Course Module

Management of Natural Resources and Environment

Faculty of Forestry

Mulawarman University

Module name	Management of Natural Resources and Environment
Module level, if applicable	Doctoral
Code, if applicable	220401902P057
Subtitle, if applicable	
Courses, if applicable	Regular
Semester(s) in which the module is taught	The course is available in all active teaching semesters
Person responsible for the module	Prof. Dr. Ir. Marlon I. Aipassa, M.Agr
Lecturer	Prof. Dr. Ir. Marlon I. Aipassa, M.Agr Dr. Yaya Rayadin, S.Hut., M.P.
Language	Indonesia
Relation to curriculum	Elective Courses
Type of teaching, contact hours	Direct instruction, discussion, and assignment
Workload	Number of meetings per semester 16 meetings (14 meetings for learning activity, 1 meeting for mid-semester, 1 meeting for final examination) For this course, students are required to meet a minimum of 79.3 hours per semester, which consist of : - 23.33 hours for lecture - 28 hours for structured assignments - 28 hours for individual study
Credit points	2 SKS / 3.2 ECTS Details: 1 Credit = 170 min / week 1 Credit = 170 min x 14 week = 2380 min / semester 1 Credit = 39.7 h / semester 1 ECTS = 25 h/ Semester 1 Credit = 1.59 » 1.6 2 Credit = 1.6 x 2 = 3.2 ECTS
Requirements according to the examination regulations	
Recommended prerequisites	

Module objectives/intended learning outcomes	**Intended Learning Outcome (ILO)** **Attitude** 1. **CPL1/ILO1 (S1)** - Internalize values, norms, and ethics **Knowledge** 2. **CPL2/ILO2 (P1)** - Synthesize knowledge acquired from research findings with novelty and its implementation 3. **CPL3/ILO3 (P2)** - Discover and develop scientific conceptions with novelty value, and develop scientific arguments as scientific solutions **General Skills** 4. **CPL4/ILO4 (KU1)** - Critically analyze the philosophy, theory, and research methodology in forestry and the moist tropical environment sciences through interdisciplinary, multidisciplinary, and transdisciplinary approaches 5. **CPL5/ILO5 (KU2)** - Demonstrate academic leadership in resource management to independently formulate research plans and possess scientific ethics **Specialized Skills** 6. **CPL6/ILO6 (GS3)** - Manage data and information to support decision-making processes 7. **CPL7/ILO7 (GS4)** - Work and communicate in an international context **Course Learning Outcome (CLO)** 1. **CLO 1 :**.Students will be able to analyze development policy frameworks in East Kalimantan and identify strategic issues related to regional development, including green economic transformation and sustainable natural resource management. 2. **CLO 2 :** Students will be able to apply concepts and principles of natural resource management (water, forests, and land) and environmental protection within the context of sustainable development, including decarbonization efforts and blue carbon inventory. 3. **CLO 3 :** Students will be able to evaluate sustainable development policies and plans, such as the development of the Nusantara Capital City and tropical forest management policies for community welfare, and provide evidence-based recommendations.
Content	The course Management of Natural Resources and Environment discusses sustainable development with a case study of East Kalimantan, covering policy frameworks, regional strategic issues, green economic transformation, land use, water resource and protected forest management, tropical forest management policies, the development of the Nusantara Capital City, as well as decarbonization efforts and blue carbon inventory. Assessment is conducted through midterm and final exams.

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1. Policy Framework for East Kalimantan Development (1st–2nd sessions) → CLO1
2. Strategic Issues Related to Regional Development in East Kalimantan (3rd session) → CLO1
3. Economic Transformation from Non-Renewable Resources to Renewable Resources (Green Economy) (4th–5th sessions) → CLO3
4. Land Use, Natural Resource Utilization, and Environmental Protection (6th–7th sessions) → CLO2.
5. Midterm exam(8th sessions)→ Assessment .
6. Water Resource Management within the Watershed and Protected Forest Management Framework (9th–10th sessions) → CLO2.
7. Tropical Forest Resource Development Policy for Community Welfare (11th–12th sessions) → CLO3.
8. Development of Nusantara Capital City (13th–14th sessions) → CLO1 & CLO3.
9. Strengthening the Implementation of Environmental Protection and Management Plans in East Kalimantan: Decarbonization, Blue Carbon Inventory (15th session) → CLO2
10. Final Exam (16th session) → Assessment
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<tr><td>Study and examination requirements and forms of examination</td><td>
Evaluation and assessment of learning achievement based on:
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<tr><th>No.</th><th>Objects of Assessment</th><th>Forms of Assessment</th><th>Quantity (%)</th></tr>
<tr><td>1</td><td>Affective</td><td>Participation</td><td>10</td></tr>
<tr><td>2</td><td>Assignment/Case Study</td><td>Group Presentation</td><td>25</td></tr>
<tr><td>3</td><td>Project</td><td>Report</td><td>25</td></tr>
<tr><td>4</td><td>Mid-semester test</td><td>Written test</td><td>15</td></tr>
<tr><td>5</td><td>Final semester test</td><td>Written test</td><td>25</td></tr>
<tr><td colspan="3">TOTAL</td><td>100</td></tr>
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<tr><td>Media employed</td><td>Class, Ms. Powerpoint, Ms. Word, Computer, LCD, STAR</td></tr>
<tr><td>Reading list</td><td>

1. Ostrom, E. 1990. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge University Press.
2. MEA. 2005. Ecosystems and Human Well-being: Synthesis. Island Press.
3. Daily, G. C.1997. Nature's Services: Societal Dependence on Natural Ecosystems. Island Press.
4. Barrow, C. J. 2006. Environmental Management for Sustainable Development. Routledge.
5. Lindenmayer, D. & Burgman, M. 2005. Practical Conservation Biology. CSIRO Publishing.

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	6. Pearce, D. W., Markandya, A., & Barbier, E. B. 1989. *Blueprint for a Green Economy.* Earthscan 7. Sayer, J. & Maginnis, S. 2005. *Forests in Landscapes: Ecosystem Approaches to Sustainability.* Earthscan. 8. Scherr, S. J., & McNeely, J. A. 2008. *Biodiversity Conservation and Agricultural Sustainability: Toward a New Paradigm of 'Ecoagriculture'.* Island Press. 9. IPCC Reports (Intergovernmental Panel on Climate Change) – *Climate Change and Resource Management.* 10. FAO (Food and Agriculture Organization) Reports – *State of the World's Forests.* 11. World Bank .2021. *The Changing Wealth of Nations 2021: Managing Assets for the Future.* 12. Government of Indonesia. 2020. *Policy Framework for East Kalimantan Development.* 13. UNEP (United Nations Environment Programme). *Decarbonization and Blue Carbon Management Reports.*