1. Course number and name

RB-S1-19-W2C-3D, Structural Mechanics I

2. Credits and contact hours*

5 ECTS, lectures: 25 hours**, classes: 2 hours**, project: 28 hours**, laboratory: 5hours**

3. Instructor's or course coordinator's name

Ryszard Walentyński, CEng, MSc, PhD, DSc, Assoc. Prof.

4. Text book, title, author, and year

- Ghali et al.: „Structural Analysis: The Unified Classical and Matrix Approach". Taylor & Francis
- Karnovski and O. Lebed: „Advanced Methods of Structural Analysis". Springer C.H.
- Norris and J.B. Wilbur: „Elementary Structural Analysis". McGraw Hill

a. other supplemental materials

- any other book of Structural Mechanics

5. Specific course information

a. brief description of the content of the course (catalog description)

Lectures:

Statically determinate structures. Finding displacements in statically determinate structures. Influence lines and envelopes.

Classes:

Statically determinate structures. Finding displacements in statically determinate structures. Influence lines and envelopes.

Project:

Statically determinate structures. Finding displacements in statically determinate structures. Influence lines and envelopes

Laboratory:

Getting skills on selected programs of structural analysis.

b. prerequisites or co-requisites

Mechanics, Mechanics of Materials,

c. indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program

Required.

6. Specific goals for the course

a. specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic

The student knows:

principles of structural analysis of statically determinate rod structures

have skills in:

- selected computer programs of structural analysis,
- solving statically determinate structures (internal forces and displacements),
- finding influence lines and envelopes of simple statically determinate structures,

have social competencies in:

- responsibility for accuracy of the work results and their interpretation,
- ability to work on the given task autonomically and cooperate in a team.

b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

K1A_W04, K1A_U04, K1A_U12

7. Brief list of topics to be covered

a) Statically determinate structures.

b) Finding displacements in statically determinate structures.

c) Influence lines and envelopes.

d) Getting skills on selected programs of structural analysis.

*- Consultations were not included in the contact hours

**-per semester