

Study program: <b>Engineering Management</b>				
Type and level of studies: Master studies (second level of studies )				
<b>Course unit: Intelligent Decision Support Systems</b>				
<b>Teacher in charge: Miroslav Radojičić, Zoran Nešić</b>				
Language of instruction: English				
ECTS: 6				
Prerequisites: -				
Semester: Winter				
<b>Course unit objective</b>				
The aim of the course is to teach students to employ methods of intelligent decision support in managerial practices, through theoretical basis, case studies, examples and project tasks.				
<b>Learning outcomes of Course unit</b>				
After attending the complete course, the student possess basic theoretical knowledge about the concepts, types and capabilities of the system for decision support and use appropriate specialized software tools for intelligent decision making.				
<b>Course unit contents</b>				
<i>Theoretical classes</i>				
The concept and evolution of decision support systems. Types of problems suitable for solving by decision support systems. From simple towards intelligent decision support systems (IDSS). Architecture IDSS's. Analysis and Design of IDSS's. Models of IDSS's. Tools and techniques of IDSS's. Areas of application. Engineering knowledge. Methods of knowledge representation. Data warehouses. Types of data warehouses. Sources of data. Designing of a data warehouse. The implementation of a data warehouse. Advanced methods of data mining. OLAP Analytical data processing.				
<i>Practical classes</i>				
Exercises include the application of the course material in solving practical problems (tasks) with appropriate software support. The work on standalone students projects - construction of OLAP systems, expert systems on the problem of decision making.				
<b>Literature</b>				
[1] E. Turban, J. E. Aronson, T.P. Liang, <i>Decision Support Systems and Intelligent Systems</i> , Prentice Hall, NY, 2011.				
[2] Radojicic M, Vesic Vasovic J., Nesic Z., Application of optimization methods in the function of improving performance of organizational systems, Monograph, Faculty of Technical Sciences Čačak, 2012.				
<b>Number of active teaching hours</b>				<b>Other classes</b>
Lectures: 2	Practice: 2	Other forms of classes	Independent work: 2	
<b>Teaching methods Lessons, consultations, study and research work</b>				
<b>Examination methods ( maximum 100 points)</b>				
<b>Exam prerequisites</b>	<b>No. of points:</b>	<b>Final exam</b>	<b>No. of points:</b>	
Student's activity during lectures	<b>10</b>	oral examination	<b>30</b>	
Practical classes/tests	-	written examination		
Seminars/homework	<b>30</b>	.....		
Project	<b>30</b>			
Other				
<b>Grading system</b>				
<b>Grade</b>	<b>No. of points</b>	<b>Description</b>		
<b>10</b>	<b>91-100</b>	Excellent		
<b>9</b>	<b>81-90</b>	Exceptionally good		
<b>8</b>	<b>71-80</b>	Very good		
<b>7</b>	<b>61-70</b>	Good		
<b>6</b>	<b>51-60</b>	Passing		
<b>5</b>	<b>less than 50</b>	Failing		