

Syllabus

Course description

Course title	Material Sciences
Course code	42312
Scientific sector	ING-IND/22
Degree	Bachelor in Wood Engineering
Semester	1 st
Year	II
Academic year	2020/21
Credits	6
Modular	No

Total lecturing hours	36
Total exercise hours	24
Attendance	Highly recommended
Prerequisites	-
Course page	https://www.unibz.it/en/faculties/sciencetechnology/phd-in-food-engineering-and-biotechnology/phd-students-feb/person/42844-chiara-tardini

Specific educational objectives	<ul style="list-style-type: none"> • Base course • ING-IND/22 <p>The course gives a general overview of scientific contents related to science of materials.</p> <p>The aim of the course is the knowledge of the properties and characteristics of materials. The materials that will be dealt with are: metals and metal alloys, ceramics, polymers and composites. Also the mechanical behavior of the combination of two of these materials will be analysed.</p>
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Learning outcomes	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> - of the chemical composition of materials, - of the atomic and crystalline structure of the mechanical behavior and properties - of their decay and related methods to prevent it. <p>Applying knowledge to find the proper solution to simple exercises in order to test the knowledge of the content of the course.</p> <p>Making judgments about the best solution in order to prevent (or to recover) decayed materials.</p>
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	<p>Communication skills: active listening, clarity and concision, language properties (in the course language)</p> <p>Learning skills: responsibility, time organization, independent work, initiative.</p>
Assessment	<ul style="list-style-type: none"> Written and oral: In the event that University will give the possibility to carry out a written exam, the students will be asked to take a written exam with exercises to solve in order to test knowledge application skills and oral one with questions. The students will be informed as soon as a decision is taken.
Assessment language	English
Evaluation criteria and criteria for awarding marks	<p>The final grade will be the sum of the two parts 70% according to the grade of the written exam and 30% of the oral exam.</p> <ul style="list-style-type: none"> Relevant for written exam: being able to solve exercises and clarity of answers for the questions; relevant for oral exam: clarity of answers, mastery of language (also with respect to teaching language), ability to summarize, skills in critical thinking.
Required readings	Callister W., Rethwisch D.G., <i>Materials Science and Engineering</i> , Wiley & Son
Supplementary readings	Shetty M. S., <i>Concrete Technology</i> , Chand & Company