

# MODUL ENVIRONMENTAL SYSTEM ANALYSIS



MASTER PROGRAM OF ENVIRONMENTAL SCIENCE  
SCHOOL OF POSTGRADUATE STUDIES  
DIPONEGORO UNIVERSITY

**A Modul Descriptions :**

Modul design	Environmental System Analysis
Modul level, if applicable	
Code, if applicable	P-CIL-8-208
Subtitles, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	2 <sup>nd</sup> Semester
Person responsible for the modul	Ir. Setia Budi Sasongko, DEA, Ph.D
Lecturer	1. Ir. Setia Budi Sasongko, DEA, Ph.D 2. Prof. Dr. Ir. Hadiyanto, ST, M.Sc. 3. Prof. Dr. Sunarsih, MSi
Language	<i>Indonesian and English</i>
Relations to curriculum	
Type of teaching, contact hours	<i>Studying:1 x 120 minutes x 16 meetings = 32 hours/week Q&amp;A:1x 20 minutes 16 meetings = 5.3 hours/week Discussion:1x 20 minutes 16 meetings = 5.3 hours/week Presentation:1x 20 minutes 16 meetings = 5.3 hours/week Individual assignments: 36 minutes/day = 3 hours/week</i>
Workload	<i>(Estimated) workload, divided into contact hours (lecture, exercise, laboratory session, etc.) and private study, including examination preparation, specified in hours,<sup>1</sup> and in total.</i>
Credit points	<i>2 credits / 4 ECTS</i>
Requirements according to the examination regulations	<i>Minimum attendance of lectures 75%</i>
Recommended prerequisites	<i>eg existing competences in...</i>

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<p>Modul objectives/intended learning outcomes</p>	<ul style="list-style-type: none"> <li>· Able to understand problem with environmental modeling approach</li> <li>· Able to solve environmental problems with an environmental modeling approach.</li> </ul>
<p>Content</p>	<p>This course studies the concept of sustainable development that integrates ecological systems to answer environmental problems.</p>
<p>Study and examination requirements and forms of examination</p>	<ul style="list-style-type: none"> <li>· <i>Open book and close book</i></li> <li>· <i>Multiple choice, case studies, interviews</i></li> </ul>
<p>Media employed</p>	<p><i>Powerpoint, youtube, website</i></p>
<p>Reading List</p>	<ol style="list-style-type: none"> <li>1. Michel R. Goodman, 1980, Study Notes in System Dynamics, The MIT Press Cambridge, Massachusetts, London, England.</li> <li>2. Muhammadi, Erman Aminullah, Budhi Soesilo, 2001, "Analisis Sistem Dinamis: Lingkungan Hidup, Sosial, Ekonomi, Manajemen", Penerbit UMJ Press.</li> <li>3. Chandra, Herry P. dan Christian, Djoni. 2002. Analisa Sistem Manajemen Lingkungan (Iso 14000) Dan Kemungkinan Implementasinya Oleh Para Kontraktor Kelas A Di Surabaya. Dimensi Teknik Sipil, Vol. 4, No. 2, 77-84, September 2002 ISSN 1410-9530</li> <li>4. Ann, G.E., Suhaiza Zailani, Nabsiah Abd Wahid, (2006),"A study on the impact of environmental management system (EMS) certification towards firms' performance in Malaysia", Management of Environmental Quality: An International Journal, Vol. 17 Iss: 1 pp. 73 – 93</li> </ol>