

CHEMICAL ENGINEERING IN FINE AND SPECIALTY CHEMICALS

1.1. Identification

University:	Kungl Tekniska Högskolan (KTH), Stockholm, Sweden												
School:	School of Chemical, Science and Technology												
Course:	Chemical Engineering in Fine and Specialty Chemicals												
ECTS:	7.5												
Semester:	<i>Winter</i>				X	<i>Summer</i>							
Category	<i>Fundamental course</i>						<i>Specialisation course</i>						X
Module	<i>MFI</i>		<i>MFII</i>		<i>MFIII</i>		<i>MSI</i>	X	<i>MSII</i>		<i>MSIII</i>		
Teachers:	Åke Rasmuson												
Language:	<i>English</i>	X	<i>Italian</i>		<i>Swedish</i>	X	<i>Spanish</i>						

1.2. Learning-outcomes

- knowledge in processes, especially separation processes, that are used in production of fine and specialty chemicals including pharmaceuticals

1.3. Competencies

▪ General

- 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 understand separation processes
- To understand the influence of psycho-chemical and processing conditions on process and products.
- To detail the different analysing techniques.

1.4. Contents

Separation processes: production of fine and specialty chemicals ,including pharmaceuticals. Batch processing and agitated tank operations, in multipurpose, multiproduct plants with emphasis on the influence of physico-chemical and processing conditions on process result and product properties. Distillation crystallization, and mixing, drying, extraction and chromatography

1.5. Teaching Methodology

- Lecture sessions
- Practical sessions: “cooperative work” for solving problems
- Laboratory sessions

1.6. Evaluation

- written exams
- oral evaluation of the problems solved by “cooperative work”
- oral evaluation of laboratory work

1.7. Bibliography

Coulson J.M. and Richardson J.F., Chemical Engineering vol. 1, 6th ed, Butterworth Heinemann, 2000 and, vol 2, 5th ed., Butterworth Heinemann, 2002