Organic synthesis | **ECTS code**<br>13.3.0659 |
|---|---|

**Name of unit administrating study**
Faculty of Chemistry

**Studies**

| Field of study | Type | Form | |
|---|---|---|---|
| Chemistry | Bachelor | Full-time studies | |

**Teaching staff**
Dr Dariusz Sobolewski

| **Forms of classes, the realization and number of hours** | **ECTS credits** 3 |
|---|---|
| **A. Forms of classes, in accordance with the UG Rector's regulations**<br>laboratory classes | classes - 45 h<br>tutorial classes – 10 h<br>student's own work – 20 h |
| **B. The realization of activities**<br>in-class learning | Total: 75 h - 3 ECTS |
| **C. Number of hours**<br>45 h laboratory classes | |

**The academic cycle**
2020/21 winter semester

| **Type of course**<br>obligatory | **Language of instruction**<br>Polish |
|---|---|
| **Teaching methods**<br>laboratory practice: making chemical experiences and preparing of results | **Form and method of assessment and basic criteria for evaluation or examination requirements**<br>**A. Final evaluation, in accordance with the UG study regulations**<br>course completion (with a grade)<br>**B. Assessment methods**<br>preparing final grade based on partial grades received during semester<br>**C. The basic criteria for evaluation** or exam requirements<br>The final grade is resultant of partial grades received during semester. Partial grades are giving for work quality and work organizing, troubleshooting and preparing reports. Criteria in accordance with rules of UG. |

**Required courses and introductory requirements**
Finished course of organic chemistry. Understanding the most important reactions and physicochemical properties used compounds. Knowledge main rules of safety in laboratory.

**Aims of education**

- To acquaint students with all issues described in programme of exercises.

- Increasing knowledge and skills in organic synthesis.

- Familiarisation of students with work in laboratory on micro scale..

**Course contents**

- Synthesis of organic compounds with different chemical properties.;
- Technics of extract and purification obtained compounds.
- Analysis of purity using chromatographic technics, e.g. TLC or HPLC.;
- Analysis of NMR spectrums (for selected compounds).

**Bibliography of literature**

**A. Literature required to pass the course**

Gawroński J., Gawrońska K., Kacprzak K., Kwit M., Współczesna synteza organiczna, Wydawnictwo Naukowe PWN, Warszawa 2004;
Vogel A.I., Preparatyka organiczna, Wydawnictwo Naukowo-Techniczne, Warszawa 1984.
Tomasik P., Mechanizmy reakcji organicznych, Wydawnictwo Naukowe PWN, Warszawa1998.

**B. Extracurricular readings**

McMurry J., Chemia organiczna t.1-5, Wydawnictwo Naukowe PWN, Warszawa 2003;
Morrisom R.T., Boyd R.N., Chemia organiczna t.1-2, Wydawnictwo Naukowe PWN, Warszawa1985.

**Knowledge**

- describe main characterisation of synthetized compound and give its chemical properties;
- characterize important techniques of purity the synthesized compound.;
- clarify rules of separation different substances using chromatographic metods;
- define solvents properties used during synthesis and purification.

**Skills**

- prepare synthesis of compounds on micro and macro scale
- accurately assort correct techniques and chemical equipment for synthesis;
- identify and assort purity of obtained compounds;
- analyse own work and draw conclusions using personal experimental results;
- keep rules of safety in laboratory..

**Social competence**

- organise own work and exhibit responsibility for personal workstation;
- appreciate meaning clearness in laboratory work;
- understand necessity of work according to procedures;
- keep caution during contacts with chemical substances.