

Study programme(s): Information Technologies			
Level: Master			
Course title: Methodics of Informatics			
Lecturer: Mirjana Ivanović			
Status: elective			
ECTS: 7			
Requirements: none			
Learning objectives Gaining knowledge in the field of methodics of informatics and preparation of students for its application in real educational processes. Introduction of modern trends in educational environments and application of ICT.			
Learning outcomes <i>Minimal:</i> Empowering of students for application of contemporary methodical principles and techniques of educational technology in preparation and application of teaching of computer science. <i>Optimal:</i> Empowering of students for application of innovative contemporary methodical principles and techniques of advanced educational technology in preparation and application of teaching of computer science, lifelong learning and informal education.			
Syllabus <i>Theoretical instruction</i> Forms of thinking in a process of teaching mathematics and informatics. Mathematical notions and methodics of its introduction in mathematics and informatics teaching. Mathematical bases and conclusions. Necessity and sufficiency. Induction and deduction. Analogy. Comparison. Analysis and synthesis. Generalization and abstraction. Role and place of assignments in teaching of informatics, their choice depending on teaching aims and methodics of assignment solving. Principles, methods and forms in teaching of informatics. Heuristic method. Method of active entrance. Method of programmed teaching. "Problem" teaching. Individualization. Organization of informatics teaching. Informatics class as an elementary form of teaching. System of preparation for classes. Planning of teaching. Examination and assessment in informatics teaching. Teaching and technical resources in informatics teaching. Problems of educational technology. Additional and supplementary teaching and free activities for pupils in informatics. Methodology in mentioned forms, schools with increased studies in informatics and their specifics. Problems of modernization of informatics teaching and repercussions of new problems on methodical approach. Educational technologies, sinchrone and asinchrone learning, Collaborative learning. E-Learning, M-Learning, Offline mobile learning, Ubiquitous learning. <i>Practical instruction</i> Written preparation of classes, demonstration of classroom teaching and actual class performance in classes of elementary and secondary school, analysis of teaching process and class performance. Students team work and discussion of concepts presented within theoretical classes and possibilities of their application in real learning primary and secondary school learning.			
Literature 1. Schubert, S., Schwill, A.: Didaktik der Informatik, Spektrum, Akademischer Verlag, Heidelberg, Berlin, 1999. 2. Бранковић, Д.: Методика наставе информатике, Комесграфика, Бања Лука, 2002. 3. Домазет, М. Грбић, Д.: Методика наставе информатике и примјена рачунара у основној школи, Завод за уџбенике и наставна средства, Бања Лука, 2004. 4. Brückner M., „Educational Technology“, Naresuan University, Phitsanulok, Thailand, 2015. 5. Соро М., Попов С., Мртодика наставе тхничког и информатичког образовања, Завод за уџбенике, 2015.			
Weekly teaching load 5			
Lectures: 2	Exercises: 2	Practical Exercises: 1	Student research:
			Other:
Teaching methodology Theoretical classes, analysis of written preparation for classes and class demonstration. Analysis of classes held in elementary and secondary schools. Tests. Seminar papers.			
Grading method (maximal number of points 100)			
Pre-exam obligations	points	Final exam	points
Practical tasks	60	Oral exam	40