



# HÖGSKOLAN I GÄVLE

## Fundamentals in Fluid Mechanics 7.5 cr

Grundläggande strömningsmekanik 7,5 hp

Set by Faculty of Engineering and Sustainable Development

### Version

Set at	Valid from
3/22/11	VT2011
12/12/12	HT2012

<b>Level</b>	G1N
<b>Education level</b>	First cycle
<b>Course identifier</b>	ME562A
<b>Credits</b>	7.5 cr
<b>Main field of study</b>	Energy Systems
<b>Subject group</b>	Energy Technology
<b>Disciplinary domain</b>	Technology 100.0 %

**Learning outcomes** On completion of the course, the student should be able to:

1. Account for basic concepts in fluid mechanics
2. Carry out mass and energy balances over a control volume
3. Carry out engineering calculations for basic fluid technical problems, such as drops in pressure in piping
4. Account for basic concepts of turbo machines

**Course content** Basic equations in fluid mechanics (the continuity equation, Euler's equation, Bernoulli's equation, impulse-momentum theorems etc), different fluid types (laminar and turbulent flow), pipe flow, methods of measurement, dimensional analysis and physical uniformity and introduction to turbo machines.

**Teaching** Lectures and exercises

**Prerequisites** Ma D and Fy B (Specific entry requirements 8) Exceptions are given for Ke A

**Examination** Written examination and laboration

**Grade** A, B, C, D, E, Fx, F

**Sustainable environment** A minor part of the course content deals with sustainable development.

**Module**

0020	Written examination	6.5 cr	Grade: AF
0030	Laboration	1 cr	Grade: UG