Faculty of Medicine / PHARMACY / ANALYTICAL CHEMISTRY IN PHARMACEUTICAL PRACTICE I

Course:	ANALYTICAL CHEMISTRY IN PHARMACEUTICAL PRACTICE I			
Course ID	**Course status**	**Semester**	**ECTS credits**	**Lessons** (Lessons+Exercises+Laboratory)
8017	Mandatory	9	2	1+1+0
Programs	PHARMACY			
Prerequisites	There is no conditionality			
Aims	The goal is that students learn what is the real sample and how to solve specific analytical problems. Complex samples necessitate a systematic approach to the problem, so the student gets his first experience in setting up a methodology for solving specific analytical problems.			
Learning outcomes	1. create a skilled approach to the analysis of real samples; 2. clearly define a problem and choose an appropriate technique for sampling, the method of sample preparation for quantitative chemical analysis; 3. select the appropriate analytical method for the analysis of inorganic ions, to test and interpret the results.			
Lecturer / Teaching assistant	Assistant Professor Vesna Vukašinović-Pešić, PhD			
Methodology	lectures, laboratory exercises, group work, consultations and interactive teaching (database search)			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Presentation of subject. Real sample - Application voltammetric technique in the analysis of inorganic ions - Part I			
I week exercises				
II week lectures	The real samples - Application voltammetric technique in the analysis of inorganic ions - Part II			
II week exercises				
III week lectures	The real samples - Analysis of the metals and metalloids using atomic spectroscopy methods - Part I			
III week exercises				
IV week lectures	The real samples - Analysis of the metals and metalloids using atomic spectroscopy methods - Part II			
IV week exercises				
V week lectures	Analytical applications of photometric titration and derivative spectrophotometry in the analysis of real samples - Part I			
V week exercises				
VI week lectures	Analytical applications of photometric titration and derivative spectrophotometry in the analysis of real samples - Part II			
VI week exercises				
VII week lectures	Application of potentiometry in the analysis of real samples - Part I			
VII week exercises				
VIII week lectures	Application of potentiometry in the analysis of real samples - Part II			
VIII week exercises				
IX week lectures	Application of UV/VIS spectroscopy and fluorometry in analysis of metal ions - Part I			
IX week exercises				
X week lectures	Application of UV/VIS spectroscopy and fluorometry in analysis of metal ions - Part II			
X week exercises				
XI week lectures	Interactive teaching and database search			
XI week exercises				
XII week lectures	Interactive teaching and database search			
XII week exercises				
XIII week lectures	Interactive teaching and database search			
XIII week exercises				

XIV week lectures	Interactive teaching and database search
XIV week exercises	
XV week lectures	Final exam
XV week exercises	
Student workload	

Per week	**Per semester**
2 credits x 40/30=2 hours and 40 minuts 1 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises **0 hour(s) i 40 minuts** of independent work, including consultations	Classes and final exam: **2 hour(s) i 40 minuts x 16 =42 hour(s) i 40 minuts** Necessary preparation before the beginning of the semester (administration, registration, certification): **2 hour(s) i 40 minuts x 2 =5 hour(s) i 20 minuts** Total workload for the subject: **2 x 30=60 hour(s)** Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) **12 hour(s) i 0 minuts** Workload structure: **42 hour(s) i 40 minuts (cources), 5 hour(s) i 20 minuts (preparation), 12 hour(s) i 0 minuts (additional work)**
Student obligations	Students are required to attend lectures and practical training, to do and teach seminars.
Consultations	
Literature	
Examination methods	Activities during lectures (0-10 poens), laboratory exercises(0-20 poens), Seminars (0-20 poens), Final exam (0-50 poens)
Special remarks	Exercises are organized in the form of visits institutions that have the right equipment and in the form of seminars.
Comment	

Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points