

COURSE DESCRIPTION – ACADEMIC YEAR 2023/2024

Course title	Technical Drawing - CAD
Course code	42613
Scientific sector	ING-IND/15
Degree	Bachelor in Wood Technology (L-P03)
Semester	2
Year	1
Credits	3
Modular	No
Total lecturing hours	24
Total lab hours	-
Attendance	Highly recommended
Prerequisites	-
Course page	Teams channel reachable through this link
Specific educational objectives	The course's objective is to provide students with the required skills about representation techniques for the technical drawing and the graphical representation of systems, industrial products and parts of buildings. The process is largely supported by Computer-Aided Design (CAD) systems; these include parametric and non-parametric, 2D and 3D software applications.
Lecturer	Yuri Borgianni
Contact	L5-03, yuri.borgianni@unibz.it , +39 0471 017821
Scientific sector of lecturer	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	<ul style="list-style-type: none"> • Drawing standards <ul style="list-style-type: none"> ○ drawing lines ○ orthographic projections and axonometric drawings ○ section drawings ○ dimensioning • Computer-Aided Design (CAD) <ul style="list-style-type: none"> ○ Use of 2D CAD systems ○ Use of 3D CAD systems for the modelling of industrial products
Teaching format	Frontal lectures, tutorials
Learning outcomes	<p>Knowledge and understanding</p> <ol style="list-style-type: none"> 1) fundamentals and formalized representation standards of the technical drawing 2) Functioning logic of CAD systems

	<p>3) Appropriateness of representations for different product typologies</p> <p>Applying knowledge and understanding</p> <p>4) applying drawing standards correctly</p> <p>5) representing a technical system accurately in both paper-based and computer-aided fashions</p> <p>6) choosing the correct system for technical documentation and modelling</p> <p>Making judgements</p> <p>7) choosing (and justifying the choice of) a specific representation method in terms of clarity, completeness and non-ambiguity</p> <p>8) evaluating pros and cons of alternative paths to build a geometry in a 3D CAD.</p> <p>Communication skills</p> <p>9) using the appropriate terms in the course's discipline</p> <p>Learning skills</p> <p>10) Ability to autonomously extend the knowledge acquired during the study course by reading and understanding</p> <p>11) Learning advanced CAD functions autonomously also thanks to sources that support troubleshooting and online guides</p>
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Assessment	The exam follows the elaboration of two separate CAD projects to be agreed with the lecturer and delivered one week before the official start of the session. These two projects are the same developed for the scope of the course "Laboratory of Technical Drawing - CAD". The exam is an oral test in which the CAD projects are critically discussed and the students' comprehension and skills are further tested. The two CAD projects are aimed at the modelling and representation of a) simple industrial products; b) buildings or parts thereof.
Assessment language	English
Assessment Typology	Monocratic
Evaluation criteria and criteria for awarding marks	<p>The final mark will be based on the outcome of the oral exam. The assessment procedure evaluates</p> <ul style="list-style-type: none"> the capability of representing geometries correctly (1, 3, 4, 5, 7) to be justified in the CAD projects; 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 capability of mastering the discipline and use the appropriate terminology (9). <p>Items 10 and 11, not mentioned in the assessment procedure, will be monitored thanks to the indication of useful sources.</p>

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