

Modul Handbook

Module Name	Analytical Chemistry III: Basics of Chemical Separations	
Module level	Bachelor	
Abbreviation, if applicable	8420403101	
Sub-heading, if applicable	-	
Course included in the module, if applicable	-	
Semester/term	1 st /First Year	
Module coordinator(s)	Dr. Maria Monica S. B. W., M.Si.	
Lecturer(s)	<ol style="list-style-type: none"> 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 14 weeks per a semester (4.2 ECTS)	
Credit points:	3 SCU	
Prerequisites course(s):	-	
Targeted learning outcomes:	<p>CLO 1</p> <p>CLO 2</p> <p>CLO 3</p> <p>CLO 4</p>	<p>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.</p> <p>Skilled students use tools in carrying out chemical separation techniques including distillation, extraction, chromatography, and electroanalysis techniques.</p> <p>Students have the ability to collaborate and are responsible for carrying out chemical separation including distillation, extraction, chromatography, and electroanalysis techniques.</p> <p>Students have the ability to communicate the analysis of the results of chemical separation including distillation, extraction, chromatography, and electroanalysis techniques.</p>
Content:	<p>Introduction to the purpose, benefits, and basics of separation in general</p> <p>Distillation</p> <p>Extraction</p> <p>Chromatography</p> <p>Electroanalysis</p>	
Study / exam achievements:	<p>Students are considered to be competent and pass if at least get 55</p> <p>Final score is calculated as follows: 20% participation + 30% assignment + 20% middle exam (UTS) & 30% final exam (UAS)</p>	

	<p>Table index of graduation</p> <ul style="list-style-type: none"> • 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:	<ol style="list-style-type: none"> 1. Day, Underwood, Ray 2002. <i>Kimia Analisis Kuantitatif (terjemahan)</i>, Jakarta: Erlangga 2. Harvey, D.2000. <i>Modern Analytical Chemistry</i>. Int.Ed. Singapore: Mc Graw Hill 3. Pecksok, et al. 1976. <i>Modern Methods of Analytical Chemistry</i>. 2nd New York: John Wiley and Sons <p>Soebagio, Budiasih, E, Ibnu, S, Widarti, H.R, Munzil. 2001. <i>Kimia Analitik II (Common Book)</i>, Malang: IMSTEP – JICA FMIPA Universitas Negeri Malang</p>
Note	<p>Basics of Chemical Separations covers the activities of theory, practicum and presentation.</p> <p>Total ECTS = ((total hours workload x 50 min)/60 min)/25 hours</p> <p>Each ECTS is equals wits 25 hours</p>