Tárgytematika / Course Description

Mechanics of Structures 2

EKNB_SETA011

Tárgyfelelős neve / Teacher's name: dr. Movahedi Rad Majid
Félév / Semester: 2019/20/2
Beszámolási forma / Assesment: Vizsga
Tárgy heti óraszáma / Teaching hours(week): 2/3/0
Tárgy féléves óraszáma / Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

The primary purpose of the course is to introduce the fundamental concepts of strength of materials, the concepts of loads, stresses, strains, and displacements, as well as the relationships between them. Particular emphasis is made on the calculation of stresses and strains due to simple and complex internal forces of bars and beams. The presented methods enable the solution of certain statically indeterminate problems.

TANTÁRGY TARTALMA / DESCRIPTION

-Introduction to strength of materials.

-Tensile members, compression members.

-Pure shear, joint connections.

-Bending.

-Skew bending.

-Eccentric loading.

-Test 1.

-Shearing stress in bending.

-Torsion.

-Principal stresses.

-Constitutive relations in solids elasticity

-Plastic bodies.

-Test 2.
-Repetition test. Exam Preparation.

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Task

Tests score between 0 and 100 points,

Final exam: written exam score between 0 and 150 points,

Minimum mid semester requirement to participate at the final exam

The semester score must be at least 100 out of 200. Semester score are calculated by the following formula:

Semester score= sum of two tests

Final Mark:

The final mark based on the total score.

Total score calculated by the following formula:

Total score= sum of two tests + written exam

1 for 101-174 points (fail)

2 for 175-210 points

3 for 211-250 points

4 for 251-280 points

5 for 281-350 points

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Recommended reading:

1. Russell C. Hibbeler Mechanics of Materials, 10th Edition, Pearson,2017

2. Egor P. Popov, Engineering Mechanics of Solids, 2nd Edition, Pearson, 1999