



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Byggnadsmaterial **Building Materials**

VBMA35, 6 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED V

Date of Decision: 2023-03-21

General Information

Compulsory for: IBYA2

Language of instruction: The course will be given in Swedish

Aim

The main purpose of the course is to give basic knowledge about the structure and properties of most building materials.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to identify the most common building materials
- be acquainted with the production, properties and performance of the most important building materials
- be able to make reasonable selections of materials and judge the consequences of the selections

Competences and skills

For a passing grade the student must

- be able to perform simple calculations of heat, moisture and strength behaviour of different materials
- be able to understand the relationships between the composition of materials and their most important properties

The choices shall be motivated by calculations and the literature

Contents

Structure of materials at sub-micro, micro and macro level. Density and porosity and their importance for the material properties. Heat and moisture issues. Strength and deformation properties. Durability. Properties at high temperatures. Test methods and judgement of test results. Production and properties of common materials as for instance concrete, steel, brick, and wood.

The student experiments are performed in groups of six students. They test strength of concrete and steel and study heat and moisture transport. The experiments are examined by a written report.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: Written examination. Approved experimental exercises.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Laboratory Work.

Credits: 2. **Grading scale:** UG. **Assessment:** Passed Laboratory Works

Code: 0217. **Name:** Written Examination.

Credits: 4. **Grading scale:** TH. **Assessment:** Written Examination

Admission

The number of participants is limited to: No

The course overlaps following course/s: VBM011, VBM012, VBMA05, VBMA25, VBM611, VBMA30

Reading list

- Burström, P. G.: Byggnadsmaterial, 4:e upplagan. Studentlitteratur, 2021, ISBN: 9789144151786.
- Burström, P. G.: Byggnadsmaterial övningsbok, 4 e upplagan. Studentlitteratur, 2021, ISBN: 9789144153988.
- Utdelat material som görs tillgängligt på kurshemsidan.

Contact and other information

Course coordinator: Peter Johansson, peter.johansson@byggtek.lth.se

Course administrator: Linnéa Ekman, linnea.ekman@ebd.lth.se

Course homepage: <http://www.byggnadsmaterial.lth.se/utbildning/vbma35>

Further information: The student experiments are performed in Lund.