

**COURSE TEMATICS AND REQUIREMENTS
2018/2019. 2ND SEMESTER**

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| <i>Course Title</i> | <i>Prestressing Technologies</i> |
| <i>Course code</i> | MSM409ANEP |
| <i>Class hours per week: le/pr/lab</i> | 2/0/0 |
| <i>Credit</i> | 2 |
| <i>Training name</i> | Structural Engineer (MSc) |
| <i>Mode</i> | Full time training |
| <i>Form of assessment</i> | Semester mark |
| <i>Semester</i> | 2 |
| <i>Required course</i> | - |
| <i>Department</i> | Civil Engineering |
| <i>Responsible lecturer</i> | András Dormány |

AIM OF COURSE

This course is aimed at providing basic and advanced knowledge on the mechanics, design and construction of prestressed concrete structures.

CONTENT

Short description: This course is aimed at providing basic and advanced knowledge on the mechanics, design and construction of prestressed concrete structures. Topics covered will include: basic concept of prestressing, prestressing systems and technologies, stress distribution in prestressed concrete structures, determination of prestress losses, flexural and shear behaviour at service and ultimate loads, deflection and crack control, design for serviceability and ultimate limit states, design of prestressed beams and slabs, external prestressing, strengthening with prestressing, durability and maintenance of prestressed concrete structures, case studies.

Lectures:

1. Concept of prestressing
2. Stress losses
3. Prestressed floors, publishing the first assignment and brief
4. Publishing the second assignment and brief
5. Consultation

6. Midterm exam

ASSESSMENT METHOD

Attendance: According to Code of Studies.

Terms to get the signature: Succes perform of midterm exam and semester assignments.

Course grade: The course grade is created by the combination of midterm exam and semester assignments. The earned points need to achieve 51% to get grade pass.

OBLIGATORY AND OFFERED SOURCES

- [1.] Lecture slides
- [2.] Eurocode 2: Design of concrete structures
- [3.]

SCHEDULE

| | | STUDY PERIOD | | | | | | | | | | | | | | | EXAM PERIOD | | | | | | |
|----------------------------|-------------------|--------------|----|----|----|----|----|----|-----|----|-----|-----|-----|-----|-----|-----|-------------|----|----|----|----|--|--|
| 2018/2019. II. FÉLÉV | | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 1. | 2. | 3. | 4. | 5. | | |
| Lecture # | | | 1 | | | | 2 | | 3 | | | 4 | 5 | | 6 | | | | | | | | |
| Midterm exam | | | | | | | | | | | | | | | | | | | | | | | |
| Semester assignemnt | Publishing | | | | | | | | 1st | | | 2nd | | | | | | | | | | | |
| | Deadline | | | | | | | | | | | | | | | X | | | | | | | |
| Semester mark | | | | | | | | | | | | | | | | | S | M | | | | | |

2019.02.06.

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responsible lecturer