

Module Handbook

Module Name:	Chemical Industrial Process
Module Level:	Bachelor
Abbreviation, applicable: if	KIF 315
Sub-heading, applicable: if	-
Courses included in the module, if applicable:	1.Inorganic Chemistry 2.Organic Chemistry 3.Natural Product Chemistry 4.Mineralogy 5.Elucidation of Organic Structure 6.Biochemistry
Semester/term:	5 th /Third Year
Module coordinator(s):	Dr.Ir. Suyanto, M.Si.
Lecturer(s):	Dr.Ir. Suyanto, M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum	Elective Studies
Teaching format / class hours per week during semester:	2 hours lecturers (50 min / hour)
Workload:	2 hours lectures, 2 hours structural activities, 2 hours individual study, 14 week per semester, and total 78 hours per semester ~ 2.6 ECTS *
Credit Points:	2
Requirements:	Physical Chemistry II
Learning goals/competencies:	<p>General Competences(Knowledge): Students are expected to be able to make pre-plan home industry based factory planning theory.</p> <p>Spesific Competences:</p> <ol style="list-style-type: none"> 1. Being able to choose an appropriate process with the home industry that planned 2. Being able to make the block diagram of the chosen process 3. Being able to calculate the mass balance and the balance of power based on the block diagram chosen 4. Being able to determine the chemical industry equipment specifications that will be used by the mass balance and the balance of power that has been calculated 5. Being able to choose the equipment specifications berdsarkan 6. Being able to choose the location of a home industry in accordance with the rules of the theory of planning factory 7. Able to make the plan a home industry 8. Able to plan dealing with the waste and safety planning 9. Ability to define an organizational structure in the home industry 10. Being able to calculate the price of chemical industry equipment and determine the fixed capital, working capital, total product cost, selling price and is able to determine the total capital investment 11. Being able to determine the break-even point, the pay out period,

	return on investment
Content:	Factory planning theory, tools chemical industry, the mass balance, energy balance, cost analysis, management, some examples of the chemical industry (gas industry, ceramics, cement)
Attribut soft skill	Discipline, good communication, effort
Study/exam achievements:	Students are considered to be competence and pass if at least get 55, Score Presentation : 40% Mid Exam, 35% Final Exam, 20% Assignment and 5% soft skill . Table Value Graduation A: 75-100 AB: 70-74.9 B: 65-69.9 BC: 60-64.9 C: 55-59.9 D: 40-54.9 E <40
Forms of Media:	Slides and LCD projectors, whiteboard, Chemical Industry Process literature
Learning Methods	Lectures, assignment
Literature:	<ol style="list-style-type: none"> 1. Vilbrand FC; Dryden CE, 1959, Chemical Engineering Plant Design, 4 th, McGraw Hill Kogakusha, Ltd., Sydney 2. OedjoeDjuriaman, 1977, PerencanaanPabrik, Teknikkimia ITS 3. Rase HF and Borrow MH, 1957, Project Engineering of Process Plant, John Wiley & Sons, Inc., London, Sydney 4. Ghosal SK, Sanyal SK, Datta S, 1995, Introduction to Chemical Engineering, McGraw Hill Publishing Compny Ltd, Sydney, Tokyo, Toronto 5. Badger WL, Bancher JT, 1987, Introduction to Chemical Engineering, International Sudent Edition, McGraw Hill Company, Auckland, London, Sydney , Tokyo, New Delhi, Madrid, Guatemala 6. Aries RS; Newton R, 1955, Chemical Engineering Cost Estimation, McGraw Hill Book Company, New York, Toronto, London 7. Terry GR dan Rue LW, 2005, Dasar-dasrMenejemen, TerjemahanTicoalu GA, PenerbitBumiAksara 8. Eckenfolder WW, 2000, Industrial Water Pollotion Control, 3 rd, Ed. McGraw Hill, New York, San Fransisco, Bangkok, London, Madrid, New Delhi, Singapore, Sydney, Toronto.
Notes:	*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours Each ECTS is equals with 25 hours