



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Additive Technologies		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	IV		
Number of ECTS Allocated	8		
Name of Lecturer/Lecturers	Miroslav Trajanovic		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input checked="" type="checkbox"/> Project work	<input checked="" type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

Purpose and Overview (max. 5 sentences)

Introduce students to the basics of additive technologies (Rapid Prototyping). Students are trained to understand the principles, importance and the advantages and disadvantages of certain AT compared to conventional technologies; to decide in which case the selection of additive technology is economically justified; to choose, based on the required characteristics of a product, the best and economically cost-effective additive technology, material and RP machine. The course is targeting both the theoretical and practical aspects of additive technologies.

Syllabus (brief outline and summary of topics, max. 10 sentences)

1) General introduction to additive manufacturing technologies, 2) Process of building a prototype, 3) Stereolithography, 4) Fused Deposition Modeling, 5) 3D printing, 6) Selective Laser Sintering, 7) Electron Beam Melting, 8) Laminated Object Manufacturing, 9) New AT, 10) Materials for AT, 11) AT in biomedical engineering, 12) Rapid Tooling, 13) Rapid Manufacturing, 14) Shortcomings and future development of AT

Language of Instruction

Serbian (complete course) English (complete course) Other _____ (complete course)

Serbian with English mentoring Serbian with other mentoring _____

Assessment Methods and Criteria

Pre exam Duties	Points	Final Exam	Points
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Activity During Lectures	10	Written Examination	40
Practical Teaching	50	Oral Examination	0
Teaching Colloquia	0	Overall Sum	100