

## ***Automation***

The automation discipline focuses on sensor technology, signal processing and embedded systems for the ability to collect and analyze measurement data. The discipline focuses further on transforming information of different physical parameters into a signal (sensor technology) and to process the signal of the parameters (signal processing) for saving and analyzing (embedded systems for collecting and analysing measurement data). The discipline also encloses more advanced control methods for the use of measurement data.

1H	TEK-3002 Reliability Engineering, 10 ECTS	FYS-2006 Signal processing 10 ECTS	FYS-2008 Measurement techniques 10 ECTS
1 V	TEK-3006 Cold climate engineering, 10 ECTS	TEK-3013 Advanced Control, 10 ECTS	Specialization/ optional course, 10 ECTS
2H	TEK-3004 Project paper, 10 ECTS	TEK-3012 Embedded systems 10 ECTS	Specialization/ optional course, 10 ECTS
2V	TEK-3901 Master thesis in engineering 30 ECTS		

Compulsory courses in this discipline are:

- FYS-2006 Signal processing, 10 ECTS
- FYS-2008 Measurement techniques, 10 ECTS
- TEK-3013 Advanced control systems, 10 ECTS
- TEK-3012 Embedded systems, 10 ECTS

Generally recommended optional courses are:

- FYS-2010 Digital image processing, 10 ECTS
- AUT-2005 Reguleringssteknikk, 10 ECTS
- TEK-3001 Operation and maintenance management, 10 ECTS
- TEK-3003 Specialization subject in technology, ECTS
- TEK-3008 Marine engineering, 10 ECTS
- TEK-3009 Risk based inspection and condition monitoring, 10 ECTS
- TEK-3015 Multiphysics Simulation 10 ECTS
- TEK-3016 Machine Vision, 10 ECTS
- MAT-3200 Mathematical methods, 10 ECTS