

SYLLABUS

Basic data of the course:			
Faculty:	Faculty of Engineering and Informatics		
Course title:	Processing of Materials II		
Level:	Bachelor		
Course status:	Core		
Year of studies:	III		
Number of hours per week:	3		
Value in credit – ECTS:	4		
Time / location:			
Course teacher:	Mr. Sc. Fatmir Çerkini		
Contact details:	Fatmir.Cerkini@ushaf.net		
Course description:			
	<i>This course will provide an understanding of the processing of different polymer materials.</i>		
Objectives of the course:			
	<i>The objective of this course is to introduce students to the methods of processing of polymer materials. Storage and processing of materials. Recognizing of additive usage. Methods for controlling materials and assembly of items from materials.</i>		
Learning outcomes:			
	<p><i>After successful completion of the course, students will be able to:</i></p> <ul style="list-style-type: none"> • <i>recognize the processing properties of polymer materials,</i> • <i>select appropriate advanced materials processes for a given product or component recognising material, size, precision, and surface quality requirements,</i> • <i>know the methods of processing polymer materials.</i> • <i>know the methods for controlling polymer materials</i> 		
Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day / week	Total
Teaching	3	15	45
Practical work	-	-	-
Contacts with the teacher / consultations	1	5	5
Field exercises	-	-	-
Tests, seminars	8	1	8
Homework	1	10	10
Student self time study	2	10	20
Final exam preparation	1	10	10
Time spent in evaluation (tests, quizzes, final exam)	1	2	2
Projects, presentations, etc.			
Total			100

Teaching methodology:	<i>Lectures and exercises combined with case studies and classroom discussions.</i>
Assessment methods:	<i>First intermediate assesment 35% Laboratory/clarroom Exercises 15% Final exam: 50%</i>
Literature	
Basic literature:	<ol style="list-style-type: none"> 1. <i>Fatmir Çerkini, Teknika e përpunimit të materialeve polimere (dispensë), Fakulteti i Shkencave të Aplikuara – Ferizaj</i> 2. <i>Teuta Çarçani „TEKNOLOGJIA KIMIKE ORGANIKE”, Tiranë</i>
Additional literature:	<ol style="list-style-type: none"> 1. <i>Prof. Assoc. Dr. Nexhat Qehaja, PËRPUNIMI I MATERIALEVE POLIMERE, Prishtinë, 2011/2012</i> 2. <i>Zehev Tadmor, Costas Gogos „PRINCIPLES OF POLYMER PROCESSING”-New Jersey,</i> 3. <i>Ing.Miroslav Nadj„POLIMERNI MATERIJALI”, Zagreb</i> 4. <i>Dipl.inž.Bogdan Rapajič„PRERADA PLASTIČNIH MASA EKSTRUDIRANJEM”, Beograd</i> 5. <i>Kemijski Kombinat „CHROMOS” -PLASTIČNE MASE - Katalog, Zagreb</i>
Designed lesson plan :	
Week	
Week one:	<i>Introduction of syllabus, teaching methods and assessment methods.</i>
Week two:	<i>Building. Additions (additives). Methods of obtaining materials.Storage and regulation of materials.Comparison of plastic masses with metals. Identification of plastic masses.Processing properties of materials.</i>
Week three:	<i>Recycling and Reuse of Materials. Methods for controlling materials.</i>
Week four:	<i>Methods of processing materials. Modeling. Extrude technology.</i>
Week five:	<i>Extruding pipes and profiles. Calibration of pipes.Extrusion of corrugated pipes.Mistakes, defects in the pipe extrude technology, the cause and elimination of mistakes.</i>
Week six:	<i>Extruding profiles. Production of sheets and plates by extrusion. Extruding-blowing method. The principle of injection.</i>
Week seven:	<i>Test I</i>
Week eight:	<i>Injection channel types.Tunnel-shaped injection system. Special distribution channel systems.Shortcomings in the treatment of injection molded thermoplastics and related solutions.</i>
Week nine:	<i>Processing expect the injection ofs sparkling (TSG).</i>
Week ten:	<i>Production of hollow bristles by means of inflatable. Extruded-bristle method. Injectable press bridging.</i>
Week eleven:	<i>Plastic laminating. Impregnation. Principle of calendering of plastic materials.</i>

Week twelve:	<i>Flush with liquid compression. Diaphragm fracturing. Vacuum forming. Rotational forming.</i>
Week thirteen:	<i>Stamping. Laminators. Coextrusion process.</i>
Week fourteen:	<i>Production of spiral pipes. Welding methods of pipes. Assembly of plastic articles. Welding assembly. Appendix. Injection of elastomers. Processing of injection moldings. Injection pressure with internal gas pressure. Stamping by injection. Some modeling technology to quickly prototype.</i>
Week fifteen:	<i>Test II</i>

Academic policies and rules of conduct

Set etiquette policies in line with USHAF status.

The teacher sets the criteria for regular attendance at lectures and exercises and rules of conduct such as: keeping calm in class, switching off cell phones, entering the room on time, etc.