



# SD2510 Experimental Methods for Biobased Materials 7.0 credits

Experimentella metoder för biobaserade material

This is a translation of the Swedish, legally binding, course syllabus.

## Establishment

Course syllabus for SD2510 valid from Autumn 2007

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

SD2500 or SD2505 or “fördjupningsarbete” in lightweight structures or solid mechanics or similar.

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

After the course, the student should be able to:

- manufacture biobased materials
- prepare specimens and use microscopy to characterize composite microstructure, and apply digital image analysis to quantify this structure
- prepare specimens for mechanical testing and carry out such testing, and analyze the results using appropriate theory
- prepare specimens for moisture experiments, and analyze the results using appropriate theory
- prepare concise literature surveys based on technical journal articles
- write technical reports in scientific style

## Course contents

Manufacturing of biocomposite material, microscopy and analysis of biocomposites. Mechanical properties of biobased materials, anisotropy. Moisture adsorption and swelling of biobased materials.

## Course literature

Carlsson and Pipes, "Experimental mechanics of composites"

Journal papers listed at start of the course.

## Examination

- LAB4 - Laboratory Work, 2.0 credits, grading scale: P, F
- LAB3 - Laboratory Work, 2.0 credits, grading scale: P, F
- LAB2 - Laboratory Work, 2.0 credits, grading scale: P, F
- LAB1 - Laboratory Work, 1.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

## **Other requirements for final grade**

Four approved lab reports.

## **Ethical approach**

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.