

Study program: Integrated academic studies of Pharmacy			
Type and level of the study program: integrated academic studies			
Course title: NMR METHODS (PhIII-NMRM)			
Teacher: Mihalj M. Poša, Ana S. Pilipović			
Course status: elective			
ECTS Credits: 3			
Condition: Organic chemistry 2; Physical Chemistry			
Course aim Introduce students to the principles of NMR methods. The application of NMR methods to solve the structure of organic molecules. Dynamic kinetic NMR monitoring process. The use of the NMR method of determining the interaction between the drug and the receptor.			
Expected outcome of the course: Introduce students to the physical and chemical processes of obtaining NMR signal and spectrum. Interpretation of NMR spectra. Students will be able to solve the structure of organic molecules on the basis of NMR spectra			
Course description <i>Theoretical education</i> <ol style="list-style-type: none"> 1. Magnetic moment nucleus 2. Energy nuclei in a magnetic field 3. Chemical shift 4. Coupling 5. Pulse techniques 6. The resultant magnetic moment vector spectral width and speed of the physical and chemical processes 7. Overhauser effect 8. 2D NMR <i>Practical education: exercises, other forms of education, research related activities</i> Interpreting the NMR spectrum, solving the structures			
Literature <i>Compulsory</i> <ol style="list-style-type: none"> 1. Hore J. Nuclear magnetic resonance. Oxford University Press, 1955. <i>Additional</i> /			
Number of active classes			Other:
Lectures: 30	Practice: 15	Other types of teaching: Research related activities:	
Teaching methods: lectures, practice			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures		Written	
Practices		Oral	40
Colloquium		
Essay	60		