

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Intelligent Management Support Systems		Code 1011101351011124060
Field of study Engineering Management - Full-time studies -	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 5
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: prof. dr hab. inż. Leszek Pacholski email: leszek.pacholski@put.poznan.pl tel. +48(61) 665 3374 Wydział Wydział Inżynierii Zarządzania ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student knows principals of management, basics of application of computer science in management.
2	Skills	The student is able to apply properly notions from the area of management and computer science.
3	Social competencies	The student is aware of the necessity for widening own knowledge and is willing to cooperate within a group.
Assumptions and objectives of the course: The subject is aimed at giving Management students interest on the future of the problem of application of expert systems and methods and techniques of artificial intelligence in Management		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. The student has the basic knowledge on the life cycle of social and technical systems - [K03-InzA_W01]		
2. The student has the basic knowledge on management, including quality management and running a business activity - [K06-InzA_W04]		
Skills:		
1. The student is able to plan and make experiments, including computer measurements and simulations, he/she knows how to interpret obtained results and draw conclusions - [K01-InzA_U1]		
2. The student is able to use analytical, simulation and experimental methods for formulating and solving engineer tasks - [K01-InzA_U2]		
3. The student is able to notice system, social and technical, organizational and economical and non-technical aspects in formulating and solving engineer problems - [K01-InzA_U3]		
4. The student is able to make a preliminary economical analysis for initiated engineer problems - [K01-InzA_U4]		
Social competencies:		
1. The student is aware of the importance and understands non-technical aspects and results of the engineer activity, including its impact on the environment and the responsibility for made decisions that correlate with it - [K01-InzA_K1]		
2. The student is aware of the fact that creating products for satisfying needs of users require a system approach - [K01-InzA_K2]		

Assessment methods of study outcomes		
<p>Forming evaluation: Classes: on basis of the evaluation of the current progress in realization of tasks Lectures: on basis of responses to questions concerning issues discussed on previous lectures.</p> <p>Final evaluation: Written test on the knowledge of issues presented during classes and project prepared in teams, concerning a chosen topic. Written test on the knowledge of issues presented during lectures ? on basis of the final colloquium.</p>		
Course description		
<p>The course of the subject encloses five topic modules. The first module concerns problems of the intelligence in general, the process of information processing and in result ? the notion of the artificial intelligence in the robotic context and information systems in management and safety engineering. It also touches the issue of an intelligent dilemma of the sixth cycle.</p> <p>The second and third module encloses the question of gaining knowledge. Methods of knowledge representation, creation and reconstruction of professional databases and strategies of expert methods for solving problems. These modules have a rather methodological character and they refer among other to heuristics and strategies of searching graphs, as well as the comparison of classical and dispersed methods of reasoning. The fourth module and the fifth one have an instrumental character. They present chosen instruments of artificial intelligence, like: artificial neuron networks and evolution algorithms. They show the way of applying them in management. They also present problems of hybrid systems and the theory of chaos.</p>		
Basic bibliography:		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Lecture	15	
2. Classes	15	
3. Preparation for classes and lectures	18	
4. Consultations	30	
5. Preparation for the final assessment	20	
6. Final assessment	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	62	2
Practical activities	15	1