Course code: 02-EMS-SAOCC-SP1 / 02-EMS-SAOCC-SP2 **Plan position:** ……

A. INFORMATION ABOUT THE COURSE

B. Basic information

Name of course	Structural analysis of chemical compounds
Field of studies	
Level of studies	
Profile of studies	General academic
Form of studies	Stationary
Specialty	
Unit responsible for the field of studies	Faculty of Chemical Technology and Engineering/Department of General and Inorganic Chemistry
Name and academic degree of teacher(s)	Przemysław Kosobucki, Ph.D., D.Sc., Associate Professor; Łukasz Dąbrowski, Ph.D., Assistant Profesor; Małgorzata Kaczorowska, Ph.D., D.Sc., Associate Professor; Katarzyna Witt-Kalicińska, Ph.D., D.Sc., Associate Professor
Introductory courses	
Introductory requirements	

C. Semester/week schedule of classes

Semester	Lectures (W)	Auditorium classes (Ć)	Laboratory classes (L)	Project classes (P)	Seminar (S)	Field classes (T)	Number of ECTS points
winter/summer	10		15				5

2. LEARNING OUTCOME

No.	Learning outcomes description	The reference to the learning outcomes of specific field of study	The reference to the learning outcomes for the area
KNOWLEDGE			
W1	Has a structured, theoretically underpinned knowledge of general understanding of structural analysis of chemical compounds.	K_W03	P6S_WG
W2	Knows techniques and methods for the characterization and identification of chemical products.	K_W11	P6S_WG
SKILLS			
U1	Works individually and as part of a team.	K_U02	P6S_UO P6S_UK
U2	Selects analytical methods for the qualitative and quantitative determination of chemical compounds and evaluation of their physico-chemical properties.	K_U11	P6S_UW

SOCIAL COMPETENCES			
K1	Is aware of the responsibility for jointly tasks, which are related to teamwork.	K_K04	P6S_KK P6S_KO

3. TEACHING METHODS

A. Traditional methods used

Multimedia lectures, laboratory experiments, and calculations (classes) are performed by students under the supervision of academic staff.

4. METHODS OF EXAMINATION

Written colloquium from lectures and written tests/reports from laboratories. The teacher may also change the form of assessment.

5. SCOPE

Lectures	Classification of the instrumental methods. Introduction to: IR spectroscopy, NMR Nuclear Magnetic Resonance, and Mass Spectrometry.
Laboratories	Health and safety rules and good laboratory practices. Application of physicochemical methods in quantitative analysis, with particular emphasis on: IR spectroscopy, NMR Nuclear Magnetic Resonance, and Mass Spectrometry

6. METHODS OF VERIFICATION OF LEARNING OUTCOMES

LEARNING OUTCOME	Form of assessment					
	Oral examination	Written exam	Colloquium	Project	Presentation	Report of the experiments
W1			x			
W2			x			x
U1			x			x
U2			x			x
K1						x

7. LITERATURE

Basic literature	1. G. D. Christian, P. K. Dasgupta K. A. Schug, ANALYTICAL CHEMISTRY, Seventh Edition, WILEY, 2014
Supplementary literature	1. Skoog D.A., Holler F.J., Holler F.J., Crouch S.R., 2014. Fundamentals of Analytical Chemistry, 9th Edition, Belmont. 2. Harris D.C., 2010. Quantitative Chemical Analysis, W.H. Freeman and Co. N.Y. 8th Ed. 3. Harvey D., 2000. Modern Analytical Chemistry. MC Graw Hill.

8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1B	25
	Supervision hours	10
	Preparation for classes	35

Student's own work	Reading assignments	25
	Other (preparation for exams, tests, carrying out a project etc)	30
Total student workload		125
	Number of ECTS points	**5**