

CIVIL-433

**Timber construction**

Natterer Johannes

<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
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
<b>Hours</b>	<b>3 weekly</b>
Courses	2 weekly
Exercises	1 weekly
<b>Number of positions</b>	

**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
Assistants	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>