

## DESIGN OF PRECAST CONCRETE STRUCTURES

|                          |                              |
|--------------------------|------------------------------|
| Civil-414                | GR C0 01                     |
| Lecture time:            | Tuesdays from 16:15 to 19:00 |
| Semester dates: weeks of | 18.02.2025 - 27.05.2025      |

| Week         | Date       | Distribution of hours (3 per week) |                             |                      | Lecture topic   | Lecturer                         | Project discussion                    | Topic of project presentations |
|--------------|------------|------------------------------------|-----------------------------|----------------------|---|----------------------------------|---------------------------------------|--------------------------------|
|              |            | Lecture                            | Project work/<br>discussion | Project presentation |   |                                  |                                       |                                |
| 1            | 18.02.2025 | 2                                  | 1                           | 0                    | Introduction to Prefabrication + Building and floors        | DFO, FM, EC                      | Group formation, project introduction |                                |
| 2            | 25.02.2025 | 2                                  | 1                           | 0                    | Elément SA. Building floors. Introduction to Prestressing I | JP Hubert,<br>Frédéric<br>Monney | Conceptual design                     |                                |
| 3            | 04.03.2025 | 2                                  | 1                           | 0                    | Bridges. Prestressing II                                    | Fred Monney,<br>DFO,             | Conceptual design                     |                                |
|              | 11.03.2025 |                                    |                             |                      | No class  |                                  |                                       |                                |
| 4            | 18.03.2025 | 0                                  | 6                           | 0                    | Visit to precast factory 13:30-18:30                        | JP Hubert                        |                                       |                                |
| 5            | 25.03.2025 | 1                                  | 2                           | 0                    | Composite design, connections                               | DFO, FM, EC                      | General design                        |                                |
| 6            | 01.04.2025 | 1                                  | 2                           | 0                    | Presentation Peikko connections. Design of connections:     | Jan Bujnak,<br>DFO, FM, EC       | General design                        |                                |
| 7            | 08.04.2025 | 0                                  | 0                           | 3                    |   | DFO, FM, EC                      |                                       | General design phase (I)       |
| 8            | 15.04.2025 | 0                                  | 0                           | 3                    |   | DFO, FM, EC                      |                                       | General design phase (II)      |
|              | 22.04.2025 |                                    |                             |                      | Semaine de Pâques   |                                  |                                       |                                |
| 9            | 29.04.2025 | 0                                  | 3                           | 0                    |   | DFO, FM, EC                      | General discussion                    |                                |
| 10           | 06.05.2025 | 0                                  | 0                           | 3                    |   | DFO, FM, EC                      | General discussion                    |                                |
| 11           | 13.05.2025 | 0                                  | 3                           | 0                    |   | FM, EC                           | General discussion                    |                                |
| 12           | 20.05.2025 | 0                                  | 0                           | 3                    |   | DFO, FM, EC                      |                                       | Final group presentations (I)  |
| 13           | 27.05.2025 | 0                                  | 3                           | 0                    |   | DFO, FM, EC                      |                                       | Final group presentations (II) |
| <b>TOTAL</b> |            | <b>8</b>                           | <b>22</b>                   | <b>12</b>            |   |                                  |                                       |                                |
|              |            |                                    |                             | <b>42</b>            |   |                                  |                                       |                                |

### Project organization

#### Material to be evaluated

Calculation Report

Drawings

Oral Presentation:

- A total of 2 presentations will be made by each group
- The two intermediate presentations will be 10' presentation and 5' discussion on the presentation, and will be based on the intermediate stages of the design (conceptual design and detailing of elements and connections)
- The final group presentation will have a longer duration, to be determined based on the number of groups, and will be based on the complete project

The Calculation Report and the Drawings will be handed in by the end of the Semester in order to allow for corrections arising during the presentation

#### Assistants de construction:

Frederic Monney

Enrique Corres