

Course title: Methods and techniques of learning chemistry – advanced course				
Lecurer: Jasna Adamov				
Status: elective				
ECTS: 15				
Requirements:				
Learning objectives Training for effective self-study of chemistry within the professional development of chemistry teachers.				
Learning outcomes After taking the course, the student should:				
General capabilities:				
<ul style="list-style-type: none"> • demonstrate advanced knowledge of techniques of learning chemical content • successfully organize chemical content into a complex system of knowledge 				
Subject-specific capabilities: Student will be able to				
<ul style="list-style-type: none"> • successfully organize and conduct pedagogical research in the field of methods and techniques of learning chemistry. 				
Syllabus				
<i>Theoretical instruction</i> The basic strategies of learning chemistry. Collaborative learning and its forms of learning chemistry. Application of concepts and associations. Active learning in chemistry. Understanding the chemical textbooks. The development of spatial visualization abilities of abstract concepts. Visualization in modern chemistry teaching in primary and secondary education.				
<i>Students research</i> Exercise in chemical language. Practice problem assignments. Creating concept maps for educational content in general, organic, physical, analytical chemistry and biochemistry. Using Databases in learning chemistry.				
Suggested literature:				
1. Young, S. - Holistic learning, (http://www.scotthyoung.com/blog/Programs/HolisticLearningEBook.pdf)				
2. De Bono, E. - Lateral Thinking: Creativity Step by Step, Harper Colophon; 1990.				
3. Buzan, T. - Buzan's Study Skills, BBC Active Publishing, 2006.				
Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	
Teaching methodology lectures, practical exercises, assignments, discussions, seminars, consultations				
Grading (maximal number of points 100)				
Practical learning 30 points				
Project 10 points				
Oral exam 60 points				