

Programme for students of Master Studies in English
applicable from the academic year 2020/2021

During the second degree chemistry studies student is obliged to obtain: (a) at least 6 ECTS and not more than 8 ECTS for subjects that are not related to the field of studies (general courses), including general university subjects from the areas of humanities or social sciences minimum 5 ECTS.

Each year a student is expected to accumulate 60 ECTS credits (however, minimum 30 ECTS credits per a semester).

Semestr 1.

Subject	Hours	Lecture	Laboratory	ECTS points	
Theoretical Chemistry A**	60	30	30	5	Exam
Environmental Analysis	45	15	30	4,5	Exam
Biochemistry	60	30	30	5	Exam
Nuclear Chemistry	60	30	30	5	Exam
Crystallography A**	30	10	20	3	Exam
Directional Course (PK)*	75	0	75	7,5	Grade
Total	330	115	215	30	

* Elective courses selected by the student in consultation with the Scientific supervisor (laboratories from the list available in English)

** Obligatory courses for people at the undergraduate level that did not pass such course in the proper thematic size and hours. Student can choose particular course at the primary (A) or advanced (level B) level.

Directional Course

- ◆ Organic synthesis – laboratory; 4,0 ECTS
prof. dr hab. Tomasz Bauer

- ◆ Quantum chemistry A – laboratory; 4,0 ECTS
dr Małgorzata Jeziorska

- ◆ Instrumental analysis – lecture and laboratory; 4,5 ECTS

prof. dr hab. Ewa Bulska, prof. dr hab. Krzysztof Maksymiuk, prof. dr hab. Agata Michalska-Maksymiuk, dr Marcin Wojciechowski

Semestr 2. (courses selected by the student in consultation with the Scientific supervisor)

Subject	Hours	Lecture	Laboratory	ECTS points	
Specialization Lecture no.1	30	30	0	3	Exam
Specialization Lecture no.2	30	30	0	3	Exam
Monographic Lecture no.1	15	15	0	1,5	Exam
Monographic Lecture no.2	15	15	0	1,5	Exam
Monographic Lecture no. 3	15	15	0	1,5	Grade
Specialization Laboratory I	120	0	120	10	Grade
Introduction to intellectual property management	15	15		1,5	Exam
Total	240	120	120	22	

Subjects required to pass - selected by the student in consultation with the Scientific supervisor (laboratories from the list offered by the Faculty of Chemistry and available in English (English group)).

Semestr 3.

Subject	Hours	Lecture	Laboratory	ECTS points
Master Seminar (oral presentation)	30	30	0	4
LabS II	250	0	250	20
Total	280	30	250	24

Semestr 4.

Subject	Hours	Lecture	Laboratory	ECTS points
Master Seminar (Poster)	30	30	0	3
LabS III	200	0	200	20
Total	230	30	200	24

Electives

Fall semester - List of classes

- ◆ Chemistry of bioelements – lecture; 2,0 ECTS
prof. dr hab. Renata Bilewicz (bilewicz@chem.uw.edu.pl)

- ◆ Molecular modeling – lecture; 1,5 ECTS
dr hab. Dominik Gront (dgront@chem.uw.edu.pl)

- ◆ Trace analysis of the organic pollutants in the environment; 3,0 ECTS
prof. dr hab. Tomasz Gierczak (gierczak@chem.uw.edu.pl)

- ◆ Fundamentals of chemical technology and chemicals management – lecture and laboratory; 8,0 ECTS
dr Hanna Wilczura-Wachnik (wilczura@chem.uw.edu.pl)

- ◆ Methods of pollution control and waste management – lecture and laboratory; 8,0 ECTS
dr hab. Elżbieta Megiel (emegiel@chem.uw.edu.pl)

- ◆ Atomic spectrometry – lecture; 1,0 ECTS
prof. dr hab. Ewa Bulska (ebulska@chem.uw.edu.pl)

- ◆ Principles of stereochemistry – lecture; 2,0 ECTS
dr Anna Zawadzka (azawadzka@chem.uw.edu.pl)

- ◆ Organic chemistry – lecture; 4,5 ECTS
prof. dr hab. Tomasz Bauer (tbauer@chem.uw.edu.pl)

- ◆ Advanced organic chemistry – lecture; 3,0 ECTS
prof. dr hab. Tomasz Bauer (tbauer@chem.uw.edu.pl)

- ◆ Physical chemistry – laboratory; level A – 3,0 ECTS; level B – 6,0 ECTS
dr Iwona Paleska (ipaleska@chem.uw.edu.pl)

- ◆ Physical chemistry – lecture; 3,0 ECTS
prof. dr hab. Magdalena Skompska, prof. dr hab. Paweł Kryśński (mskomps@chem.uw.edu.pl,
pakrys@chem.uw.edu.pl)

- ◆ Physicochemistry of new materials – lecture; 3,0 ECTS
dr hab. Robert Szoszkiewicz, prof. UW (rszoszkiewicz@chem.uw.edu.pl)
- ◆ Practical application of Raman spectroscopy – lecture; 1,5 ECTS
dr Agata Królikowska (akrol@chem.uw.edu.pl)
- ◆ Advanced techniques in infrared spectroscopy – lecture; 1,5 ECTS
dr hab. Barbara Palys, prof. UW (bpalys@chem.uw.edu.pl)
- ◆ Marine microplastics: from the anthropogenic litter to the plastisphere – lecture; 1,5 ECTS
dr Agnieszka Dąbrowska (adabrowska@chem.uw.edu.pl)
- ◆ General physics 1 – lecture and laboratory; 6,0 ECTS
dr hab. Robert Szoszkiewicz, prof. UW (rszoszkiewicz@chem.uw.edu.pl)
- ◆ „Nuclear chemistry” – laboratory; 2,0 ECTS
dr Anna Makowska (milew@chem.uw.edu.pl)
- ◆ Liquid Chromatography – laboratory; 3,5 ECTS
dr hab. Magdalena Biesaga (mbiesaga@chem.uw.edu.pl)
- ◆ Crystallography A – lecture; 1,0 ECTS; laboratory 2,0 ECTS
prof. dr hab. Michał K. Cyrański (mkc@chem.uw.edu.pl)
- ◆ Crystallography B – lecture; 3,0 ECTS; laboratory 3,0 ECTS
dr Anna Makal (amakal@chem.uw.edu.pl)
prof. dr hab. Krzysztof Woźniak (kwozniak@chem.uw.edu.pl)

Spring semester – List of classes

- ◆ Liquid crystals – lecture; 1,5 ECTS
dr hab. Damian Pocięcha (pociu@chem.uw.edu.pl)
- ◆ Ionic liquids – lecture; 1,5 ECTS
dr Anna Makowska (milew@chem.uw.edu.pl)
- ◆ Chemical kinetics and catalysis – lecture; 1,5 ECTS
prof. dr hab. Marek Orlik (morlik@chem.uw.edu.pl)
- ◆ Computer aided drug design – lecture; 1,5 ECTS
prof. dr hab. Sławomir Filipek (sfilipek@chem.uw.edu.pl)
- ◆ Autooxidation and antioxidants – lecture; 1,5 ECTS
prof. dr hab. Grzegorz Litwinienko (litwin@chem.uw.edu.pl)

- ◆ Natural compounds and their impact on drug synthesis – lecture; 1,5 ECTS
dr Anna Zawadzka (azawadzka@chem.uw.edu.pl)

- ◆ Thermochemistry-physico-chemical properties of emulsions containing natural compounds – lecture; 3,0 ECTS
dr Hanna Wilczura-Wachnik (wilczura@chem.uw.edu.pl)

- ◆ Microemulsions of biologically active compounds – lecture; 1,5 ECTS
dr Hanna Wilczura-Wachnik (wilczura@chem.uw.edu.pl)

- ◆ Specialization laboratory 1-inorganic and analytical chemistry – laboratory; 10,0 ECTS
dr hab. Rafał Jurczakowski (rafjur@chem.uw.edu.pl)

- ◆ Organic chemistry – specialization laboratory; 10,0 ECTS
dr Elżbieta Winnicka (eboroda@chem.uw.edu.pl)

- ◆ Metrology in chemistry – lecture; 2,0 ECTS
prof. dr hab. Ewa Bulska (ebulska@chem.uw.edu.pl)

- ◆ Physical chemistry – laboratory; level A – 3,0 ECTS; level B – 6,0 ECTS
dr Iwona Paleska (ipaleska@chem.uw.edu.pl)

- ◆ Introduction to intellectual property management – lecture; 1,5 ECTS
dr Marcin Strawski (marcin@chem.uw.edu.pl)

- ◆ General physics 2 – lecture and laboratory; 8,0 ECTS
dr hab. Robert Szoszkiewicz, prof.UW (rszoszkiewicz@chem.uw.edu.pl)

- ◆ Fundamentals of molecular spectroscopy A – laboratory; 2,0 ECTS
dr Beata Wrzosek (bwrzosek@chem.uw.edu.pl)

- ◆ Fundamentals of molecular spectroscopy B – laboratory; 2,0 ECTS
dr Beata Wrzosek (bwrzosek@chem.uw.edu.pl)

- ◆ Ionic liquid – lecture; 1,5 ECTS
dr Anna Makowska (milew@chem.uw.edu.pl)

Students can also choose subjects at other faculties of the University of Warsaw and the Warsaw University of Technology.