MODULE HANDBOOK

Module Name	Basics of Chemical Separations
Module level	Bachelor
Abbreviation, if applicable	8420403101
Sub-heading, if applicable	-
Course included in the module, if applicable	-
Semester/term	1st/First Year
Module coordinator(s)	Dr. Maria Monica S. B. W., M.Si.
Lecturer(s)	1. Dr. Pirim Setiarso, M.Si; 2. Dr. Utiya Azizah, M.Pd. 3. Rusmini, S.Pd., M.Si. 4. Dr. Nita Kusumawati, M.Sc.
Language	Indonesian
Classification within the curriculum	Compulsory Course
Teaching format/class hours per week during the semester:	3 hours lecturers (50 min per hours)
Workload:	Total workload 126 hours per semester which consists of 3 hours lecture, 3 hours structured activities, 3 hours individual activities, and 16 weeks per a semester (4.77 ECTS)
Credit points:	3 SCU (3 X 1.59 = 4.77 ECTS)
Prerequisites course(s):	-
Targeted learning outcomes:	CLO 1 Students have knowledge of the concepts of chemical separation techniques in terms of chemical structure, energetics and chemical analysis including distillation, extraction, chromatography, electroanalysis and membrane techniques. CLO 2 Skilled students use tools in carrying out chemical separation techniques including distillation, extraction, chromatography, electroanalysis and membrane techniques. CLO 3 Students have the ability to collaborate and are responsible for carrying out chemical separation including distillation, extraction, chromatography, electroanalysis and membrane techniques. CLO 4 Students have the ability to communicate the analysis of the results of chemical separation including distillation, extraction, chromatography, electroanalysis and membrane techniques.
Content:	Introduction to the purpose, benefits, and basics of separation in general Distillation Extraction Chromatography Electroanalysis Membrane
Study / exam achievements:	Students are considered to be competent and pass if at least get 55 Final score is calculated as follows: 20% participation + 30% assignment + 20% middle exam (UTS) & 30% final exam (UAS) Table index of graduation • A = 4 (85 ≤-≥ 100)

	• A- = 3,75 (80 ≤-< 85) • B+ = 3,5 (75 ≤- < 80) • B = 3 (70 ≤-< 75) • B- = 2,75 (65 ≤-<75) • C+ = 2,5 (60 ≤-<65) • C = 2 (55 ≤-<60) • D = 1 (40 ≤-<55) E = 0 (0 ≤-<40)
Media:	Computer, LCD, White board
Learning Methods	Individuals assignment, group assignment, discussion, presentation, and practicum
Literature:	1. Day, Underwood, Ray 2002. *Kimia Analisis Kuantitatif (terjemahan)*, Jakarta: Erlangga 2. Harvey, D.2000. *Modern Analytical Chemistry*. Int.Ed. Singapore: Mc Graw Hill 3. Pecksok, et al. 1976. *Modern Methods of Analytical Chemistry*. 2nd New York: John Wiley and Sons 4. Soebagio, Budiasih, E, Ibnu, S, Widarti, H.R, Munzil. 2001. *Kimia Analitik II (Common Book)*, Malang: IMSTEP – JICA FMIPA Universitas Negeri Malang
Note	Basics of Chemical Separations covers the activities of theory, practicum and presentation. Total ECTS = ((total hours workload x 50 min)/60 min)/25 hours Each ECTS is equals wits 25 hours