

<b>Course title: Fundamentals of Object-Oriented Programming</b>
Course code: 63047
ECTS credits: 8
Requirements: None
<b>Basic information</b>
Level of studies: Undergraduate applied studies
Year of study: 2
Trimester: 5
Goal: Acquiring knowledge of the basic principles of object-oriented programming and creative application of these principles in the Java programming language.
Outcome: The student is familiar with one of the Java programming language development environments. The student will be able to create small programs in the Java programming language using the basic principles of object-oriented programming.
<b>Contents of the course</b>
Theoretical instruction
1.Object-oriented programming basics: Polymorphism, Encapsulation, Data Abstraction and Inheritance
2. JAVA programming language: Data types
3. JAVA programming language: Operators
4. JAVA programming language: Control statements
5. JAVA programming language: Class and object
6. JAVA programming language: Inheritance and polymorphism
7. JAVA programming language: Abstract class
8. JAVA programming language: Packages
9. JAVA programming language: Input/Output operations
Practical instruction (Problem solving sessions/Lab work/Practical training)
1. JAVA programming language development environment
2. JAVA programming language: Control statements, operators, data types, arrays
3. JAVA programming language: Strings
4. JAVA programming language: Class, object, method

5. JAVA programming language: Inheritance, and polymorphism
6. JAVA programming language: Abstract class
<b>Textbooks and References</b>
1. D. Vohra, B. Baesens, A. Backiel, S. vanden Broucke, Beginning Java Programming: The Object-oriented Approach, John Wiley & Sons, 2015.
2. H. Schildt, Java TM J2SE TM 5: комплетан приручник, Микро књига, Београд, 2006, оригинално издање: Java TM: The Complete Reference, J2SE TM 5 Edition, The McGraw-Hill Companies, 2005.
3. L. Kraus, Rešeni zadaci iz programskog jezika Java, Akademska misao, Elektrotehnički fakultet, Beograd, 2005.
4.
5.
<b>Number of active classes (weekly)</b>
Lectures: 4
Practical classes: 4
Other types of classes: 0
<b>Grading (maximum number of points: 100)</b>
<b>Pre-exam obligations: Points</b>
Activities during lectures:
Activities on practical exercises: 25
Seminary work:
Colloquium: 25
<b>Final exam: Points</b>
Written exam: 50
Oral exam:
<b>Lecturer</b>
Goran Zajić, PhD
<b>Associate</b>