

**ACADEMIC YEAR: 2019-2020**

COURSE: Wood industry and processing

TYPE OF EDUCATIONAL ACTIVITY: Characteristic

TEACHER: Luigi Todaro

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Language: Italian

ECTS: (lessons / tutorials/practice): 6 (5 frontal lectures; 1 practice)	n. of hours: 40 hours lectures 16 hours practice	Campus: Potenza School: SAFE Program: LM Forest and Environmental Sciences	Semester: I
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#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course provide the theoretical and technical elements in wood processing with particular regard to the production of panels and the main products derived from wood. Final competencies to be obtained in the course: systematic understanding and practical skills in the technical, environmental and mechanical aspects of wood processing. At the end of the course, students will also be able to distinguish the different types of products, the relevant Standard Regulations (UNI, EN, ISO) and health risks during wood processing.

- **Knowledge and understanding:** knowledge and understanding of the general principles governing, both at a qualitative and quantitative level, the physical and mechanical performance of wood panels.
- **Applying Knowledge and understanding:** ability to identify the principal wood products (particle board, plywood, medium density fiber, glued laminated boards). Ability to identify and to describe the industrial processes and the different used wood species.
- **Making judgements:** ability to discriminate the different properties of wood products and the possible uses.
- **Learning skills :** ability to collect and organize in a functional way the information coming from class lectures, suggested books, and literature data.

#### PREREQUIREMENTS

- LT (3-year degree)

- basic elements of wood technology and the most common physical and mechanical characteristics of wood

#### SYLLABUS

##### Lessons

ECTS-1: (8 h) Introduction to wood industry and processing. Plants or other industrial facilities in wood processing (sawing, boards production, drying). Wood modification and innovative wood product.

ECTS -2: (8 h) Wood processing and use of main woods and plywood, modified wood, veneer, wood-based. Glued laminated timber products for structural and nonstructurale use in accordance with rule (EN, EN).

ECTS -3: (8 h) Adhesives for wood products. Window and Door wood Materials. Furnishing (flooring, furniture, stairs).

ECTS -4: (8h L) Technical standards rules (UNI, EN, ISO). Physical and mechanical characteristics of the main wood species for wood industrial fields.

ECTS -5 (8 h L) Wood machining and their uses and safety for human heat.

ECTS -6 (16 h E): Visiting and practice understanding at wood industry companies; experimental exercise in wood laboratory and identification of a different wood products.

#### TEACHING METHODS

Theoretical lessons in the Classroom and laboratory (40 hours).

During practices students will be asked to evaluate and measure the main properties of wood panels.

#### EVALUATION METHODS



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Oral and practical examination at the end of the course

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**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

- Teaching material distributed in classroom.
  - J. M Dinwoodie: Timber: its nature and behavior.
  - G. Giordano. Tecnologia del legno UTET 1981-88 (disponibile presso la biblioteca della Facoltà)
  - Adelizzi D. 1999 - Manuale dei semilavorati: semilavorati di legno naturale e pannelli a base di legno.
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**INTERACTIONS WITH STUDENTS**

- in the office at planned days/hours (usually on Wednesday)
  - email, skype (every time)
  - mobile (working hours)
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**EXAMINATION SESSIONS (Forecast)**

Please see the format Prof Paola D'Antonio. For the specific modulus, usually the 2nd Tuesday of every month (except August)

**EVALUATION BOARD**

Paola D'Antonio  
Luigi Todaro

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**SEMINARS BY EXTERNAL EXPERTS YES**

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