Course: Applied Mechanics — credits: 5

Course code	WBVP23AM1
Name	Applied Mechanics
Study year	2026-2027
ECTS credits	5
Language	English
Coordinator	J.T. Hofman
Modes of delivery	Education
Assessments	Applied Mechanics - Written, organised by STAD examinations

Learning outcomes

The student:

- translates a given 2-dimensional statically loaded product into a schematic representation and translates this schematic representation further into Free Body Diagram (FBD)
- determines the unknown external loads by applying the three laws of equilibrium in a structured manner
- determines the internal loads of a construction using the method of sections
- calculates internal stresses from the internal loads using a set of given relations
- compares the maximum internals stress to the maximum stress acceptable by the material
- solves mathematical equations that are relevant for the engineering field

Content

All products around us have been designed to fulfill certain requirements. In many cases, the dominant design aspects are related to strength requirements. In this course (5 EC), the student will learn to translate external loads into internal loads and stresses, and check the strength of the material. Analyses of given practical situations will be performed in a structured manner. Relevant mathematics will be taught along the way.

Included in programme(s)

Mechanical Engineering VWO a 3-year variant

School(s)

Engineering, Life Sciences & ICT

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