1A FISE	CU 6.4
Semester 6	7 School ECTS

CU 6.4: WOOD MECHANICS AND REGULATIONS

Director of studies: Laurent BLERON

General CU objectives:

• Understand and master the models of the mechanics of deformable solid media with a view to pre-sizing and sizing of a timber construction system (linear elastic behaviour and minor disturbances).

• Understand and control the loading and sizing rules of straight structural elements according to the Eurocode (EC0, EC1 and EC5).

• Acquire the basic knowledge necessary to understand the European regulatory system and to bring new products to market.

Consists of:

- Module 1: Wood mechanics
- Module 2: French and European regulations
- Module 3: Not applicable
- Module 4: Not applicable

Hourly volume

In-person		*Self-directed study*
26.25 H	**Lectures**	**48.50 H**
40.00 H	**Tutorials**	
20.00 H	**Practicals**	

Positioning of the CU in the School reference system:

semester 6

Units of skills

In accordance with the RNCP sheet

Updated on 19 March 2025

CU 6.4: WOOD MECHANICS AND REGULATIONS

Module 1: Wood mechanics	**Coefficient 1**
Session leaders: Laurent BLERON, Frédéric GABRYSIAK, New lecturer	
Teaching assistants: Stéphane AUBERT, Julien LALLEMAND	
Prerequisites: none	
Teaching materials: Course notes – Reading list	
Assessment methods: individual Class assignment– File– Practical examination	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Describe the mechanical behaviour of timber for different mechanical stresses. Analyse a mechanical system and calculate a state of stresses and deformations in a structure.	Mechanical behaviour of timber.	1.75		20.00
	Constraints and deformations under simple stresses.	5.25		
	Calculations of isostatic and hyperstatic systems according to energy and force methods.	5.25	16.00	
		12.25	**16.00**	**20.00**

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Module 2: French and European regulations	Coefficient 1
Session leaders: Eric DIEBLING, Jérôme ROBIN, Rémi SENNEPIN (CRITTBois), New lecturer	
Teaching assistants:	
Prerequisites: Know how to determine the state of stress and deformation in a mechanical system.	
Teaching materials: Course notes – Presentation slides	
Assessment methods: individual Class assignment– Report	

Learning outcomes	Description	Number of student hours (in-person)		
		Lectures	Tutorials	Practicals
Describe the French and European regulatory system. Establish a load path, define the loads acting on a building. Be able to size and implement the structure of a timber building, in accordance with national and European regulations.	Structuring of standards, basic standards, DTU (building standards), labels, structuring of civil engineering regulations.	1.75		
	– Normative environment ATE, CEN, DTU, ATEC, ATECS	3.50		
	– Eurocode 0, Eurocode 1	3.50		
	– Introduction to Eurocode 5	5.25	24.00	
		14.00	**24.00**	**0.00**

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