

Course	Additive Manufacturing – 3D printing, 3 ECTS credits
Year and period	M.Sc. 1–2, 29 July–2 August 2019
Teacher(s)	Heidi Piili, Research Scientist, LUT University N.N., visiting lecturer
Person(s) in Charge	Heidi Piili, Research Scientist, LUT University
Aims	After having passed this course a student: <ul style="list-style-type: none"> - knows basic technologies of additive manufacturing (AM) aka 3D printing, - is familiar with terminology used in additive manufacturing, - is able to compare and select most common features of additive manufacturing processes, - knows the basics about product design for additive manufacturing (AM) aka 3D printing, - is familiar with economical aspects of additive manufacturing.
Content	During the course the student will become familiar with: <ul style="list-style-type: none"> - terminology used in additive manufacturing, - most common methods, processes and equipment, - principles of utilisation of additive manufacturing in product design, - economical aspects of additive manufacturing, - practical cases and applications, - future possibilities of additive manufacturing.
Modes of Study	<ul style="list-style-type: none"> - Introductory lectures and exercises 17 hours - Team work and a limited project work 22 hours - Presentations of the results of the team work/ project work 6 hours - Independent work is needed 30 hours - Exam 3 hours Total workload 78 hours. Moodle is used in this course.
Evaluation	Final grade 0-5: Seminar work 80% Exam 20%
Study Materials	<ul style="list-style-type: none"> - Gibson, I., Rosen, D. W., Stucker, B.: Additive Manufacturing Technologies - Lecture material

Prerequisites	<ul style="list-style-type: none">- Good understanding of manufacturing and engineering.- Basic knowledge of product design.- Ability to use design programs as SolidWorks, Autocad etc. is recommended.
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