

### DESCRIPTION OF A STUDY COURSE – SYLLABUS

<b>Title of a course</b>	<b>Object-oriented Technologies I</b>				
<b>Study programme</b>	<b>Professional undergraduate study Information Science</b>				
<b>Status of a course</b>	Obligatory				
<b>Year of study</b>	2	<b>Semester (Winter/Summer)</b>	S	<b>ECTS credits</b>	6
<b>Goals of a course</b>					
Acquiring knowledge of the basic concepts of object-oriented programming and application design.					
<b>Conditions for enrolling course</b>					
No conditions					
<b>Learning outcomes on a level of a study programme which includes course</b>					
Outcome 2: Apply business information system design methods. Outcome 4: Develop an application solution for the Internet and desktop environment. Outcome 12: Apply engineering methods and principles in information science. Outcome 15: Independently present professional content in written and spoken form in Croatian and English.					
<b>Expected learning outcomes on a level of a course</b>					
<ol style="list-style-type: none"> <li>1. Describe the process of planning and building software from the object-oriented approach aspect.</li> <li>2. Apply basic concepts of object-oriented programming</li> <li>3. Design an application using the object-oriented approach</li> <li>4. Implement the application in object programming language based on the assigned task</li> <li>5. Create an application with data entry and display, using the object-oriented approach</li> </ol>					
<b>Content of a course</b>					
<p>Software products and their development. Procedural vs. object-oriented programming. Introduction to object-oriented analysis. Concepts of object-oriented approach. Basic phases of object-oriented design. Process of collecting demands. Classes and objects as basic units of abstraction. Classes and objects model. Links between classes. Polymorphism. Encapsulation. Attribute class design, operation/method and relation. Pattern design. Inheritance.</p> <p>Incremental and iterative processes in the development of applications. Static and dynamic modelling in object-oriented analysis. Identification and analysis of dynamic models. Use of CASE tools. Selection of tools for modelling. UML (Uniform Modelling Language). Oracle Jdeveloper 9i and 10g tool. Object-oriented languages: C++, Perl, Java, Script languages. Application on the client server and the network. Security and control. Standards for application expansion.</p>					
<b>Teaching modes</b>	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
<b>Grading, evaluation and monitoring of students' work continuously during lectures and exams</b>					
Grading is based upon evaluation course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.					