

**Formularz opisu przedmiotu (formularz sylabusu) na studiach wyższych,
doktoranckich, podyplomowych i kursach doszkalających**

A. Ogólny opis przedmiotu

Nazwa pola	Komentarz
Name of the subject (in Polish and English)	<i>Praktyki zawodowe Internship</i>
Unit offering the subject	Faculty of Chemistry
Unit for which the subject is offered	Faculty of Chemistry
Subject code	0600-S1-O-PZ
ERASMUS code	
Number of ECTS credits	4
Method of assessment	The internship book The report confirmed by tutor
Language of instruction	English
Designation whether a subject may be credited more than once	No
Allocation of the subject to subject groups	<i>Compulsory subject</i>
Total student workload	Participation in practical classes, writing report: 120 hrs Altogether: 120 hrs (4 ECTS)
Learning outcomes - knowledge	<p><i>Student</i></p> <p>K_W01: knows the basic rights and chemical nomenclature, K_W02: knows the most important elements and their compounds; methods of correlation properties of elements and their basic chemical compounds with the position of the element in the periodic table, K_W04: knows the role of experiment and computer simulation of chemical processes, K_W05: knows basic application software packages to analyze experimental data K_W06: knows the theoretical and practical aspects of the implementation of qualitative and quantitative analysis of classical and instrumental methods and rules of operation of the apparatus, K_W07: has a basic knowledge about functional groups of organic compounds and reaction mechanisms K_W08: is familiar with states of matter, equations of state, the theory of chemical kinetics, intermolecular interactions, laws of thermodynamics, phase equilibria, basic electrochemistry, K_W09: has knowledge of basic terms, concepts, principles and laws of physics and their universal nature sufficiently to further education, K_W10: knows the basic concepts and research methods of modern inorganic and coordination chemistry, K_W11: knows the basics of biochemistry and chemistry of metabolic processes, K_W12: knows how to prepare samples for analysis of environmental matrices, indicators of water quality, toxicity tests, methods of neutralization treatment, K_W13: knows the basic aspects of construction and methods of assessing the properties of materials and chemicals. Has knowledge allowing the use of materials for a particular purpose and guidance,</p>

	<p>practical methods of management after usage, K_W15: has knowledge in the field of basic issues of technology and chemical engineering, K_W16: knows the rules and principles of health and safety at work, the basic concepts of toxicology; Legal framework of the standards and requirements of chemical laboratories and regulations on the substances and their storage and labeling.</p>
<p>Learning outcomes - skills</p>	<p><i>Student</i></p> <p>K_U01: Can use chemical nomenclature and concepts of general chemistry, K_U02: can correlate the properties of elements and their chemical compounds with the position in the periodic table and chemical properties of substances bind with their contemporary applications, K_U05: has measurement skills of basic chemicals and can analyze the experimental results of physico-chemical measurements, K_U06: is able to perform quantitative analysis using methods of weight titration and instrumental based on analytical procedures and prepare analysis reports, K_U07: recognizes the functional groups of organic compounds and experiments conducted in the field of organic chemistry, K_U08: distinguishes between states of matter and knows how to define and describe the physical and chemical processes, K_U10: can synthesize simple inorganic compounds and selected coordination compounds, K_U11: can determine the structure and function of macromolecular compounds occurring in living organisms and to characterize the metabolic changes that occur in the basic metabolic pathways, as well as ways of storing and processing of chemical energy in the cell, K_U12: is able to retrieve and prepare environmental samples and analyze them, K_U13: knows how to find the relationship between the behavior of the material during the formation and its physico-chemical properties, structure and type of structure, K_U15: is able to solve basic problems related to the implementation of technological processes, K_U16: can properly behave in the event of various types of risks, such as fire, contact with chemical reagents.</p>
<p>Learning outcomes - social competencies</p>	<p><i>Student</i></p> <p>K_K01: effectively works with a large amount of information, sees the relationship between phenomena and correctly draws conclusions using the rules of logic, K_K02: thinks creatively to improve existing or create new solutions, K_K03: is set to the best execution of the task; takes care of the detail; is the systematic K_K04: Effectively communicates to others K_K05: is set to continually acquire new knowledge, skills and experience; sees the need for continuous improvement and raise the professional competence; knows the limits of his own knowledge and understands the need for further education, K_K06: works steadily and has a positive approach to the difficulties standing in the way of the objective pursued; keeping deadlines; understands the need for systematic work on all projects, K_K07: Fully independently carries out agreed targets, by independent and sometimes difficult decisions; can independently search for information in the literature, K_K09: Establishes and maintains long-term and effective cooperation</p>

	with others; seeks to achieve team goals through proper planning and organization of their work, and others.
Teaching methods	Practical methods (demonstrations and exercises performed under the supervision of the tutor).
Prerequisites	General chemistry course.
Brief description of the subject	Individual 120-hour practice is carried on in the student's chosen workplace over any period of time. The student agrees details about the internship with the workplace in person. Internship can be performed both in production plants as well as companies and institutions whose activity is related to the chemical aspect.
Complete description of the subject	Internship takes place in the student's chosen institution with a chemical laboratory or production line with a chemical process. The training program is determined by the University with the institution that organizes apprenticeships. In this framework, the trainees become familiar with the structure and functioning of selected institutions, the scope of the performed tasks, current problems and ways of solving them, learn the basics of methodology and field work. The program may also include specific projects, for example monitoring, synthesis, chemical participation in educational tasks carried out by the organizer practices.
Literature	Literature given by the tutor and organizer of internship.
Assessment methods & criteria	Interview with tutor. In terms of competence, supervision of the tutor.
Work placement	Yes

B) Opis przedmiotu cyklu

Nazwa pola	Komentarz
Didactic cycle	2014/2015
Method of assessment of the subject in the cycle	Non graded credit
Type of classes, number of hours of classes and methods of assessment	Non graded credit
Subject coordinator	Dr Marcin Cichosz
Subject teachers	
Nature of the subject	obligatory subject
Limit of places available in each group	No limit
Time and place	Classes take place outside the Faculty
Learning outcomes	As in part A
Assessment methods & criteria	As in part A
List of topics	As in part A
Teaching methods	As in part A
Literature	As in part A