

Óbuda University Bánki Donát Faculty of Mechanical and Safety Engineering				Faculty Research Organisation Centre			
Subject title and code: Additive manufacturing - BKBXAGE3MNF				Credits: 4			
Full-time study 2026/2027 ac. 1 semester year							
The course is available at: mechatronical engineering							
Supervised by: Ferenc Oláh				Instructors: Ferenc Oláh			
Prerequisite (neptun code): Polymer technologies (BAXPTE1MNF)							
Weekly number of lessons							
Lecture: 2		Group seminar:		Lab:		Consultation:	
Way of assessment: Midterm (Written) mark							
Online consultation (in case it's required): ... (BBB link)							
Edu. goal: The objective of this course is to provide students with practical, industry-oriented insight into the design methodology of components specifically engineered for additive manufacturing. Following an introduction to the principles of this specialized, non-conventional design approach, students will become familiar with the most common additive manufacturing processes..							
Schedule							
Education week		Topics					
1.		Introduction to the world of manufacturing technologies, overview of technologies					
2.		Design for polymer-based technologies I. (FDM)					
3.		Design for polymer-based technologies II. (SLA, DLP)					
4.		Design for polymer-based technologies III. (Powder bed)					
5.		Assignment of homework, presentation of sample task					
6.		Design for metal-based technologies					
7.		Topology optimization					
8.		Infill-based topology optimization					
9.		Generative design					
10.		Using slicer software for 3D printing					
11.		Post-processing of 3D printed parts					
12.		Homework presentation					
13.		Exam					
14.		Exam Re-take					
Mid-semester requirements							
Test		Assignment to be submitted		Szöveg beírásához kattintson vagy koppintson ide.			
amount	dates	amount	deadlines	amount	dates		
1	13. week	1	12				
According to the HKR attendance of group seminars and lab exercises are mandatory.							
Other requirements for participation in sessions not covered by the regulations and restrictions on substitutions:							
Test		Assignment to be submitted		Szöveg beírásához kattintson vagy koppintson ide.			
maximum points available	minimum score required to pass /test	maximum points available	minimum score required to pass / assignment	maximum points available	minimum score required to pass /lab		
100points	40points	100points	40points	...points	...points		

Total number of points achievable in semester: 200points				
Grading thresholds	satisfactory 40 % and above	average 60 % and above	good 75 % and above	excellent 90 % and above
Other evaluation criteria:				
Receive a signature denied entry: Students who do not take part in the written exam or do not give a presentation will fail the course.				
Required references: material uploaded to the e-learning platform				
Recommended references:				
Quality assurance methods of the subject:				

Things, that are not included, can be found within the regulations of Óbuda University.