

Course title: <i>Expert systems (advance course)</i>				
Course code	Course status	Semester	Number of ECTS credits	Lecture hours
<i>PA3301</i>	Mandatory	III	5	3+1

Study program: Graduate academic studies, ELECTRICAL ENGINEERING, study program: Electronics, Telecommunications and Computer engineering (studies last for 4 semesters, 120 ECTS credits).	
Prerequisites: Expert systems, Information systems	
Course aims: Students will be introduced with modern intelligent information systems, and with practical scopes of artificial intelligence.	
Teacher(s) first and last names: <i>Prof. Jaroslav E. Poliščuk</i>	
Studying method: Lectures, individual work on practical tasks, consultations.	
Course synopsis:	
Preliminary week I week II week III week IV week V week VI week VII week VIII week IX week X week XI week XII week XIII week XIV week XV week XVI week Final week XVIII-XXI week	Preparation and semester enrolment. Introduction notes. Basics about natural and artificial intelligence Automatic proven of theorems Fuzzy expert systems Neuron networks and expert systems Genetic algorithms Presentation of first part of seminar work Free week Agents, multi-agents and intelligent systems Modern intelligent systems: Intelligent data base Modern intelligent systems: Hybrid information systems Modern intelligent systems: intelligent telecommunication networks Presentation of second part of seminar work Methodology of expert systems development Tools for creating of expert systems Creating of expert systems: Acquisition of knowledge in expert systems Examples of fuzzy expert systems Final exam. Administrative procedure. Additional lessons, correction of the final exam and administrative procedures.
STUDENT WORKLOAD	
<p style="text-align: center;"><u>per week</u></p> Working hours: 5 credits x 40/30 = 6 hours and 40 minutes. Working hours structure: 3 hours for teaching 1 hour for obligatory consultations 2 hours and 40 minutes for individual work, including additional consultations.	<p style="text-align: center;"><u>per semester</u></p> Teaching and the final exam: (6 hours and 40 minutes) x 16 = 106 hours and 40 minutes. Necessary preparation (before semester): 2 x (6 hours and 40 minutes) = 106 hours and 40 minutes. Total work hours for the course: 150 hours Additional hours for preparing correction of the final exam, including the exam taking: up to 30 hours. Work hours structure: 106 hours and 40 minutes (lectures) + 106 hours and 40 minutes (preparation) + 30h ours (additional work)
Lessons attendance is obligatory for students, as well as doing seminar work that is publicly presented	
Literature: Poliščuk E. J.: Ekspertni sistemi	
The forms of knowledge testing and grading: - Seminar work (50 points maximal) - Final exam carries 50 points Student gets the passing grade by collecting 50 points at least.	
Special remarks for the course: Practical problems and preparation of seminar work is planes for exercises of this course	
Teacher(s) who provided the information: <i>Prof. Jaroslav E. Poliščuk</i>	
Note:	