

| Basic data of the subject | | | |
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| Academic Unit: | Faculty of Architecture, Design and Wood Technology | | |
| Subject title: | Modeling with 3D Technologies | | |
| Study level: | Master | | |
| Subject status: | Mandatory | | |
| Years of study: | I | | |
| Number of hours per week: | 4 | | |
| Value of credits - ECTS: | 5 | | |
| Time / location: | | | |
| Lecturer of the subject: | Rrahim Sejdiu | | |
| Contact details: | rrahim.sejdiu@ushaf.net | | |
| Subject description: | | | |
| | | Familiarizing with 3D scanning technologies, knowing the 3D printing technologies, materials used in 3D printing technologies advanced knowledge of 3D Modeling and its concepts, Identification and selection of software programs used in 3D scanning and printing. Intervention in scanned design through software programs. Scanning different objects, changing shape and size, print redesigned objects | |
| Purpose of subject: | | | |
| | | Familiarizing with 3D scanning technologies, materials for 3D printing technology advanced knowledge in 3D Modeling and its Concepts, Identification and selection of software programs used in 3D scanning and 3D printing. Intervention in scanned design through software programs. Scanning different objects, changing shape and size, Print redesigned objects | |
| Expected learning outcomes: | | | |
| | | After successful completion of this subject, students will be able to: <ul style="list-style-type: none"> • Classify the appropriate programs for 3D scanning and printing, • Scanning 3D objects and Printing 3D objects • To gain knowledge for materials used in 3D printing, • Optimize scanned objects, change them by interfering with various programs. | |
| Contribution to student workload (which should correspond to the students learning outcomes) | | | |
| Activity | Hours | Days/week | Total |
| Lectures | 2 | 13 | 26 |
| Theoretical / laboratory exercises | 2 | 12 | 24 |

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| Practical work | 4 | 4 | 16 |
| Contacts to the Lecturer / Consultations | 1 | 5 | 5 |
| Field exercises | 4 | 3 | 12 |
| Tests, student seminars | 2 | 2 | 4 |
| Home work | 4 | 5 | 20 |
| Time of self-study (in the library or home) | 2 | 9 | 18 |
| Time spent in assessment (tests, quiz, final exam) | 4 | 1 | 4 |
| Projects, presentations, etc. | 4 | 1 | 4 |
| Total | | | 128 |
| Teaching methodology: | | | |
| | Lectures and exercises with project assignments combined with case analyzes and classroom discussions | | |
| Assessment methods: | | | |
| | For students that have access examination Attendance 10%, Projects 50%, Written exam 40% | | |
| | For students who end up with intermediate tests Attendance 10% Course work 50% Intermediate test I 20%, Intermediate test II 20% | | |
| Literature | | | |
| Basic literature: | | | |
| | <ol style="list-style-type: none"> 3D Photorealistic Rendering: Interiors & Exteriors with V-Ray and 3ds Max, Jamie Cardoso HAMAD M.; AutoCAD 2019 3D Modeling, DESIGN FOR 3D PRINTING Samuel N. Bernier, Bertier Luyt, and Tatiana Reinhard | | |
| Additional literature: | | | |

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| Designed plan of teaching: | |
| Weeks | Lecture to be held |
| Week 1: | Introduction to subject and syllabus description |
| Week 2: | Modeling theory 3D |
| Week 3: | Modeling of interior objects (chairs, armchairs, ladders etc. |
| Week 4: | Parametric modeling (Modeling of interior objects through parametric design) |

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| Week 5: | Modeling of complex objects with 3D softwares |
| Week 6: | Introduction on 3D scanning |
| Week 7: | 3D Scanning |
| Week 8: | First intermediate test |
| Week 9: | 3D Scanning |
| Week 10: | Principals of 3D print |
| Week 11: | Materials used for 3D printing |
| Week 12: | Design printing (modeled and scanned on 3D) |
| Week 13: | Second intermediate test |
| Week 14: | Project presentations |
| Week 15: | Project presentations |
| Academic policies and rules of conduct: | |
| Regular attendance, tranquility and active engagement in dialogue during lectures and exercises are obligatory. As a matter of courtesy, mobile phones should be switched off during classes and exams. | |