BYG2301 Design of Constructions - Study plans 2016-2017

Course code:
BYG2301

Course name:
Design of Constructions

Course level:
Bachelor (syklus 1)

ECTS Credits:
10

Duration:
Autumn

Duration (additional text):
Offered first time autumn 2015.

Language of instruction:
Norwegian

On the basis of:
REA1141 Matematikk 1

BYG2251 Mekanikk

BYG2221 Byggstatikk

Expected learning outcomes:
Knowledge:

After having completed the subject will the student

- know the working principles of different structural building systems.

- have knowledge of the empirical and theoretical background for the relevant European structural building codes (Eurocodes).

Skills:

After having completed the subject should the student will, by means of the relevant Eurocodes

- be able to find the design loads of a structure

- be able to do steel and wood design of beams and simple elements in compression and tension.

General competence:

After having completed the subject the student will

- know the relevant technical language.

- have a good understanding of the design of structures.

Topic(s):
Subject topics:

Topic 1: Structural components, How the major building structures functions / Foundation principles.

Topic 2: Structural loading based on NS-EN 1990:2002+NA2008. Dead loads and live loads according to NS-EN 1991-1-1, snow loads according to NS-EN 1991-1-3, wind loads according to NS-EN 1991-1-4.

Topic 3: Wood Design involving

- beams for moment, shear, axial load, torsional buckling, deflection and local effects.

- simple elements for compression (columns) and tension.

Topic 4: Steel design involving

- beams for moment, shear, axial load, torsional buckling, deflection and local effects.

- simple elements for compression (columns) and tension.

- cross-sectional classification.

Teaching Methods:
Lectures
Mandatory assignments

Teaching Methods (additional text):
Emnet er tilrettelagt for gjennomføring både for campusstudenter og nettstudenter. Den enkelte student står fritt til selv å velge den formidlingsform som best er tilpasset eget behov. Emnet foreleses med forelesninger på campus som er åpne for alle. Materiell som tar for seg hovedpunktene fra campusforelesningene i emnet finnes også på internett.

Form(s) of Assessment:
Written exam, 6 hours

Form(s) of Assessment (additional text):
The final exam counts 100 %.

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: 2020.

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:
6 - 8 works of which all except one must be accepted.

Academic responsibility:
Faculty of Technology, Economy and Management

Course responsibility:
Høgskolelektor Marthin Landgraff

Teaching Materials:
Will be announced at the start of the subject.

Replacement course for:
Replace partial BYG2201 Materialer og konstruksjoner and partial BYG3281 Stål og trekonstruksjoner.

Publish:
Yes