



## Course syllabus

Faculty of Technology  
Kalmar Maritime Academy

1DU04D Mekanik, 4 högskolepoäng  
Mechanics, 4 credits

**Main field of study**

Energy Technology

**Subject Group**

Energy Technology

**Level of classification**

First Level

**Progression**

G1F

**Date of Ratification**

Approved 2014-05-13

Revised 2014-10-29 by Faculty of Technology.

The course syllabus is valid from spring semester 2016

**Prerequisites**

NO VALUE DEFINED

### Objectives

*Knowledge and understanding*

After completing the course the student is expected to:

- identify detailed mechanical quantities in a design

*Competence and skills*

After completing the course the student is expected to:

- select appropriate calculation methodology, perform calculations, and analyse results in terms of consequence and reliability

### Content

*Statics:*

- basic concepts
- force geometry
- equilibrium calculation with and without friction
- centre of gravity calculation

*Dynamics:*

- linear movement
- circular movement
- force equation
- rigid body rotation about a fixed axis
- energy laws and effect
- momentum equation and impulse

## Type of Instruction

Teaching consists of lectures and graded exercises.

## Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

In order to attain a Pass grade all objectives are expected to have been achieved. In order to attain Pass with Distinction, the level of Pass with Distinction must be attained in the written exam.

Examination takes the form of:

- individual written exam

## Course Evaluation

Course evaluation is conducted in accordance with the Kalmar Maritime Academy's Quality Manual.

## Required Reading and Additional Study Material

Hagström, J. och Ahlstrand, M., *Mekanik inom sjöfart*, Lärobok i statik för sjömän, Sjöfartshögskolan

Hagström, J., *Kompendium: Dynamik*, Lärobok i mekanik för sjöingenjörer, Sjöfartshögskolan