

<b>Study programmes:</b> Bachelor studies - Informatics				
<b>Course name:</b> P102 - Object-oriented programming				
<b>Lecturers:</b> Vladimir Filipović, Aleksandar Kartelj and other teachers from Department for Computer Science and Informatics				
<b>Status:</b> Compulsory				
<b>ECTS:</b> 6				
<b>Attendance prerequisites:</b> P100, P101				
<b>Course aims:</b> Acquiring general and specific knowledge in Object-oriented programming.				
<b>Course outcome:</b> Upon finishing this course, student have basic knowledge of object-oriented programming. He/she understands concepts of programming, algorithm and program, as well as various programming paradigms. Student is capable for programming, testing and debugging in Java programming language using both integrated development environment and command line tools. Student is able to use object, classes and inheritance in the process of problem solving. He/she also should know how to work with abstract classes and interfaces. Student should successfully work with enumerated types and to work with existing and create new generic types and methods. He/she should be able to use exceptions, to write into and read from data streams attached to the file. Student should have knowledge of reflection, and also the basic knowledge of multi-threaded programming. Upon finishing the course, student should be able to write programs that use GUI.				
<b>Course content:</b> - Object-oriented paradigm. - Objects, classes, inheritance. - Programming language Java. - Classes and inheritance in Java language. - Packages. - Inner classes. - Exceptions. - Enumerated types. - Generic types and methods. - Reflection. - Annotations. - Collections. - Multi-threaded programming. - Input and output. - Serialization. - JavaFX.				
<b>Literature:</b> 1. Cay Horstmann, Garry Cornell: Core Java 2 Volume 1 - Fundamentals, Sun Microsystems, 2008. 2. Carl Dea: Java FX 2.0 - Introduction by Examples, Apress, 2011. (teacher can select other adequate books)				
<b>Number of hours:</b> 5	<b>Lectures:</b> 3	<b>Tutorials:</b> 2	<b>Laboratory:</b> -	<b>Research:</b> -
<b>Teaching and learning methods:</b> Frontal, group, individual and practical.				
<b>Assessment (maximal 100 points)</b>				
<b>Course assignments</b>	<b>points</b>	<b>Final exam</b>		<b>points</b>
Lectures	-	Written exam		-
Exercises / Tutorials	-	Oral exam		-
Colloquia	30	Written-oral exam		70
Essay / Project	-			