

Name of the course	Process and plant automatization
Number of instruction hours	20
Outline of course/module content	<p>Process and industrial plant process control system. Organization and components of modern control system. Distributed process control system. Continuous process control. Batch process control. Process industry case studies.</p> <p>Data acquisition and processing. Statistical process control. Process Diagnostics and monitoring. Control loop optimisation. Methods of system identification. Virtual instrumentation. Intelligent sensors and transmitters. Software sensors. Complex plant and process control. Structure of the nonlinear control system. Nonlinear process adaptive control. Predictive and model-based control. Use of artificial intelligence in process control.</p> <p>Control system design. Practical example of process control design and optimisation. Industrial process case studies.</p>
Description of instruction methods	Lectures, seminars, case studies, computer simulation
Description of course/module requirements	Seminar work, oral exam