Force transfer in concrete - BMEEOEMDT71

I. Subject Specification

1. Basic Data

1.1 Title

Force transfer in concrete

1.2 Code

BMEEOEMDT71

1.3 Type

Module with associated contact hours

1.4 Contact hours

Type	Hours/week / (days)
Consultation	3

1.5 Evaluation

Exam

1.6 Credits

3

1.7 Coordinator

name	Dr. Balázs György
academic rank	Professor
email	balazs.gyorgy@emk.bme.hu

1.8 Department

Department of Construction Materials and Technologies

1.9 Website

https://epito.bme.hu/BMEEOEMDT71
https://edu.epito.bme.hu/course/view.php?id=2563

1.10 Language of instruction

english

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1.11 Curriculum requirements

Ph.D.

1.12 Prerequisites

1.13 Effective date

1 September 2022

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2. Objectives and learning outcomes

2.1 Objectives

The purpose of the subject is to understand bond, cracking, and anchorage characteristics of different reinforcement in concrete.

2.2 Learning outcomes

Upon successful completion of this subject, the student:

A. Knowledge

1. Able to understand the physical and mechanical behavior

B. Skills

1. Able to apply analytical and experimental methods described in the subject

C. Attitudes

1. Able to further develop methods of analysis

D. Autonomy and Responsibility

1. Able to estimate applicability for practical applications

2.3 Methods

Lectures

2.4 Course outline

Hét	**Előadások és gyakorlatok témaköre**
1.	INTRODUCTION, IMPORTANCE OF BOND, TERMINOLOGY, HISTORY
2.	INFLUENCING FACTORS
3.	MATHEMATICAL DESCRIPTION OF BOND-SLIP

	LAW
4.	BOND UNDER CYCLIC LOADS
5.	INFLUENCE OF PRELOADING; Miner hypothesis
6.	BOND UNDER RANDOM LOADING
7.	BOND TESTS WITH ACOUSTIC EMISSION
8.	REVERSED CYCLIC BOND BEHAVIOUR
9.	BOND UNDER LONG TERM LOADS
10.	MODELLING OF SLIPPING CONTACT
11.	TRANSFER CONTROL OF PRESTRESSING TENDONS
12.	CRACKING AND TENSION STIFFENING
13.	BOND OF CORRODED REINFORCEMENT
14.	REVIEW AND PREPARATION OF EXAM

The above programme is tentative and subject to changes due to calendar variations and other reasons specific to the actual semester. Consult the effective detailed course schedule of the course on the subject website.

2.5 Study materials

- pdf versions of the Lectures.
- Literature is provided for the preparation of the exam as well as for the classes.
- (Uploaded in the moodle system.)

2.6 Other information

2.7 Consultation

Arranged via e-mail.

This Subject Datasheet is valid for:

2024/2025 semester II

II. Subject requirements

Assessment and evaluation of the learning outcomes

3.1 General rules

3.2 Assessment methods

Teljesítményértékelés neve (típus)	Jele	Értékelt tanulási eredmények
Exam, oral	E	A.1; B.1; C.1; D.1

The dates of deadlines of assignments/homework can be found in the detailed course schedule on the subject's website.

3.3 Evaluation system

Jele	Részarány
E	100%
Összesen	**100%**

3.4 Requirements and validity of signature

Active presence during the semester.

3.5 Grading system

Érdemjegy	Pontszám (P)
jeles (5)	85-100
jó (4)	74-84
közepes (3)	62-73
elégséges (2)	50-61
elégtelen (1)	0-49

3.6 Retake and repeat

Possible during the examination period.

3.7 Estimated workload

Tevékenység	Óra/félév
Lectures + Study	28+14
Összesen	**42**

3.8 Effective date

1 September 2022

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