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	4th/Second 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:	1 CU for bachelor degree equals to 3 workhours per week or 170 minutes (50' face to face learning, 60' structured learning, and 60' independent learning). In one semester, courses are conducted in 14 weeks (excluding mid and end-term exam). Thus, 1 CU equals to 39.67 workhours per semester. One CU equals to 1.59 ECTS.
Credit points:	3 CU = 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, and electroanalysis techniques. CLO 2: Skilled students use tools in carrying out chemical separation techniques including distillation, extraction, chromatography, and electroanalysis techniques. CLO 3: Students have the ability to collaborate and are responsible for carrying out chemical separation including distillation, extraction, chromatography, and electroanalysis techniques. CLO 4: Students have the ability to communicate the analysis of the results of chemical separation including distillation, extraction, chromatography, and electroanalysis techniques.
Content:	Introduction to the purpose, benefits, and basics of separation in general

	Distillation Extraction Chromatography Electroanalysis
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