

Faculty of Metallurgy and Technology / CHEMICALL TECHNOLOGY / ORGANIC CHEMICAL TECHNOLOGY I

Course:	ORGANIC CHEMICAL TECHNOLOGY I			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
3468	Mandatory	6	6	3+2+0
Programs	CHEMICALL TECHNOLOGY			
Prerequisites				
Aims	Through this course student acquire basic knowledge for selection of best available production process in organic chemical industry and food industry, with implementation of previous knowledge from different scientific areas. Through this course student acquire knowledge necessary for solving theoretical and practical problems in the field of organic tehnology.			
Learning outcomes	According to knowledge acquired through this course students will be able: • to group the major raw materials in organic chemical industry of natural products • to explain major process in organic chemical industry of natural products • to know technological methods of obtaining organic industry natural products and their application • to define relevant parameters for process survey • to solve material balances in organic chemical industry of natural products.			
Lecturer / Teaching assistant	Dr Biljana Damjanovic-Vratnica, full professor MSc Dragan Radonjić			
Methodology	Lectures, exercises, midterm thesis, consultation.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Informations about the course and methodology of examination. Basic raw materials for organic chemical industry. Crude oil. Natural gas. Biodiesel.			
I week exercises	Calculations: physico-chemical characteristics of crude oil			
II week lectures	Crude oil: Prerada nafte: porijeklo, sastav, karakterizacija. Oil refinery processes and operation- crude distillation and vacuum distillation.			
II week exercises	Calculations: crude distillation and vacuum distillation.			
III week lectures	Catalytic conversion processes of crude oil: reforming, cracking, hydrocracking			
III week exercises	Calculations: crude oil catalytic conversion processes			
IV week lectures	Thermal conversion processes of crude oil: cracking, pyrolysis and coking.. Refining.			
IV week exercises	Calculations: crude oil thermal conversion processes. Synthetic gas from crude oil.			
V week lectures	Lubrication oil. Production and application.			
V week exercises	Calculations: lubricating oil			
VI week lectures	Edible oil and fat production. Chemical composition and properties. Methods of isolation and conversion processes: margarine, biodiesel.			
VI week exercises	Calculations: edible oil and fat			
VII week lectures	First midterm exam			
VII week exercises	Makeup first midterm exam			
VIII week lectures	Carbonhydrates production. Saccharose. Saharoza. Sugar production from sugar beet.			
VIII week exercises	Calculations: Carbonhydrates production			
IX week lectures	Starch production. Production of corn starch and starch derivates.			
IX week exercises	Calculations: Carbonhydrates production			
X week lectures	Cellulose. Procceseing of tree fiber - supl hate and sulphite proesses. Paper, cellulose derivate. Environmental impact.			
X week exercises	Calculations: Carbonhydrates production			
XI week lectures	Fermentation processes. Ethanol production.			
XI week exercises	Field exercise - plant visit.			
XII week lectures	Wine production. Production of organic acids.			

XII week exercises	Field exercise – plant visit.					
XIII week lectures	Barley malt and beer production. Environmental impact.					
XIII week exercises	Midterm thesis.					
XIV week lectures	Letaher processeing. Morphology and chemical composition. Tehnologija kože. Morfologija i hemijski sastav. Tawing and finishing.					
XIV week exercises	Midterm thesis					
XV week lectures	Second midterm exam.					
XV week exercises	Makeup second midterm exam.					
Student workload	Weekly: 6 ECTS x 40/30 sati = 8 h The total load for the semester = 180 h					
Per week			Per semester			
6 credits x 40/30=8 hours and 0 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 2 excercises 3 hour(s) i 0 minuts of independent work, including consultations			Classes and final exam: 8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts Total workload for the subject: 6 x 30=180 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 36 hour(s) i 0 minuts Workload structure: 128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)			
Student obligations			Attending lectures, midterm thesis defense, midterm and final exams			
Consultations			Working days: 11-12 h.			
Literature			J. Sadadinović, Organska hemijska tehnologija-Hemijska industrija, Tehnološki fakultet, Univerzitet u Tuzli, 1999 J. Sadadinović, Organska hemijska tehnologija-Prehrambena industrija, Tehnološki fakultet, Univerzitet u Tuzli, 1999 N. Ilišković, Organ			
Examination methods			- Activity during lectures: (0 - 3 points), - Activity during exercises and midterm thesis: (0 - 7 points), - First midterm exam: (0 - 20 points), - Second midterm exam: (0 - 20 points), - Final exam : (0 - 50 points), Passing grade gets the			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points