Course title: Selected Chapters of Methodics of Teaching Computer Science 1	
Lecturer: **Dragan Mašulović**	
Status: elective	
ECTS: 15	
Requirements:	

Learning objectives

Introduction of (future) teachers with the elementary notions and systematizations in a domain of teaching and with the most important didactic aspects of teaching process, various forms of teaching, all with the final goal of competent and efficient realization of complex role of teacher in educational process. Achievement of a high level of knowledge and understanding of current problems in teaching computer science, research and highly expert work with transfer of original ideas into teaching practice.

Learning outcomes

Understanding of elementary teaching postulates in teaching of computer science, methods of their application and their influence on various aspects of teaching process. Thorough understanding and improvement of own role of teacher, of teaching process and working methods, as much as of nature and possible outcomes of practicing of different teaching forms. Usage of expert literature, scientific terminology, modern teaching methods and interdisciplinary approach to teaching.

Syllabus

Theoretical instruction

History of methodics. Basic notions, characteristics, and systematization in a field of methodics. Specifics of presentation of teaching material. Expert and methodical aspects of some of the most important topics from computer science curricula for elementary and secondary schools. Basic concepts of teaching. Didactic principles. Forms of teaching. Types of teaching and modern teaching models. Assessment and knowledge testing. Quality of teaching and assurance and maintenance of quality.

Student research

Analysis of basic didactic principles and teaching forms and their realization in schools. Exercises follow lectures as topics are presented.

Suggested literature:

1. Roland Mittermeir, Maciej M. Syslo (Eds), *Informatics Education - Supporting Computational Thinking: Third International Conference on Informatics in Secondary Schools*, Lecture Notes in Computer Science / Theoretical Computer Science and General Issues (Book 5090), Springer 2008

2. Ira Diethelm, Roland T. Mittermeir (Eds), *Informatics in Schools. Sustainable Informatics Education for Pupils of all Ages: 6th International Conference on Informatics in Schools*, Lecture Notes in Computer Science / Theoretical Computer Science and General Issues (Book 7780), Springer 2013

3. A. W. Bates, A. Sangra, *Managing Technology in Higher Education: Strategies for Transforming Teaching and Learning*, Jossey-Bass, 2011

Weekly teaching load	**Lectures**: 5	**Student research**: 5

Teaching methodology

Lectures, consultations, interactive and dialog methods.

Grading (maximal number of points 100)			
Pre-exam requirements	points	**Final exam**	points
Practical teaching	10	Oral exam	60
Colloquia	10		
Seminar papers	20		