Syllabus

Descrizione corso

Titolo insegnamento	Laboratorio di Scienza delle costruzioni
Codice insegnamento	42638
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	NN
Lingua	Tedesco
Corso di Studio	Corso di laurea professionalizzante in Tecnologie del Legno
Altri Corsi di Studio (mutuati)	
Docenti	dott. Thomas Franz Xaver Moosbrugger, ThomasFranzXaver.Moosbrugger@unibz.it https://www.unibz.it/en/faculties/engineering/academic-staff/person/42499
Assistente	
Semestre	Primo semestre
Anno/i di corso	2
CFU	2
Ore didattica frontale	0
Ore di laboratorio	20
Ore di studio individuale	30
Ore di ricevimento previste	6
Sintesi contenuti	1. practical determination of material parameters using simple fracture tests 2. project work „Timber construction” a. Design of a simple timber construction b. Model assumptions c. Structural analysis 3. Dimensioning of the designed structure.
Argomenti dell'insegnamento	Elaboration of the fundamentals for the design of timber structures based on the basic mechanical principles of elastostatics.

	Insight into the essential standards of Eurocode 0, 1, and 5.
Parole chiave	Statics, structural design, ULS and SLS verification, timber construction, laboratory exercises
Prerequisiti	None.
Insegnamenti propedeutici	
Modalità di insegnamento	Seminar work supervised in the lecture room.
Obbligo di frequenza	Recommended.
Obiettivi formativi specifici e risultati di apprendimento attesi	Specific educational objectives The course aims to teach participants the basic formal relationships of structural design, primarily in timber construction, and practical methods for solving problems in these contexts. Knowledge and understanding: • Understanding of the basic design concept for load-bearing structures - based on limit states - and the necessity of safety factors. • Basic knowledge of modeling buildings and load-bearing structures in structural engineering. Applying knowledge and understanding: • Basic knowledge of real load-bearing behavior and necessary simplified model approaches • Application of theoretical content through exercises, case studies and project work as well as understanding the problems presented. Theoretical content is illustrated by means of calculation exercises using practical examples. Making judgments: • Based on what they have learned, students are able to describe the function of real load-bearing systems. Communication skills: • The students are able to actively participate in subject-specific discussions using the specific terminology based on what they have learned. Learning skills • Students learn the subject matter both through frontal teaching (theoretical part) and through exercises in the lecture hall (practical exercises) • Students are able to expand their acquired knowledge through self-taught self-study and consultation of scientific and technical

	texts.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	Assessment of the written seminar thesis as part of the attendance in the laboratory units and final presentation of the small project.
Criteri di valutazione	Assessment: pass/fail. The final mark is determined 100% from the results of the laboratory/seminar work. Criteria for assessment: Correctness of the individual tasks, impression and cooperation in the context of the laboratory units, impression and correctness of the written laboratory work.
Bibliografia obbligatoria	Teaching material L-P03.
Bibliografia facoltativa	Colling, F.: Holzbau: *Grundlagen und Bemessung nach EC 5*, Springer Vieweg; Auflage: 5., überarb. und akt. Aufl. 2016 (7. Oktober 2016), ISBN-10: 3658142324 Niemz, P., Sonderegger, Walter, U.: 2011, *Physik des Holzes*. Hanser Fachbuchverlag, ISBN 978-3-446-876 44526-0, doi:10.3139/9783446445468. ÖNORM EN 1995-1-1 2019 06 01: *Eurocode 5: Bemessung und Konstruktion von Holzbauten - Teil 1-1: Allgemeines - Allgemeine Regeln und Regeln für den Hochbau (konsolidierte Fassung)*, 2019.
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Innovazione e infrastrutture