

| <b>STUDY MODULE DESCRIPTION FORM</b>   |  |  |
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| Name of the module/subject<br><b>Computer Science</b>  |  | Code<br><b>1011104311011160390</b>                     |
| Field of study<br><b>Logistics - Part-time studies - First-cycle</b>   | Profile of study<br>(general academic, practical)<br><b>(brak)</b> | Year /Semester<br><b>1 / 1</b>                         |
| Elective path/specialty<br><b>-</b>  | Subject offered in:<br><b>Polish</b>                               | Course (compulsory, elective)<br><b>obligatory</b>     |
| Cycle of study:<br><b>First-cycle studies</b>  | Form of study (full-time,part-time)<br><b>part-time</b>            |  |
| No. of hours<br>Lecture: - Classes: - Laboratory: <b>10</b> Project/seminars: -  |  | No. of credits<br><b>2</b>                             |
| Status of the course in the study program (Basic, major, other)<br><b>(brak)</b>   |  | (university-wide, from another field)<br><b>(brak)</b> |
| Education areas and fields of science and art  |  | ECTS distribution (number and %)                       |
| <b>Responsible for subject / lecturer:</b><br><br>dr inż. Aleksander Jurga<br>email: aleksander.jurga@put.poznan.pl<br>tel. +4861 6653388<br>Faculty of Engineering Management<br>Strzelecka Str. 11, 60-965 Poznań  |  |  |
| <b>Prerequisites in terms of knowledge, skills and social competencies:</b>  |  |  |
| 1  | <b>Knowledge</b>   | Basic knowledge of secondary school.                   |
| 2  | <b>Skills</b>  | Basic computer literacy.                               |
| 3  | <b>Social competencies</b>   | Able to work in computer laboratory group.             |
| <b>Assumptions and objectives of the course:</b><br>-Students should be made familiar with algorithmic thinking, the ways algorithms are developed and coded in programming languages. They should be able to design and implement simple algorithms in modern development environment. They should be provided with the introduction to computer science disciplines the most relevant to further study of logistics. |  |  |
| <b>Study outcomes and reference to the educational results for a field of study</b>  |  |  |
| <b>Knowledge:</b>  |  |  |
| 1. Student is able to explain what is an algorithm and how it is converted into a computer program. - [(T1A_W02) K1A_W09]  |  |  |
| 2. Has a preliminary knowledge of Windows forms GUI interface. - [(T1A_W02) K1A_W10]   |  |  |
| 3. Is able to characterize shortly parts of computer science important for logistics and operations research. - [(InzA_W05) KInzA_W05]   |  |  |
| <b>Skills:</b>   |  |  |
| 1. Is able to design and analyze flowcharts of algorithms and explain how they work. - [T1A_U05 K1A_U05]   |  |  |
| 2. Is able to generate in Visual Basic a graphical user interface for simple application, and to program simple engineering task. - [(T1A_W02) K1A_W10]  |  |  |
| 3. Is able to define decision making problem in the way appropriate for further computerized solution. - [(T1A_U09) K1A_U09 i (T1A_U14) K1A_U14]   |  |  |
| <b>Social competencies:</b>  |  |  |
| 1. Is aware of computer data security and the interests and rights of their users. - [(T1A_KO2) K1A_K02]   |  |  |
| <b>Assessment methods of study outcomes</b>  |  |  |

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|--|-----------------------------|-------------|
| <p>-Practical programming tests in laboratories.<br/>         Formative assessment:<br/>         a) in the field of laboratory classes: implementation of exercises, practical test on a komputer.</p> <p>Summary:<br/>         a) in the field of laboratory classes: the total score of the exercises and the result of the test.</p>          |                             |             |
| <b>Course description</b>  |                             |             |
| <p>Laboratories:<br/>         Graphical user interface objects.Event-driven applications. Introduction to object-oriented programming with the help of tools for rapid application generation (Visual Studio).</p> <p>Didactic methods:<br/>         -Work with a book.<br/>         -Demonstration method.<br/>         -Laboratory method.</p> |                             |             |
| <p><b>Basic bibliography:</b><br/>         1. Logistyka. Teoria i praktyka, praca zbiorowa, Difin 2011<br/>         2. Skowronek C., Sarjusz-Wolski Z., Logistyka w przedsiębiorstwie, PWE 2008<br/>         3. C.H.Pfohl, Systemy logistyczne, ILIM 2001<br/>         4. C.H,Pfohl, Zarządzanie logistyką, ILIM 2002</p>                        |                             |             |
| <p><b>Additional bibliography:</b><br/>         1. Kozłowski R., Sikorski A., Podstawowe zagadnienia współczesnej logistyki, Oficyna Wydawnicza 2009<br/>         2. Fertsch M., Słowni terminologii logistycznej, ILIM 2016</p>   |                             |             |
| <b>Result of average student's workload</b>  |                             |             |
| <b>Activity</b>  | <b>Time (working hours)</b> |             |
| 1. Attendance and active participation in laboratory exercises   | 10                          |             |
| 2. Preparation for the final credits   | 10                          |             |
| 3. Consultation  | 2                           |             |
| 4. Literature studying   | 10                          |             |
| <b>Student's workload</b>  |                             |             |
| <b>Source of workload</b>  | <b>hours</b>                | <b>ECTS</b> |
| Total workload   | 32                          | 2           |
| Contact hours  | 12                          | 1           |
| Practical activities   | 10                          | 1           |