Fakultät für Ingenieurwesen
Facoltà di Ingegneria
Faculty of Engineering

COURSE DESCRIPTION – ACADEMIC YEAR 2024/2025

Course title	**Laboratory of Technical Drawing - CAD**
Course code	42614
Scientific sector	-
Degree	Bachelor in Wood Technology (L-P03)
Semester	2
Year	1
Credits	3
Modular	No

Total lecturing hours	-
Total lab hours	42
Attendance	Highly recommended
Prerequisites	-
Course page	MS Teams channel to be activated before the beginning of the course

Specific educational objectives	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).

Lecturers	Yuri Borgianni, Aurora Berni
Contact	B1.4.06, yuri.borgianni@unibz.it; aurora.berni@unibz.it
Scientific sector of lecturer	IIND-03/B (former ING-IND/15)
Teaching language	English
Office hours	From Monday to Friday, upon email request
Lecturing Assistant (if any)	-
Contact LA	
Office hours LA	
List of 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
Teaching format	Exercises, tutorials

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

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.
Assessment language	English
Assessment Typology	Commission formed by the lecturers
Evaluation criteria and criteria for awarding marks	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	-
Software used	AutoCAD, SolidWorks, Rhino