Syllabus

Course Description

Course Title	Laboratory of Technical Drawing - CAD
Course Code	42614
Course Title Additional	
Scientific-Disciplinary Sector	NN
Language	English
Degree Course	Professional Bachelor in Wood Technology
Other Degree Courses (Loaned)	
Lecturers	Prof. Yuri Borgianni, Yuri.Borgianni@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/35189 dr. Aurora Berni, Aurora.Berni@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/42284
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	3
Teaching Hours	0
Lab Hours	42
Individual Study Hours	33
Planned Office Hours	
Contents Summary	The course's objective is to allow students to acquire basic practice for the use of different CAD systems in different industrial contexts (product development, architecture, design of wood buildings and items) and in relation to different scopes (modelling, production of technical drawing documentations, graphical illustration).
Course Topics	• 2D CAD systems

	• Parametric 3D CAD systems for the modelling of industrial products • 3D CAD systems for graphics and application in the building industry • Interactions among different CAD environments
Keywords	technical drawing; architectural drawing; 2D CAD; 3D CAD; drafting
Recommended Prerequisites	-
Propaedeutic Courses	
Teaching Format	Exercises, tutorials
Mandatory Attendance	Attendance is not compulsory but strongly recommended
Specific Educational Objectives and Learning Outcomes	Knowledge and understanding 1) Use of CAD systems to comply with the formalized representation standards of the technical drawing 2) Functioning logic of CAD systems 3) Appropriateness of representations for different domains Applying knowledge and understanding 4) applying drawing standards correctly 5) representing a technical system accurately in a CAD environment 6) choosing the correct system for technical documentation and modelling Making judgements 7) choosing a specific representation method in terms of clarity, completeness and non-ambiguity 8) evaluating pros and cons of alternative paths to build a geometry in more 3D CAD systems. Communication skills 9) using the appropriate terms in the course's discipline Learning skills 10) Ability to autonomously extend the knowledge acquired during the course by testing functionalities in CAD software that have not been explained by the lecturers
Specific Educational	-

Objectives and Learning Outcomes (additional info.)	
Assessment	The exam requires the elaboration of two separate CAD projects to be agreed with the lecturer and delivered one week before the official start of the session. The two CAD projects are aimed at the modelling and representation of a) simple industrial products; b) buildings or parts thereof. The exam is evaluated as pass/no pass
Evaluation Criteria	The decision to pass students is based on the outcomes and assessment of the CAD projects, markedly in terms of • the capability of representing geometries correctly (1, 3, 4, 5, 7); • the ability to use and justify the choice of CAD systems (2, 5, 6), as well as the correctness and clarity of drawing choices (8). The item 10, not mentioned in the assessment procedure, will be monitored thanks to the indication of useful sources. The item 9 will be trained and verified in the matching course "Technical Drawing – CAD". Formative assessment will take place during the course, as some hours will be dedicated to exercises where students will be supervised by the lecturers and given feedback. Office hours, especially those requested by the students to monitor the progress of the project development, will fundamentally contribute to formative assessment.
Required Readings	Handouts of the course (especially in its initial part) supplemented by excerpts of selected books and Internet websites.
Supplementary Readings	-
Further Information	The software applications used for training are AutoCAD, SolidWorks, Rhinoceros
Sustainable Development Goals (SDGs)	Industry, innovation and infrastructure, Quality education