

| Basic data of the subject | | | |
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| Academic Unit: | Faculty of Architecture, Design and Wood Technology | | |
| Subject title: | Application of Design with CNC Technologies | | |
| Study level: | Master | | |
| Subject status: | Elective | | |
| Years of study: | II | | |
| Number of hours per week: | 4 | | |
| Value of credits - ECTS: | 5 | | |
| Time / location: | | | |
| Lecturer of the subject: | Prof. As. Dr. Muhamet Ymeri | | |
| Contact details: | muhamet.ymeri@ushaf.net | | |
| Subject description: | | | |
| Deep knowledge of CNC technology; package of application programs in all technological phases; programming in CNC machines; the data transformation methods of the product directly designed in the software | | | |
| Purpose of subject: | | | |
| Provide in-depth knowledge for independent work with CNC technologies, programming and use of application software packages, to implement product design with the assistance of these technologies. | | | |
| Expected learning outcomes: | | | |
| After completion of this module, students will be able to: | | | |
| <ul style="list-style-type: none"> • Learn to program using CNC technology applicative packages, • Know to design unique and standard products with these technologies, • Know how to implement product designs with the assistance of CNC technologies, with direct data streams in the software, • Have knowledge about the application of production processes with CNC technologies. | | | |
| Contribution to student workload (which should correspond to the students learning outcomes) | | | |
| Activity | Hours | Days/week | Total |
| Lectures | 2 | 15 | 30 |
| Theoretical / laboratory exercises | 2 | 4 | 8 |
| Practical work | 2 | 11 | 22 |

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| Contacts to the Lecturer / Consultations | | | |
| Field exercises | | | |
| Tests, student seminars | 2 | 4 | 8 |
| Home work | | | |
| Time of self-study (in the library or home) | 5 | 11 | 55 |
| Final preparation for the exam | | | |
| Time spent in assessment (tests, quiz, final exam) | | | |
| Projects, presentations, etc. | 2 | 2 | 4 |
| Total | | | 127 |

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| Teaching methodology: | Presentations lectures, independent work and seminary |
| Assessment methods: | Exam content: Permanent testing on the subject's objectives, presentation of the case study-seminar, Lecture attendance: 10% Presentation of Case Study: 50% Exam: 40% total: 100% |
| Literature | |
| Basic literature: | 1. Computer Numerical Control CNC, M.Ymeri; (USHAF 2016), |
| Additional literature: | 2. Rehg, J.A., Computer-Integrated Manufacturing, Prentice Hall, 1994 3. Innovative and Interdisciplinary use of Computer Numerical Control (CNC) : Philip Ashley, Neil Gordon, Byron Stanley & Franklin Wilbrink ISS Institute/TAFE Fellowship 4. Fellowship funded by OTTE, Victorian Government 5. Manual i makinave CNC, ne repartin e USHAF |

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| Designed plan of teaching: | |
| Weeks | Lecture to be held |
| Week 1: | Introduction to the design process with NC and CNC technology |
| Week 2: | Application of CNC technology in final and surface |

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| | processing |
| Week 3: | Selection of processing operations in CNC technologies |
| Week 4: | Introduction to CNC programming: machine programming |
| Week 5: | Programming with NC programming packages |
| Week 6: | Graphic programming |
| Week 7: | Digitalization Programming |
| Week 8: | Techniques in programming |
| Week 9: | Programming with the CAD system |
| Week 10: | Application of design with CNC technology, in the final processing |
| Week 11: | Application of design with CNC technology, in the surface processing |
| Week 12: | Application of design with CNC technology, in assembly process |
| Week 13: | Presentation from case studies |
| Week 14: | Presentation from case studies |
| Week 15: | Presentation from case studies |

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| Academic Policies and Rules of Conduct: |
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| Regular attendance, keeping calm and active engagement in dialogue during lectures and exercises is mandatory. |
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