

## Landscape Ecology

Module name		<i>Landscape Ecology</i>				
Module level		4 <sup>th</sup> year of Bachelor program				
Abbreviation, if applicable		-				
Sub-heading, if applicable		-				
Courses included in the module, if applicable		BI4202 Landscape Ecology				
Semester/term		8 <sup>th</sup> Semester				
Module coordinator(s)		Dr. Endah Sulistyawati				
Lecturer(s)		Dr. Endah Sulistyawati				
Language		Indonesian				
Classification within the Curriculum		Elective courses for Bachelor Program in Biology				
Teaching format/ class hours per week during the semester		Lecture (face to face teaching): 3 hours x 14 weeks Assignment: Student class presentation/group: 2 hours x 2 weeks Quizzes: 15 minutes x 8 weeks				
Workload	Total Workload	144 hours; 3 CU				
		Face to face teaching	Structured Activities	Independent study	E	Total
	Lecture	44	48	48	4	144
Credit points		<i>Landscape Ecology (3 Credits)</i>				
Requirements		-				
Content		<ol style="list-style-type: none"> <li>1. <i>History,</i></li> <li>2. <i>Definition and scope of landscape ecology;</i></li> <li>3. <i>Concept of scale and grain;</i></li> <li>4. <i>Key processes forming spatial heterogeneity (physical templates, biotic interactions and disturbances;</i></li> <li>5. <i>Models for representing landscape structure (patch-corridor- matrix)</i></li> <li>6. <i>Implication of size and shape of landscape element on organism,</i></li> <li>7. <i>Matter and energy dynamics;</i></li> <li>8. <i>Landscape metrics;</i></li> <li>9. <i>Spatial processes creating landscape dynamics;</i></li> <li>10. <i>Remote sensing as a tool for analyzing landscape structures and dynamics,</i></li> <li>11. <i>Application of landscape ecology for managing landscape.</i></li> </ol>				
Learning goals/competencies		Students are able to : - explain characteristic of landscape ecology - explain the process of heterogeneity landscape formation - explain methodology to analyze landscape structure - explain effect of structure on organism and material dynamic in landscape - give some example of landscape ecology application for ecosystem management				
Study/exam achievements		Mid Term Exam	Final Exam	Laboratory Practice	Assignments	Total
		35%	35%	20%	10%	100%
Forms of media		Classical teaching tools:		White board, power point presentation		
		Digital teaching tools:		Video/CD, Website		
Literature		<ol style="list-style-type: none"> <li>1. Forman, R.T.T. and Godron, M. 1986. <b>Landscape Ecology</b>. John Wiley &amp; Sons. New York.</li> <li>2. Turner MG, RH Gardner, and RV O'Neill. 2001. <b>Landscape ecology in theory and practice: Pattern and process</b>. Springer-Verlag, New York. 401 pp.</li> <li>3. Forman, R.T.T. 1995. <b>Land Mosaic: The Ecology of Landscapes and Regions</b>. Cambridge University Press, Cambridge. (Pustaka utama)</li> <li>4. Lindenmayer, D.B and Hobbs, R.J.2007. <b>Managing and Designing Landscape for</b></li> </ol>				

	<b>Conservation.</b> Blackwell Publising, Malden (Pustaka utama)
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