COURSE DESCRIPTION

THE HIGHER VOCATIONAL STATE SCHOOL IN WLOCLAWEK

Course: BASICS OF PROGRAMMING

<table>
<tr><td>Field of study:</td><td colspan="5">Computer science</td><td colspan="2">Course code:</td></tr>
<tr><td>Unit supervising the course:</td><td colspan="5">Instytut Nauk Społecznych i Technicznych, Zakład Informatyki</td><td colspan="2"></td></tr>
<tr><td>Course orientation:</td><td colspan="7">Practical</td></tr>
<tr><td>Language of instruction:</td><td colspan="7">English</td></tr>
<tr><td>Course type:</td><td colspan="7">Directional</td></tr>
<tr><td>Course status:</td><td colspan="7">Mandatory</td></tr>
<tr><td>Level: I</td><td colspan="3">Year: I</td><td colspan="4">Semester: I</td></tr>
<tr><td colspan="8">The number of teaching hours on the full-time programme:</td></tr>
<tr><td>Total</td><td>lecture</td><td>classes</td><td>laboratory</td><td>projects</td><td>tutorials</td><td>seminars</td><td>practicum</td></tr>
<tr><td>20</td><td>-</td><td>-</td><td>-</td><td>20</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td colspan="8">The number of teaching hours on the part-time programme:</td></tr>
<tr><td>Total</td><td>lecture</td><td>classes</td><td>laboratory</td><td>projects</td><td>tutorials</td><td>seminars</td><td>practicum</td></tr>
<tr><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td colspan="2">Learning outcomes:</td><td colspan="6">Knowledge:
• has a general or specific knowledge in terms of computer science
Skills:
• can plan and carry out experiments, including computer simulations, interpret the results and draw conclusions
Social competence:
• has a sense of responsibility for own work and the willingness to submit to the rules work in a team and to take responsibility for collaborative tasks</td></tr>
<tr><td colspan="2">Full description of the course:</td><td colspan="6">Laboratory:
1. Elements JAVA development environment,
2. Entering the code and compile programs,
3. Syntactic issues,
4. Types of data
5. Variables
6. Arrays
7. Arithmetic, logical and assignment operators,
8. Expressions controls:
• Selection instructions,
• Iterative instructions,
• Jump instructions.
9. Recursion,
10. Operations with texts,</td></tr>
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<tr><td></td><td colspan="5">11. Functions,
12. Introduction to classes:
• Declaring objects
• Introduction to the methods,
• Constructor.</td></tr>
<tr><td>Methods:</td><td colspan="5">Laboratory:
Laboratory exercises.</td></tr>
<tr><td rowspan="10">The student's workload/ ECTS credits:</td><td rowspan="3">Forms of activities</td><td colspan="4">Average number of hours to complete activities</td></tr>
<tr><td colspan="2">Full-time</td><td colspan="2">Part-time</td></tr>
<tr><td>Lecture</td><td>Classes</td><td>Lecture</td><td>Classes</td></tr>
<tr><td>Contact hours with academic instructor</td><td>-</td><td>40</td><td>-</td><td>-</td></tr>
<tr><td>Hours without academic instructor</td><td>-</td><td>110</td><td>-</td><td>-</td></tr>
<tr><td>1. Preparation for the classes, including reading assignments</td><td>-</td><td>30</td><td>-</td><td>-</td></tr>
<tr><td>2. Processing the quantitative data /preparation for the exam, evaluation tests, etc.</td><td>-</td><td>50</td><td>-</td><td>-</td></tr>
<tr><td>3. Preparation of a report, presentation, discussion</td><td>-</td><td>30</td><td>-</td><td>-</td></tr>
<tr><td>Total</td><td>-</td><td>150</td><td>-</td><td>-</td></tr>
<tr><td>Total number of ECTS for the conducted form of classes</td><td>-</td><td>6</td><td>-</td><td>-</td></tr>
<tr><td>Total number of ECTS points for the entire course</td><td colspan="2">6</td><td colspan="2">-</td></tr>
<tr><td>The type and mode of obtaining the credit and marking criteria or requirements:</td><td colspan="5">The type:
• Laboratory - credit rating.
The mode:
• Laboratory – realization of lab exercises and presentation.
Basic assessment criteria:
• Laboratory – passing the final test</td></tr>
<tr><td>Literature:</td><td colspan="5">Prescribed reading:
1. Eckel. B., "Thinking in Java", Prentice-Hall, 2002.
2. http://en.wikibooks.org/wiki/Java_Programming
3. Sierra K., Bates B., "Head First Java:, O'Reilly, 2005.
Recommended reading:
1. Schildt H., Java, A Beginner's Guide, Oracle Press, 2011.
2. Deitel H., Java How to Program, Deitel., 2011</td></tr>
<tr><td colspan="6">Course instructor: mgr inż. Bartosz Popławski</td></tr>
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