

MODULE HANDBOOK

Modul Name	Electrochemistry										
Module Leve	Bachelor										
Abbreviation, if applicable	3074112074										
Sub-heading, if applicable	-										
Course included in the module, if applicable	-										
Semester/term	4 th / second year										
Module coordinator(s)	Dr. I Gusti Made Sanjaya, M.Si.										
Lecturer(s)	Dr. I Gusti Made Sanjaya, M.Si. and Samik, S.Si., M.Si.										
Language	Indonesian Language										
Classification within the curriculum	Elective Course										
Teaching format/class hours per week during the semester	2 hours lectures (50 min / hour)										
Workload	2 x 50 minutes lectures, 2 x 60 minutes structured activity, 2 x 60 minutes individual activity, 14 weeks per semester, 79.33 total hours per semester ~ 3.18 ECTS**										
Credit point	2 CU x 1.59 = 3.18 ECTS										
Prerequisite course(s)	-										
Learning Outcomes	<p>General Competence (knowledge): Student can conclude the electrical properties of chemicals, their measurements, and their application in the development of alternative energy.</p> <p>Spesific Competence: Students can take advantage of the electrical properties of chemicals to develop alternative energy</p>										
Content	Course materials examine the electrical properties of chemicals and their measurements, as well as their application in the development of alternative energy.										
Study/exam achievements	<p>Students are considered to complete the course and pass if they obtain at least 40% of maximum final grade. The final grade (NA) is calculated based on the following ratio:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Assessment Components</th> <th style="text-align: left;">Percentage of contribution</th> </tr> </thead> <tbody> <tr> <td>Participation</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Assignment</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>Mid-semester test</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>Final semester test</td> <td style="text-align: center;">30%</td> </tr> </tbody> </table>	Assessment Components	Percentage of contribution	Participation	20%	Assignment	30%	Mid-semester test	20%	Final semester test	30%
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Participation	20%										
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Mid-semester test	20%										
Final semester test	30%										
Media	Internet, Computer, LCD, White board										
Learning Methods	Lectures, discussion, problem solving, projects, and assignment										
Literature	1. Bard, A.J. and Faulkner, L.R. 2001. <i>Electrochemical Methods Fundamental and Applications</i> . USA: John Wiley & Sons, Inc.										

	<ol style="list-style-type: none"> 2. Kulikovsky, A.A. 2010. <i>Analytical Modelling of Fuel Cells</i>. Amsterdam: Elsevier. 3. Jha , A.R. 2010. <i>Solar Cell Technology and Applications</i>. USA: Taylor and Francis Group, LLC
Notes:	<p>*1 CU in learning process = three periods consist of: (a) scheduled instruction in a classroom or laboratory (50 minutes); (b) structured activity (60 minutes); and (c) individual activity (60 minutes) according to the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 44 Year 2015 jo. the Regulation of Indonesia Ministry of Research, Technology, and Higher Education No. 50 Year 2018.</p> <p>**1 CU = 1.59 ECTS according to Rector Decree Of Universitas Negeri Surabaya No. 598/UN38/Hk/Ak/2019</p>