Course Unit Descriptor

Study Programme: Chemistry

Course Unit Title: Experimental Organic Chemistry

Course Unit Code: IHO-201

Name of Lecturer(s): Assistant professor Jovana Ajduković

Type and Level of Studies: Bachelor Academic Studies

Course Status (compulsory/elective): Elective

Semester (winter/summer): Winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 5

Prerequisites: None

Learning objectives
Introduction to basic experimental techniques used in laboratories for organic chemistry. Further development manual skills necessary for safe operation in the organic laboratory.

Learning outcomes
Knowledge of laboratory techniques in organic chemistry. Mastering the work in the laboratory of organic chemistry. Apply standard laboratory techniques in the synthesis of organic compounds. Safe handling of the laboratory equipment, supplies and apparatus used in laboratories for organic chemistry.

Syllabus
Theoretical instruction
Theoretical treatment of the experimental techniques used in laboratories for organic chemistry. Purification techniques of solid, liquid and gaseous organic compounds. Extraction - liquidliquid, solid-liquid, solid-solid (SPE - solid phase extraction). Chromatography - Column and thin. Drying techniques of organic substances - dry solid, liquid and gaseous substances. Performing reactions at extremely low temperatures.

Practical instruction
Distillation - a simple, fractional, distillation with steam, distillation under reduced pressure. Crystallization. Vacuum drainage. Vacuum evaporation. Monitoring of the reaction by thin-layer chromatography. The separation of mixtures of substances overhead chromatography. Drying of solid organic substances. Dry and liquid solutions of organic compounds. Drying gases. Carrying out the reaction at temperatures below -50^{o} C.

Required Reading:
1. Weekly teaching load

Weekly Contact Hours: 60	**Lectures:** 15	**Practical work:** 45

Teaching Methods:
Lectures and practical problem solution

Knowledge Assessment (maximum of 100 points): 100

Pre-exam obligations	points	**Final exam**	points
Activity	5	Seminar	15
Experimental work	50	Oral exam	30