

## Module Handbook

<b>Module Name</b>	Petrochemical and Fertilizer Analysis				
<b>Module Level</b>	Higher Diploma				
<b>Code, if applicable</b>	VKT744				
<b>The subtitle, if applicable</b>	-				
<b>Courses, if applicable</b>	-				
<b>Semester(s) in which the module is taught</b>	Odd semester				
<b>A person responsible for the module</b>	Bayu Wiyantoko, M.Sc.				
<b>Lecturer</b>	Bayu Wiyantoko, M.Sc.				
<b>Language</b>	Bahasa Indonesia				
<b>Relation to curriculum</b>	Elective				
<b>Type of teaching, contact hours</b>	Lecture (face to face teaching, structured activities, independent study and exam): 11.3 hours x 16 weeks per semester				
<b>Workload</b>	Total workload	91 hours; 2CU			
		Face to face teaching	Structured activities	Independent study	Exam
	Hours	23	28	28	11
<b>Credit Points</b>	2 CU/3.4 ECTS				
<b>Requirements according to the examination regulations</b>	75% minimum requirements of attendance				
<b>Recommended prerequisites</b>	-				
<b>Module objectives/intended learning outcomes</b>	<p>PLO 5: Able to contribute to solving problems in the scope of work.</p> <p>Subject LO:</p> <p>Students are able to apply the principles of petrochemical and fertilizer analysis methods</p> <p>Students are able to describe (K3) and analyze petrochemical and fertilizer samples instrumental and non-instrumental according to their characteristics</p> <p>Students are able to respond and solve problems related to petrochemical and fertilizer testing</p>				
<b>Content</b>	<ol style="list-style-type: none"> <li>1. Physical, chemical properties and content of petroleum compounds</li> <li>2. Petroleum products and their derivatives</li> <li>3. Refining process</li> <li>4. Petroleum product quality parameters</li> <li>5. Petrochemical analysis</li> <li>6. Renewable energy</li> <li>7. Analysis of raw materials and fertilizer products</li> </ol>				
<b>Study and examination requirements and forms of examination</b>	Midterm (35%), presentation (10%), final exam (35%), assignment (20%)				
<b>Media employed</b>	Google classroom, youtube, zoom meeting, google form, google doc				

<b>Reading list</b>	<ol style="list-style-type: none"><li>1. Grace, R., 2007, Oil – An Overview of The Petroleum Industry 6th edition, Gulf Publishing Company, Texas.</li><li>2. Nadkarni, R.A.K., 2007, Guide to ASTM Test Methods for The Analysis of Petroleum Products and Lubricants 2nd edition, West Conshohocken, PA.</li><li>3. Speight, J.G., 2001, Handbook of Petroleum Analysis, John Wiley and Sons, Inc., New Jersey.</li><li>4. Speight, J.G., 2002, Handbook of Petroleum Product Analysis, John Wiley and Sons, Inc., New Jersey.</li><li>5. Speight, J.G., 2014, The Chemistry and Technology of Petroleum 5th edition, CRC Press, Taylor &amp; Francis Group, New York.</li></ol>
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