

**Faculty of Metallurgy and Technology / CHEMICAL TECHNOLOGY / ORGANIC CHEMICAL TECHNOLOGY (SELECTED CHAPTERS)**

<b>Course:</b>	ORGANIC CHEMICAL TECHNOLOGY (SELECTED CHAPTERS)			
<b>Course ID</b>	<b>Course status</b>	<b>Semester</b>	<b>ECTS credits</b>	<b>Lessons</b> (Lessons+Exercises+Laboratory)
12280	Mandatory	1	7	3+1+2
<b>Programs</b>	CHEMICAL TECHNOLOGY			
<b>Prerequisites</b>				
<b>Aims</b>	Through this course, the student is trained to choose the optimal production process and the best way to solve problems in the field of organic chemical industry, where he should apply previously acquired knowledge from different fields. In this way, students acquire knowledge that enables them to work in the field of organic chemical industry and related fields.			
<b>Learning outcomes</b>	Based on the knowledge acquired in this course, students will be able to: • group the most important raw materials of the organic chemical industry of synthetic products; • explain the basic processes of the organic chemical industry of synthetic products, based on synthesis and processing; • know the technological procedures for obtaining products of the organic industry of synthetic products and the ways of their application; • define relevant parameters for process monitoring; • resolve material and energy balances in the organic chemical industry of synthetic products			
<b>Lecturer / Teaching assistant</b>	Dr Biljana Damjanović-Vratnica, full professor MSc Dragan Radonjić			
<b>Methodology</b>	Lectures, exercises, seminar work. Consultations and colloquiums.			
<b>Plan and program of work</b>				
Preparing week	Preparation and registration of the semester			
I week lectures	Introducing the students to the work plan. Organic chemical technology - introduction, importance and application. Basic raw materials for the organic chemical industry.			
I week exercises	Material and energy balances in organic chemistry industry.			
II week lectures	The technology of washing agents. Surfactants and their mechanism of action.			
II week exercises	Practical exercises			
III week lectures	Soap production. Production of detergents. Impact on the environment.			
III week exercises	Practical exercises			
IV week lectures	Essential Oil Technology. Raw materials, methods of isolation.			
IV week exercises	Exercises in essential oil technology.			
V week lectures	Chemical composition of essential oils, examples and application.			
V week exercises	Exercises in essential oil technology.			
VI week lectures	Exercises in polymer technology.			
VI week exercises	Exercises in polymer technology.			
VII week lectures	First Midterm exam			
VII week exercises	First midterm exam			
VIII week lectures	Copolymerization. Ionic polymerization. Polymerization methods.			
VIII week exercises	Exercises in polymer technology.			
IX week lectures	Polycondensation polymers. Polyaddition. Molecular characteristics of polymers.			
IX week exercises	Exercises in polymer technology.			
X week lectures	Processing of polymer materials. Polymer additives.			
X week exercises	Exercises in polymer technology.			
XI week lectures	Production and treatment of plastic waste.			
XI week exercises	Practical exercises			
XII week lectures	Rubber technology. Natural and synthetic rubber. Application.			
XII week exercises	Practical exercises			

XIII week lectures	Rubber processing procedures. Impact on the environment.					
XIII week exercises	Seminar work					
XIV week lectures	Second midterm exam					
XIV week exercises	Seminar woks					
XV week lectures	Seminar woks					
XV week exercises	Makeup second midterm exam					
Student workload						
Per week			Per semester			
<b>7 credits x 40/30=9 hours and 20 minuts</b> 3 sat(a) theoretical classes 2 sat(a) practical classes 1 excercises <b>3 hour(s) i 20 minuts</b> of independent work, including consultations			Classes and final exam: <b>9 hour(s) i 20 minuts x 16 =149 hour(s) i 20 minuts</b> Necessary preparation before the beginning of the semester (administration, registration, certification): <b>9 hour(s) i 20 minuts x 2 =18 hour(s) i 40 minuts</b> Total workload for the subject: <b>7 x 30=210 hour(s)</b> 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) <b>42 hour(s) i 0 minuts</b> Workload structure: <b>149 hour(s) i 20 minuts (courses), 18 hour(s) i 40 minuts (preparation), 42 hour(s) i 0 minuts (additional work)</b>			
Student obligations			Attending classes, presenting a seminar paper, taking a midterm and final exam			
Consultations			Tuesday, 12-13h			
Literature			A. Lendlein, A. Sisson, Handbook of Biodegradable Polymers - Isolation, Synthesis, Characterization and Applications, Wiley VCH, 2011. K. Baser, G. Buchbauer, Handbook of Essential Oils: Science, Technology, and Applications, CRC Press 2009.;J. Sadadinović, Organska hemijska tehnologija, Tehnološki fakultet, Univerzitet u Tuzli, 1999. N. Ilišković, Organska hemijska tehnologija, Svjetlost-Sarajevo, 1991.			
Examination methods			Exercise activity, submitted reports and seminar work: (0 - 15 points), I midterm exam: (0 - 15 points), II midterm exam: (0 - 20 points), Final exam: (0 - 50 points), A passing grade is obtained if at least 50 points are accumulated cumulatively.			
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