Study programme(s): Teaching Informatics (IC)

Level: master

Course title: Teaching methods in informatics (IA222)

Lecturer: Vladimir M. Kurbalija

Status: obligatory

ECTS: 7

Requirements: None

Learning objectives

Acquiring knowledge in the field of methodologies of teaching informatics and preparation of students for their application.

Learning outcomes

Preparation students for application of contemporary methodological principles and educational techniques in preparation and performing of teaching informatics.

Syllabus

Theoretical instruction

Forms of thinking in a process of teaching of mathematics and informatics. Mathematical notions and methodology of their introduction in teaching of mathematics and informatics. Mathematical basics and conclusions. Necessity and sufficiency. Induction and deduction. Analogy. Comparison. Analysis and synthesis. Generalization and abstraction.

Role and place of assignments in teaching informatics, their choice according to teaching goals and methodology of their solving. Principles, methods, and forms in teaching informatics. Heuristic methods. Methods of active input. Method of programmed instruction. Problem-based learning. Individualization. Organization of teaching of informatics. Computer science class as a basic form of teaching. System of preparation for class teaching. Teaching planning. Examination and assessment in teaching informatics. Teaching and technical equipment in teaching informatics. Problems of educational technology. Additional and complementary teaching and free pupil activities in teaching informatics. Methodology of work for those activities, schools with enhanced studies of informatics and specificities of their work. Problems of modernizations with teaching of informatics and repercussions of new problems on methodological approaches.

Practical instruction

Written preparation for a teaching class, demonstration of teaching class and actual conduction of teaching at elementary and secondary school, analysis of teaching process and conducting classes.

Literature

1. Schubert, S., Schwill, A.: Didaktik der Informatik, Spektrum, Akademischer Verlag, Heidelberg, Berlin, 1999.
2. Brankovic, D.: Methodology of teaching informatics, Komesografika, Banja Luka, 2002.
3. Domazet, M., Grbić, D.: Methodology of teaching informatics and usage of computers in elementary school, Institute for publication of textbooks, Banja Luka, 2004.

Weekly teaching load				Other:
Lectures: 2	Exercises: 3	Other forms of teaching:	Student research:	

Teaching methodology

Lectures, analysis of written preparations for teaching classes and demonstration of classes. Analysis of classes conducted at elementary and secondary schools. Tests.

Grading (maximum number of points 100)

Pre-exam obligations	**points**	**Final exam**	**points**
Activities at lectures	**4**	Oral exam	40

Practical exercises	**20**		
Tests	**16**		
Seminar paper(s)	**20**		