UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF CHEMISTRY
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Module name:	Industrial Management
Module level, if applicable:	Undergraduate
Code:	KMA 6219
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	4th
Module coordinator:	Ir. Endang Dwi Siswani, M.T.
Lecturer(s):	Ir. Endang Dwi Siswani, M.T.
Language:	Bahasa Indonesia and English
Classification within the curriculum:	Compulsory Subject
Teaching format / class hours per week during the semester:	100 minutes lectures, 120 structured activities and 120 individual study per week
Workload:	Total workload is 90,67 hours per semester which consists of 100 minutes lectures, 120 structured activities and 120 individual study per week for 16 weeks
Credit points:	2 SKS (3 ECTS)
Prerequisites course(s):	-
Course Outcomes	After taking this course, the students are expected to be able to: CO1 Explain the function of the scope of Industrial Management in industrial activities CO2 Analyzing the function of the strategy of implementing operations management and production management in the chemical industry. CO3 Explain the idea of innovative work safety and accident prevention activities in the chemical industry
Content:	The Industrial Management course is a course consisting of theory and making papers in groups, then presented. In theory explained about: the role of graduates of chemical study programs in a chemical industry, what abilities must be possessed by graduates to enter the workforce. In the next chapter, it is explained about production management and operations. Chapter II explains the safety and prevention of accidents. Chapter IV discusses how the stages of designing a chemical industry, and in Chapter V describes how industry managers strive to create a chemical industry that is ready for competitiveness and environmentally friendly. In making papers in groups, students make the design of a chemical factory; which includes: Name of industry, background why the industry was founded, things to think about when establishing a

<table>
<tr><td></td><td>chemical industry, the purpose of the establishment of industry, production processes, organizational structure, safety of work and accident prevention.</td></tr>
<tr><td>Study / exam achievements:</td><td>Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not taken into account in the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude. The final mark will be weight as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO1,
CO2,
CO3,</td><td>a. Assignments
b. Activity
c. Final Exam
d. Midterm Exam</td><td>Presentation / written test</td><td>20%
20%
30%
30%</td></tr>
<tr><td colspan="4">Total</td><td>100%</td></tr>
</table></td></tr>
<tr><td>Forms of media:</td><td>Handout, Board, LCD Projector, Laptop/Computer, Module</td></tr>
<tr><td>References:</td><td>
Kiran R. Golwalkar, (2016), Production Management of Chemical Industries, Springer
Heras-Saizarbitoria, Inaki, (2018), ISO 9001, ISO 14001, and new Management Standards, Springer
GenserikLL.L. Reniers, Keneth Sorensen, Karl Vrancken, (2013), Management Principles of sustainable Industrial Chemistry, John Wiley & Sons
Vooradi, R., anne, S.B., Tula, A.K. et. al. (2019), Energy and CO2 Management for chemical and related industries: issues, opportunities and challenges, BMC Chem Eng 1, 7
Omotioma, M., (2019), Chemical Plant Design for the Production of Ammonia through Haldor Topsoe Process Route: Simulation using Plant Design Management System, IOSR Journal of Engineering Vol 9 No 10
Endang Dwi Siswani (2016), Diktat Manajemen Industri, Jurusan Pendidikan Kimia FMIPA UNY
</td></tr>
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PLO and CO mapping

	PLO									
	Attitude	General Skill		Knowledge				Specific Skill		
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1			√							
CO2					√					
CO3										√