



LTH

FACULTY OF
ENGINEERING

Course syllabus

Byggnadsmaterial Building Materials

VBMA30, 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

Main field: Technology.

Compulsory for: V1

Language of instruction: The course will be given in Swedish

Aim

The aim 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
- know the structure, manufacturing process, and properties of building materials
- realize how the properties can be affected during development and manufacturing

Competences and skills

For a passing grade the student must

- be able to identify important demands in various environments and how these affect the materials
- be able to make reasonable material choices and to judge the consequences of these choices in various situations

Contents

The course deals with the most common building materials.

Interrelations between the structure and the properties of building materials. Test methods and their interpretation. Production of materials. Structure of materials on submicro-, micro- and macro-levels. Density and porosity. Heat and moisture transfer and their effects. Strength and deformation. Durability. Effect of high temperatures.

The student experiments are performed in groups of four students. They test for example concrete, heat and moisture transport, strength and creep.

Examination details

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

Assessment: Written examination. Three mandatory student experiments.

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: 0121. **Name:** Laboratory Work.

Credits: 1. **Grading scale:** UG. **Assessment:** Laboratory Work

Code: 0221. **Name:** Written Examination.

Credits: 5. **Grading scale:** TH. **Assessment:** Written examination

Admission

The number of participants is limited to: No

The course overlaps following course/s: VBM011, VBM611, VBMA05, VBM012, VBMA35

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: Linnea Ekman, linnea.ekman@ebd.lth.se

Course homepage: <http://www.byggnadsmaterial.lth.se/utbildning/vbma30>