

Study Programme: Chemical engineering			
Course Unit Title: Chemical Process Equipment Design 2			
Course Unit Code: HPO401			
Name of Lecturer(s): Assoc. Prof.Svetlana Popović, PhD			
Type and Level of Studies: Bachelor Academic Degree			
Course Status (compulsory/elective): Compulsory for Chemical-process Engineering			
Semester (winter/summer): winter			
The language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: Unit operations			
Course Aims: The aim of this course is to train students to design chemical process devices and equipment connecting heat and mass transfer principles to the dimensions of process equipment.			
Learning Outcomes: Student gain skills to analyze and select equipment. Formulate the equations for calculation of dimensions. Create solutions and recommendations for appropriate dimensions of equipment.			
Syllabus: <i>Theory</i> The course includes topics: systems and equipment included in chemical engineering processes, such as distillation, absorption, adsorption heat exchangers, condensers, evaporators, etc. The rigorous design methods of tray and packed columns. <i>Practice</i> Selection and application of appropriate quantitative models for solving design problems related to the theory presented during lectures and project work using ASPEN plus software.			
Required Reading: 1. Couper, J.R., Roy Penney, W., Fair, J.R., Walas, S. M.Chemical Process Equipment (Third Edition) Selection and Design, 2012, 2. Coulson, J.M., Richardson, J.F., Chemical Engineering (Vol. VI), An Introduction to Chemical Engineering Design (R.K. Sinnott), Pergamon Press, NY, 2002.			
Weekly Contact Hours: 6	Lectures: 3	Practical work: 3	
Teaching Methods: Lectures, solving problems and laboratory practicum students group work.			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Test I and Test II	40	oral exam	30
Seminar(s)	30		