Tárgytematika / Course Description

Steel structures

NGB_SE104_3

Tárgyfelelős neve / Teacher's name: dr. Bukovics Ádám

Félév / Semester: 2018/19/1

Beszámolási forma / Assesment: Vizsga

Tárgy heti óraszáma / Teaching hours(week): 2/1/0

Tárgy féléves óraszáma / Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

Behavior and properties of steel

Introduction of steel structures and buildings

Introduction of the concept of design of steel structural members for buildings subjected to tension, compression, shear and bending

Design of welded and bolted connections

TANTÁRGY TARTALMA / DESCRIPTION

Introduction of steel structures

Structural system of steel buildings and steel structures

Advantages and disadvantages of steel

The required properties of steel

Alloying and polluter

Rolled products

Material quality of structural steel

Viewpoints of material selection

Stress-strain diagram

Classification and combination of actions

Material models

Central tension

Residual stresses

Central compression

Buckling resistance of compressed members

Bending moment and shear

Lateral torsional buckling

Welded connections

Bolted connections

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Preparation of a design work

The finished design work must be show at least in the 14. weeks of the semester.

Written exam at the end of the semester.

Calculation of the final note:

50% design work (maximum 100 points)

50% written exam (maximum 100 points)

Grading:

0-109 points 1

110-129 points 2

130-149 points 3

150-169 points 4

170-200 points 5

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

European Steel Design Educational Programme (ESDEP) http://www.fgg.unilj.si/kmk/ESDEP/master/toc.htm

The free enciklopedia for UK steel construction information

steelconstruction.info

Daniel L. Schodek: Structures, An Introduction to Structural Analysis

Mete A. Sozen, Toshikatsu Ichinose: Understanding Structures

EN 1990 EUROCODE 0: Basic of structural design

EN 1991 EUROCODE 1: Actions of structures

EN 1993 EUROCODE 3: Design of steel structures