

## Course: Applied Mechanics

credits: 5

<b>Course code</b>	ELVP22AMEC
<b>Name</b>	Applied Mechanics
<b>Study year</b>	2023-2024
<b>ECTS credits</b>	5
<b>Language</b>	Dutch, with parts in English
<b>Coordinator</b>	A.M. Overweel-Vogelaar

<b>Modes of delivery</b>	Problem-based learning
<b>Assessments</b>	Applied Mechanics - Assignment

### Learning outcomes

#### **Defining**

The student clearly identifies a problem or customer need, contextualizes it, consults relevant sources, and converts it into a goal, problem statement, and electrical engineering requirements.

#### **Designing**

The student considers various solution directions to arrive at a detailed and well-founded electrical engineered product/service/process based on the program of requirements, using appropriate design methodologies and taking into account societal interests and engineering standards.

### Content

In this course, you will learn how to answer the following question in a structured manner: "Is this part strong enough in this situation of forces?". The two ways of answering this question will be covered in this course, namely calculations and a computer simulation.

For the manual calculations, the focus is on schematizing (simplified) situations and visualizing by drawing external forces and moments in a free body diagram. These external forces are translated to internal forces and tensions on (part of) the product in order to be answer the question whether a part is strong enough.

Additionally, using software, this question is answered by visualizing the deformation and tension as a consequence of external forces on a product.

### Included in programme(s)

Electrical Engineering Major Sensor Technology  
Electrical Engineering Major Electronics

### School(s)

Institute of Engineering

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