

BYG2311 Building Materials - Study plans 2016-2017

Course code:

BYG2311

Course name:

Building Materials

Course level:

Bachelor (syklus 1)

ECTS Credits:

10

Duration:

Autumn

Language of instruction:

Norwegian

On the basis of:

BYG2251 Mekanikk

REA1141 Matematikk 1

REA2101 Fysikk og kjemi

Expected learning outcomes:

The course provides basic knowledge of the properties of essential materials, especially steel, aluminum, concrete, brick, wood and composites. After completion the student should be able to:

Knowledge:

- The candidate will learn the basic theory about important building materials. This includes materials' composition, preparation, structure, properties, function and applications.
- Explain thermal characteristics, strength and fire resistance.
- Explain degradation and lifetime for different materials, and how these are affected by external influences such as climate (humidity, temperature) and chemicals.
- Justify the choice of materials for various purposes.
- Be familiar with different secondary building materials such as insulation materials, sheet materials, plastic sealant materials and their material properties within buildings.

Skills:

- Show the relationship between the choice of materials, physical material properties and environmental concerns.
- Identify tensions in materials as a result of applied loads
- Perform laboratory exercises for some building materials

General competence:

- The candidate has insight into the environmental impacts of products and solutions within buildings.

Topic(s):

For the relevant materials:

- Raw materials, construction and production
- Strain, tension, strength and stiffness
- Persistence and fire resistance
- Environmental considerations for the whole life cycle

Teaching Methods:

Lectures

Exercises

Tutoring

Teaching Methods (additional text):

This course is for students at campus in Gjøvik and also for web based students.

Form(s) of Assessment:

Written exam, 5 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: 2018.

Re-sit examination:

Ordinary.

Tillatte hjelpemidler:**Examination support:**

- Support material code C: Specified printed and hand-written support material is allowed. A specific basic calculator is allowed.
 - John Haugan: «Formler og tabeller»
 - The following basic calculators are permitted:
 - Casio fx-82ES PLUS
 - Citizen SR-270X and Citizen SR-270X College
 - Hewlett Packard HP30S

Coursework Requirements:

8-10 exercises. All except two must be approved.

Academic responsibility:

Faculty of Technology, Economy and Management

Course responsibility:

Førsteamanuensis Mohammad Hajmohammadian Baghban

Publish:
Yes