

BYG3311 Design of wood and steel structures - Study plans 2016-2017

Course code:

BYG3311

Course name:

Design of wood and steel structures

Course level:

Bachelor (syklus 1)

ECTS Credits:

10

Duration:

Vår

Duration (additional text):

Offered first time spring 2016.

Language of instruction:

Norwegian

Prerequisite(s):

BYG2251 Mekanikk

REA1141 Matematikk 1

On the basis of:

BYG2301 Konstruksjonsteknikk

BYG2221 Byggstatikk

Expected learning outcomes:

Knowledge: After having completed the subject the student will

- have knowledge of the empirical and theoretical background for the eurocodes (NS-EN) relevant for the topics of the subject.

Skills: After having completed the subject the student will

- be able to design simple and also somewhat complex wood- and steel-structures, including bracing systems, according to the relevant eurocodes.

- be able to design beams and columns, both in wood and steel, for the requirements.

General competence: After having completed the subject the student will

- have some insight into the carrying capacity of somewhat complex structures.

- have acquired the necessary technical language of the subject.

Topic(s):

Theme 1:

Steel design according to NS-EN 1993-1-1, NS-EN 1993-1-2, NS-EN 1993-1-5 og NS-EN 1993-1-8. Beams and columns. Classifications of cross sections, bolted and welded connections, lateral stiffening, torsional lateral buckling of steel columns, cross-section class 4, design of beams and columns for fire protection.

Theme 2:

Wood design according to NS-EN 1995-1-1 og NS-EN 1995-1-2. Beams for moment, shear, lateral buckling and deflection, columns for axial and lateral loadconnections. Design of beams and columns for fire protections. Stability and bracing systems. Details and joint design.

Teaching Methods:

Lectures

Mandatory assignments

Form(s) of Assessment:

Written exam, 6 hours

Grading Scale:

Alphabetical Scale, A(best) – F (fail)

External/internal examiner:

Graded by internal examiner (lecturer).

External sensor regularly is either evaluating or preparing the examination. Next time: 2021.

Re-sit examination:

Oral examination.

Tillatte hjelpemidler:**Examination support:**

- Support material code B: All printed and hand-written support material is allowed. A specific basic calculator is allowed.
 - The following basic calculators are permitted:
 - Casio fx-82ES PLUS
 - Citizen SR-270X and Citizen SR-270X College
 - Hewlett Packard HP30S

Coursework Requirements:

5 - 7 problems of which all but one must be accepted.

Academic responsibility:

Faculty of Technology, Economy and Management

Course responsibility:

Høgskolelektor Marthin Landgraff

Teaching Materials:

Announced at the start.

Replacement course for:

Replace partial BYG2201 Materialer og konstruksjoner and partial BYG3281 Stål og trekonstruksjoner.

Publish:

Yes