

Course description

Course code: MAP18AU / MAP18AU03

Course name: Automation Laboratory Work

Extent of studies: 5 ECTS

Recommended Progression of Studies: 4 year student

Prerequisites: Pneumatic and Hydraulic, Automatic Control and Measure Systems

Course-specific Competences (matrix): Sensors
PLC
Process control
Measurements
PID
Analog/Digital sensors

Language of instruction: Swedish

Courses included in the Study Module: Hydraulic and Pneumatic, Automatic Control and Measure Systems

Administering Degree Programme: Mechanical and Production Engineering

Course-specific competences

Course code: MAP18AU03

Course name: Automatic Control and Measure Systems

Competences

Criteria for Assessment

	1	3	5
Competence 1	Basic principles of Functional relationships between mechanical elements, pneumatics, electronics and PLC	Design, assemble, and test basic PLC circuits	Find and solve problems in PLC hydraulic circuits
Competence 2	Design and function of pneumatic and electropneumatic components	Maintain and troubleshoot pneumatic components and basic control systems	Reviewing, completing and using machine documentation
Competence 3	Basic principles of industrial electric controls	Identify and describe the design, features, and operation of PLC components	Understand the fundamentals of hydraulic oil
Competence 4	Basic principles of sensor technology	Identify and explain symbols for PLC components	Understand the fundamentals of logical components and circuits
Competence 5	Cutting installation costs - from single valve to valve terminal	Practical exercises on systematic troubleshooting	Interpret technical specifications and data relating to hydraulic components

Made by:

Checked by:

Approved by:

Valid in curriculum

AG 23.1.2018

HS 26.1.2018

HS 26.1.2018

2018