NAME OF THE COURSE	Methods of Teaching Informatics I					
Code	PMIK50	Year of study	GU-1			
Course teacher	izv. prof.dr. sc. Ivica Boljat	Credits (ECTS)	6,0			
Associate teachers	Monika Mladenović	Type of instruction (number of hours)	L	S	E	F
			30	30	30	
Status of the course		Percentage of application of e-learning	20			

COURSE DESCRIPTION	
Course objectives	Theoretically and practically train students for quality preparation, realization and analysis of the teaching process.
Course enrolment requirements and entry competences required for the course	Knowledge of basic IT areas is essential, especially programming. It is desirable to have knowledge of didactics and psychology of learning.
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	Students will be able to: - To differentiate IT as one of the fundamental natural sciences from other related disciplines - Understand the role of IT teachers in accordance with school theories - Analyze the curriculum of IT, plan lessons, organize knowledge for teaching. - Realize teaching by using the most appropriate teaching models tailored to the content, type of school, age, and individual characteristics of students, especially by taking into account the learning styles and the theory of multiple intelligences and the recommendations that arise from learning theory - Motivate students by using theoretical results, especially cognitive motivation theories and goal achievement goals - Identify factors that obstruct the objective evaluation and mitigate their performance, compile measuring instruments that meet the requirements of validity, reliability, objectivity
Course content broken down in detail by weekly class schedule (syllabus)	1. Basic concepts: computer science, computer science, computer science, information science, computer engineering, information and communication technology, software engineering, information systems. CC2005. (2 + 2 + 0) 2. Classification of Methodology and Informatics in the Science of ACM, Frascatti. Informatics is a natural science - Denning. Relationship of methodology-didactics-supra-science. (1 + 1 + 0) 3. Is the methodology science. Criteria of Popper, Connorsa, Monshowera, Lakatos, Laudana. (1 + 1 + 0) 4. HNOS, K-12, CS213. Literacy, agility, knowledge and skills required: concepts, ability to solve problems, IT skills. Alternative approaches to curriculum development. Treshold concepts. (3 + 3 + 4) 5. Theories of school. (2 + 2 + 0) 6. Didactic theories. (2 + 2 + 0) 7. Teaching Models in Computer Science: Problem Training, Project, Dating, Learning by Detection, Collaborative, ERR Teaching Framework, Situational Learning, Generic, Septic. Bergine's Patterns. Training in Computer Laboratory. Getting experience in teaching information technology. (4 + 6 + 12) 8. Communication and planning of teaching. Organizing knowledge for teaching. (2 + 2 + 4))

	9th Constructivism. (2 + 2 + 0) 10. Behavioral and cognitive theories of learning: Piaget, Vigotski, Talizina, Galjperin, Podđakov, Bruner, Gagne, Bandura. Information Processing Theory. (3 + 3 + 0) 11. Styles of learning. Myers-Briggs, Pask, Entwistle, Grasha-Reichmann, Dunn-Dunn, Gregorc, Kolb, Honey-Mumford, Herrmann, Felder-Silverman. (2 + 2 + 0) 12. Learning Concepts. Klausmeier's CLD theory. (1 + 1 + 2) 13. Motivation. Sources of motivational needs. Theories of Motivation: Maslow, Alderfer, Theory of Expectations, Attribution Theory, Cognitive Disonance Theory, Goal Achievement Theory. (2 + 2 + 0) 14. dokimologija. Sources and types of errors. Measuring Instruments and Characteristics. Validity, reliability, objectivity, discriminative value of the task. Construction of a computing test using Bloom's taxonomy. Types of issues in CSE. (3 + 3 + 8)
Format of instruction	☐ lectures ☒ seminars and workshops ☒ exercises ☐ on line in entirety ☐ partial e-learning ☐ field work ☐ independent assignments ☐ multimedia ☐ laboratory ☒ work with mentor ☒ homework assignments
Student responsibilities	Attending all forms of teaching, teaching practice, oral exam.

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*

Name	Ects	Name	Ects	Name	Ects
Class attendance	2	Research		Experimental work	
Oral exam	3	Report		Homework assignments	
Seminar essay		Essay			
Tests		Practical training	1		
Written exam		Project			

Grading and evaluating student work in class and at the final exam	Oral exam (75%) Practical ntraining 825%)

Required literature (available in the library and via other media)

Title	Number of copies in the library	Availability via other media
1. Boljat, I. metodika nastave informatike I, predavanja, 2014.	0	yes
2. Hazzan, O., Lapidot, T., Ragonis, N., Guide to teaching computer science: an activity-based approach, Springer, 2011.	1	yes

Optional literature (at the time of submission of study programme proposal)	1. Petrina, S., Advanced teaching methods for technology classroom, Information Science Publishing, 2007. 2. Schubert, S., Schwill, A., Didaktik der informatik, 2011. 3. Hubvieser, P., Didaktik der Informatik: Grundlagen, Konzepte, Beispiele, 2007. 4. Instructional strategies online, http://olc.spsd.sk.ca/DE/pd/instr/index.html, 2014.
Quality assurance methods that ensure the acquisition of exit competences	Conversation with students, student evaluation using anonymous poll, student success on the exam, self-assessment.
Other (as the proposer wishes to add)	