

| <b>STUDY MODULE DESCRIPTION FORM</b>   |  |  |
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| Name of the module/subject<br><b>Logistics</b>   |  | Code<br><b>1010601241010620400</b>   |
| Field of study<br><b>Transport</b>   | Profile of study<br>(general academic, practical)<br><b>(brak)</b> | Year /Semester<br><b>2 / 4</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>full-time</b>           |  |
| No. of hours<br>Lecture: <b>2</b> Classes: <b>1</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>  |  | No. of credits<br><b>3</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<br><b>technical sciences</b><br><b>Technical sciences</b>  |  | ECTS distribution (number and %)<br><b>3 100%</b><br><b>3 100%</b>   |
| <b>Responsible for subject / lecturer:</b><br><br>prof. nzw. dr hab. inż. Jerzy Kwaśnikowski<br>email: jerzy.kwasnikowski@put.poznan.pl<br>tel. (61) 665 26 12<br>Working Machines and Transportation<br>ul. Piotrowo 3; 60-965 Poznań   |  |  |
| <b>Prerequisites in terms of knowledge, skills and social competencies:</b>  |  |  |
| 1  | <b>Knowledge</b>   | The student has a basic understanding of transport in the economy, science and the relationship with other areas of knowledge. The student knows and understands the basic methods and practical tools from the scope of the description of transport. The student knows the main tasks in the operation of transport and economic development of enterprises and the state. |
| 2  | <b>Skills</b>  | The student is able to use the concepts and methods in the description of the technical and economic problems. Students can use their knowledge to analyze specific events and processes in technical and economic systems. The student is able to deal with specific problems from the technical and economic systems.  |
| 3  | <b>Social competencies</b>   | Students can work together in a group, taking the different roles. The student is able to prioritize the tasks. The student is self-reliant in solving problems, acquire and improve their knowledge and skills.   |
| <b>Assumptions and objectives of the course:</b><br>The aim of the course is to provide students with information concerning logistics, definitions and concepts. Students gain knowledge and skills in the operation of logistics in various industrial and service enterprises in various modes of transport and warehouse management.   |  |  |
| <b>Study outcomes and reference to the educational results for a field of study</b>  |  |  |
| <b>Knowledge:</b>  |  |  |
| 1. Has a structured, theoretically founded knowledge in the field of logistics, including: the essence of logistics, the reasons for the development of logistics concepts, structure of logistic systems, logistics management - [K1A_W09]<br>2. Has detailed knowledge of the importance of logistics in the phase of supply, production and sales phases, development of models in stocks, the importance of logistics in transport, logistics chains - [K1A_W09]<br>3. Has a detailed knowledge of the logistic systems, including: methods of organization and technology for freight and passenger transport, selection of resources for the tasks - [K1A_W10] |  |  |
| <b>Skills:</b>   |  |  |
| 1. Is able to obtain information from the literature, internet, databases and other sources in Polish and foreign languages - [K1A_U01]<br>2. Is able to communicate using a variety of techniques in a professional environment and other environments using the formal model logistic systems - [K1A_U02]<br>3. Is able to organize and manage the transport, logistics and freight forwarding process in field of study, especially in the chosen specialization - [K1A_U16]<br>4. Is able to use acquired mathematical theories to create and analyze simple models of logistics systems - [K1A_U18]   |  |  |

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| <b>Social competencies:</b>   |
| 1. Understands the need and knows the possibilities of lifelong learning, knows the need for acquiring new knowledge for professional development - [K1A_K01] |
| 2. Is able to think and act in an entrepreneurial manner, make decisions, work for the development of the employer and the society - [K1A_K07]                |
| 3. Is aware of the transfer of knowledge to society, takes steps to ensure that the information is understandable - [K1A_K08]                                 |

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| <b>Assessment methods of study outcomes</b>  |                             |             |
| The written examination, final test, the project   |                             |             |
| <b>Course description</b>  |                             |             |
| general definitions of logistics, logistics jobs, logistics overview of the history, the development stage of logistics, logistics customer service and its main components, measures and standards of customer service based on selected market segments, restocking cycle, the basic method of restocking, the method ABC / XYZ inventory classification based on selected market segments, components of comprehensive logistics costs, logistics cost comparison of different modes of transport, the base demand forecasting, |                             |             |
| <b>Basic bibliography:</b>   |                             |             |
| 1. Beier F.J., Rutkowski K.: Logistyka. SGH, Warszawa 1993.  |                             |             |
| 2. Coyle J., Bardi E., Langley C.: Zarządzanie Logistyczne. PWE, Warszawa 2007.  |                             |             |
| 3. Praca zbiorowa: Podstawy logistyki. Biblioteka Logistyka, Poznań 2008.  |                             |             |
| <b>Additional bibliography:</b>  |                             |             |
| 1. Krzyżaniak S., Cyplik P.: Zapasy i magazynowanie. Tom I. Zapasy. Biblioteka Logistyka, Poznań 2008.   |                             |             |
| 2. Niemczyk A.: Zapasy i magazynowanie. Tom II. Magazynowanie. Biblioteka Logistyka, Poznań 2008.  |                             |             |
| 3. Rydzkowski W., Wojewódzka-Król K. (red.): Transport. PWN, Warszawa 1998.  |                             |             |
| 4. Stajniak M., Hajdul M., Foltiński M., Krupa A.: Transport i spedycja. Biblioteka Logistyka, Poznań 2008.  |                             |             |
| <b>Result of average student's workload</b>  |                             |             |
| <b>Activity</b>  | <b>Time (working hours)</b> |             |
| 1. Preparation for lectures  | 1                           |             |
| 2. Participation in the lecture  | 30                          |             |
| 3. Studying the lecture  | 1                           |             |
| 4. Consultation lecture  | 3                           |             |
| 5. Exam Preparation  | 10                          |             |
| 6. Participation in the exam   | 2                           |             |
| 7. Preparation for design classes  | 1                           |             |
| 8. Participation in the project activities   | 15                          |             |
| 9. Preparation of the draft  | 2                           |             |
| 10. Consultations to design classes  | 3                           |             |
| 11. Preparing to pass  | 6                           |             |
| 12. Participation in completing  | 2                           |             |
| <b>Student's workload</b>  |                             |             |
| <b>Source of workload</b>  | <b>hours</b>                | <b>ECTS</b> |
| Total workload   | 76                          | 3           |
| Contact hours  | 55                          | 2           |
| Practical activities   | 0                           | 0           |