

CIVIL-433

Timber construction

Natterer Johannes

Cursus	Sem.	Type
Civil Engineering	MA2, MA4	Opt.
Civil engineering minor	E	Opt.

Language of teaching	English
Credits	3
Session	Summer
Semester	Spring
Exam	Oral
Workload	90h
Weeks	14
Hours	3 weekly
Courses	2 weekly
Exercises	1 weekly
Number of positions	

Summary

Help students understand and design innovative, architecturally and structurally interesting wood constructions. Deepen technical knowledge through the study of built examples.

Content

Understand and design parts of timber constructions like:

- beam, truss and strut systems
- design of load-bearing systems for multi-storey buildings
- Stabilization of multi-storey buildings
- Structural elements: building columns and floors
- Building envelope
- Fire protection and calculations

Keywords

wooden buildings, floor, connection, fire facade, timber, design, construction

Learning Prerequisites**Required courses**

CIVIL-331 : Design and dimensioning of timber structures, or equivalent.

Important concepts to start the course

Structural statics and basic dimensioning of timber structures

Learning Outcomes

By the end of the course, the student must be able to:

- Design structural systems
- Analyze structural behaviour
- Construct timber connections

Transversal skills

- Manage priorities.

Teaching methods

ex cathedra, illustrated with slides, exercises, tour

Assessment methods

Oral exam

Supervision

Office hours	No
Assistant.e.s	Yes
Others	During the exercices R/Q session before the examen

Resources

Bibliography

- P-A Dupraz, M. Mooser, D. Plug ; « Dimensionnement des structures en bois - aide au calcul basé sur la norme SIA 265 », PPUR, 2010
- TGC13: Construction en bois
- Construire en bois / Thomas Herzog, Julius Natterer, Roland Schweitzer, Michaël Volz, Wolfgang Winter /ed. PPUR, collection: Atlas de la construction
- Normes SIA (structure porteuse), de n° 260 à 265
- TGC volume 13

- Dimensionnement des structures en bois / Dupraz
- Construction en bois (TGC13) / Natterer
- Construire en bois / Herzog et al.
- Normes SIA - only access (for EPFL only)

Ressources en bibliothèque

- [Normes SIA - online access \(for EPFL only\)](#)
- [Find the references at the Library](#)

Moodle Link

- <https://go.epfl.ch/CIVIL-433>