

CHEMICAL PROCESS CONTROL

1.1. Identification

University:	Kungliga Tekniska Högskolan (Stockholm)										
School:	School of Chemical, Science and Technology										
Course:	Chemical Process Control										
ECTS:	6										
Semester:	<i>Winter</i>					<i>Summer</i>				X	
Category	<i>Fundamental course</i>				X	<i>Specialisation course</i>					
Module	<i>MFI</i>	X	<i>MFII</i>		<i>MFIII</i>		<i>MSI</i>		<i>MSII</i>		<i>MSIII</i>
Teachers:	Elling W. Jacobsen										
Language:	<i>English</i>			<i>Italian</i>			<i>Swedish</i>		X	<i>Spanish</i>	

1.2. Learning-outcomes

- knowledge about the control of production processes and products with the aid of computers
- knowledge about the fundamentals of energy optimization in industrial processes

1.3. Competencies

▪ General

- to analyse and solve complex problems on environmental issues of industrial processes
- to have critical understanding of technical and scientific tools
- to work and manage teams
- communication skills (both written and oral)
- to work in an international context

▪ Specific

- to acquire skills in modelling and analysis of process dynamics
- to reach a deep understanding of the fundamental control theory
- to determine the parameters that allow the design of industrial processes

1.4. Contents

Modelling and analysis of process dynamics, linearized models, transfer functions, stability, estimating time-responses from transfer functions, modelling from experimental data. Analysis of simple control systems, multivariable control.

1.5. Teaching Methodology

- Lecture sessions
- laboratory sessions

1.6. Evaluation

- written exams
- laboratory work

1.7. Bibliography

- Course notes