



**UNIVERSITAS NEGERI JAKARTA**  
**FACULTY OF MATHEMATICS AND NATURAL SCIENCES**  
**CHEMISTRY STUDY PROGRAM**

Jl. Rawamangun Muka, RT 11/RW 14, Rawamangun, Pulo Gadung,  
 East Jakarta City, Special Capital Region of Jakarta 13220  
 Phone/Fax: (021) 4894909, E-mail: [kimia@unj.ac.id](mailto:kimia@unj.ac.id), <http://fmipa.unj.ac.id/kimia/>

**Bachelor in Chemistry**

**MODULE HANDBOOK**

Module name:	Separation Chemistry	
Module level, if applicable:	Undergraduate	
Code:		
Sub-heading, if applicable:		
Classes, if applicable:		
Semester:	Ganjil	
Module coordinator:	Dr. Fera Kurniadewi, M.Si	
Lecturer(s):	1. Dra. Tritiyatma H., M.Si. 2. Dr. Moersilah M.Si 3. Prof. Dr. Erdawati, M.Sc. 4. Yussi Pratiwi, M.Sc.	
Language:	Bahasa Indonesia	
Classification within the curriculum:	Compulsory course	
Type of Teaching	Contact hours per week during the semester	Class Size
Lecture (Expository, discussion, exercise)	150 Minutes	40
Workload:	Total workload is 510 minutes (4.5 ECTS) per semester which consists of 150 minutes (1.3 ECTS) learning activity, 180 minutes (1.6 ECTS) structured task and 180 minutes (1.6 ECTS) individual learning per week for 16 weeks.	
Credit points:	4.5 ECTS	
Prerequisite course(s):	Basic Chemistry I and II, Qualitative and Quantitative Analytical Chemistry.	
Course Outcomes:	After taking this course the students have ability to: CLO 1. Able to understand the basic concepts of chemical separation CLO 2. Choose the type of distillation method according to the nature of the substance to be separated CLO 3. Choose the type of extraction method according to the nature of the substance to be separated CLO 4. Choose the type of chromatographic method according to the nature of the substance to be separated	

	CLO 5. Predicting good separation conditions based on the principle of electrolysis																					
Content:	<ol style="list-style-type: none"> <li>1. Basics of separation</li> <li>2. Distillation</li> <li>3. Extraction</li> <li>4. Chromatography</li> <li>5. Electrolysis</li> </ol>																					
Study/exam achievements:	<p>Examinations are conducted as Unit Tests. There are two unit tests, each covers 4-5 chapters. The final marks are derived from unit tests (80%) and structured tasks (20%).</p> <table border="1"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assesment Object</th> <th>Assessment Techniques</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="4">1</td> <td rowspan="4">CO 1-5</td> <td>a. Individual assignments 1</td> <td rowspan="4">Written test</td> <td>10%</td> </tr> <tr> <td>b. Individual assignments 2</td> <td>10%</td> </tr> <tr> <td>c. UTS</td> <td>40%</td> </tr> <tr> <td>d. UAS</td> <td>40%</td> </tr> <tr> <td colspan="4" style="text-align: center;">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assesment Object	Assessment Techniques	Weight	1	CO 1-5	a. Individual assignments 1	Written test	10%	b. Individual assignments 2	10%	c. UTS	40%	d. UAS	40%	Total				100%
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Total				100%																		
Media	Power point presentation, Laptop, Whiteboard, Zoom, Google Classroom, Ms. Teams																					
Literatures	<ol style="list-style-type: none"> <li>1. Books <ol style="list-style-type: none"> <li>a. Meloan E. Clifton. 1999. <i>Chemical Separation</i>. New York: John Wiley and Sons Inc.</li> <li>b. R.P. Budhiraja. 2006. <i>Separation Chemistry Third Eddition</i>. New Age International Publishers</li> </ol> </li> <li>2. Journal</li> <li>3. Internet</li> </ol>																					

**PLO and CO mapping**

	<b>PLO1</b>	<b>PLO2</b>	<b>PLO3</b>	<b>PLO4</b>	<b>PLO5</b>	<b>PLO6</b>	<b>PLO7</b>	<b>PLO8</b>	<b>PLO9</b>	<b>PLO10</b>	<b>PLO11</b>	<b>PLO12</b>
<b>CO1</b>			v			v						
<b>CO2</b>			v			v						
<b>CO3</b>			v			v						
<b>CO4</b>			v			v						
<b>CO5</b>			v			v						