

Study Programme: Energy And Process Engineering			
Course Unit Title: Industrial thermoprocess plants			
Course Unit Code: M34I21			
Name of Lecturer(s): Sokolović Dunja			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
Semester (winter/ summer): winter			
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: Understanding the structure of industrial processes necessary for the analysis, management, optimization and maintenance of process industrial systems and plants. Understanding the interdependence of energy and process operations on selected examples of industrial systems. Understanding the interdependence of material and energy flows in thermoprocess industrial systems.			
Learning Outcomes: Acquiring knowledge about the interdependence of raw materials, water and energy use in energy and process industrial systems. Ability to use basic tools for analyzing the process by developing and analyzing the process flow diagram.			
Syllabus. Raw materials, energy and water in termoprocess industrial systems. The role of material and energy flows in thermoprocess industrial systems. Interconnection of material and energy flows. Capabilities to rationalize performance through the concept of integrating the process. Structure and classification of energy and process industrial plants. The structure of the process and its spatial organization. Basic characteristics of industrial processes. Process flow diagram. Methodology for identifying material flows of the process through the analysis of the flow scheme. Analysis of selected processes of the inorganic, organic and food industry.			
Required Reading: Ernest E. Ludwig Applied Process Design for Chemical and Petrochemical plants, 3rd edition Gulf Professional Publishing 2001 Sami Matar, Lewis F. Hatch Chemistry of petrochemical processes, 2nd edition Gulf Publishing Company 2000			
Weekly Contact Hours: 2	Lectures: 3	Practical work: 0	
Teaching Methods: Lectures, computer tutorials, laboratory and computational exercises, auditory and industry practice and consultations. Interactive teaching.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

