Module Handbook

Module Name	**Environmental Chemistry (Practical)**
Module Level	Bachelor
Abbreviation, if applicable:	LKK 302
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	Environment Chemistry
Semester/term:	5th / third year
Module coordinator(s):	Siti Wafiroh, S.Si, M.Si.
Lecturer(s):	Dr. Abdulah ; Dr. Muzaki, Handoko DK , DEA
Language:	Indonesia
Classification within the curriculum	Elective course
Teaching format / class hours per week during semester:	2 hours laboatory work (50 min / hour)
Workload:	2 hours doing worksheet and pretest preparation, 2 hours laboratory work, 2 hours group discussion , searching literature and writing report , 13 week per semester, and total 78 hours per semester ~ 2.6 ECTS *
Credit Points:	1 SCU
Requirements:	Physical Chemistry II (KIF 203)
Learning goals/competencies:	**General Competence (Skills):** Able to link research and activity in small groups. **Specific competence:** 1. able to plan and analyze acidity - alkalinity 2. able to plan and analyze coagulation - flocculation 3. able to plan and analyze the total hardness 4. able to plan and analyze WASTE 5. able to plan and analyze the breakpoint chlorination (BPC) 6. able to plan and analyze CHEMICAL OXYGEN DEMAND (COD) 7. able to plan and analyze the Dissolved Oxygen (DO) 8. able to plan and analyze ANALYSIS OF IRON
Content:	Analyzed acidity - alkalinity, coagulation - flocculation. Total hardness, waste, breakpoint chlorination (BPC), Chemical Oxygen Demand (COD), Dissolved Oxygen (DO), analysis of iron.
Attribut soft skill	Students are considered to be competent and pass if at least get 55 of practicum report and pass the final exam. Final score is calculated as follows: 75% practicumandreport + 25% final exam Final index is defined as follow: A : 75 - 100 AB : 70 - 74.99 B : 65 - 69.99

	BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E: 0 - 39.99
Study/exam achievements:	White board, Laboratory
Forms of Media:	Laboratory equipments
Learning Methods	Lectures, Practicum, discussion
Literature:	1. Anonim, Composting of Domestic Refuse. Environmetal Sanitaion Information Center, AIT, Bangkok, 1993 2. Sawyer, Clair N., and Perry L McCarty, Chemistry for Environmental Engineering, Mc. Graw-Hill Book Company, New York. 1994 3. APHA,AWWA,AWPCP, Standart Methods for The Examination of Water and Wastewater, Washington, 1995
Notes:	*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours **Each ECTS is equals with 25 hours**