

Study Programme: Engineering Management			
Course Unit Title: End-of-Life Product Management			
Course Unit Code: IM1119			
Name of Lecturer(s): Milovan Lazarević			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
Semester (winter/ summer): summer			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 5			
Prerequisites: none			
Course Aims: The goal of course is to master the basic knowledge and skills related to the removal of products at end of life in accordance with the approach of sustainable development and restoration of natural resources. The aim of the course is also to acquire competencies for engineering analysis and implementation of appropriate strategies for managing products at end of life and to find an adequate solution to the technical, legal and economic aspects of the problems relating to the treatment and management of products at end of life.			
Learning Outcomes: After completing the course and passing the exam, the student is able to choose the optimal strategy for the removal of the product at the end of the product lifecycle. Then, to choose the level of disassembly which will be implemented and how the separated materials to be treated and recycled in accordance with legal regulations. Also, knowledge of legal documents relating to the management of products at end of life in accordance with the recommendations given them the knowledge acquired at the end of the course, which are necessary for managers of modern production systems in the presence on the market both at local and global levels. Industrial management engineer acquires competence for planning process and system for treatment of at the end of the product life cycle from technical and environmental to legal aspects.			
Syllabus. Introduction to the disassembly and recycling technologies. Environmental aspects of sustainable development. Strategies of end of life products. Design for Excellence, Life-Cycle Engineering (LCE), product structure, materials and suitability for dismantling and recycling. Define the sequence of disassembly operations products. Determining the depth of product disassembly in accordance with the strategies of end of life. Removal technologies (with and without destruction). Equipment and tools for disassembly. The selection of materials, depending on the chosen strategy. Handling of hazardous and harmful substances. Automation dismantle operations. Design and production process for the disassembly of the system. Materials recycling technologies. Technical, legal and economic aspects of waste management. Legal regulations and laws developed countries related to waste.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours:2	Lectures: 3	Practical work: 0	
Teaching Methods: Oral presentation slides to follow the video screen and the appropriate practices for the relevant theoretical areas. Using a chart and written materials as a function of exercise, as well as computer exercises aimed at introducing specialized software tools in this area, laboratory work and visits to modern business systems for processing - treatment and Product Management at end of life.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

