Course Module

Evaluation of Biomass Productivity and Land Suitability

Faculty of Forestry

Mulawarman University

Module name	Evaluation of Biomass Productivity and Land Suitability
Modul level, if applicable	Graduates Programme
Code, if applicable	190401802P022
Subtitle, if applicable	
Courses, if applicable	Regular
Semester(s) in wich the module is taught	II (two)
Person resposible for the module	Dr. Ir. Syahrinudin, M.Sc.
Lecturer	Dr. Ir. Syahrinudin, M.Sc. Dr. Ir. Wahjuni Hartati, M.P. Dr. Ir. Ibrahim, M.P.
Language	Indonesia
Relation to curriculum	Programme, mandatory
Type of teaching, contact hours	Lecture, 3 lecture contact hours
Workload	Number of meetings per semester: 16 meetings (14 meetings for learning activity, 1 meeting for mid semester, 1 meeting for final examination) 3 x 50 minutes lectures, 3 x 60 minutes structure activity, 3 x 60 minutes individual activity, with a total of 7,140 minutes or equivalent to a total of 119 hours in 14 weeks per semester
Credit points	3 SKS (4.77 ECTS) Details: 1 Credit = 170 min/week 1 Credit = 170 min x 14 week = 2,380 min/semester 1 ECTS = 25 h / semester 1 Credit = 2,380 / 60 / 25 = 1.59 ECTS 3 Credit = 1.59 x 3 = 4.77 ECTS
Requirements according to the examination regulations	Have attended not less than 80% class meetings
Recommended prerequisites	
Module objectives/intended learning outcomes	After attending this course, students have the ability to: 1. compare and analyze changes in forest types and soil types across a range of landscapes and global climates. 2. compare and analyze the characteristics of various forest types and soil types along a range of landscapes that are not influenced by climate. 3. determine and analyze the balance of plant nutrients in various forest types and soil types.

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<tr><td></td><td>4. analyze the vulnerability of various types of forests to pressures from outside the system.
5. analyze the basic concepts of forest floor and fertilization.
6. analyze the role of soil enhancers in the management of various types of forests.</td></tr>
<tr><td>Content</td><td>This course discusses the characteristics of forests in a range of landscapes and global climates; interactions and mutual influences between land, climate and vegetation components; forest and soil types based on climate zones; forest and soil types that are not influenced by climate zones; important characteristics of forest and land management in different types based on their vulnerability to external disturbances; and efforts that need to be made to maintain their sustainability while still considering opportunities for economic improvement.</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>Evaluation and assessment of the learning process are following scheme 5 in the Academic Regulations of Mulawarman University:
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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 and class attendance</td><td>Participation</td><td>10</td></tr>
<tr><td>2</td><td>Assignment</td><td>Q&A</td><td>20</td></tr>
<tr><td>3</td><td>Mid-semester test</td><td>Written test</td><td>30</td></tr>
<tr><td>4</td><td>Final semester test</td><td>Written test</td><td>40</td></tr>
<tr><td colspan="3">TOTAL</td><td>100</td></tr>
</table></td></tr>
<tr><td>Media employed</td><td>Laptop, LCD</td></tr>
<tr><td>Reading list</td><td>1. Hartati, W., Arifin, J., Sudarmadji, T., Syahrinudin, Ruhiyat, D. 2021. Spodosols of East Kalimantan: Land Cover Disturbances Induced Degradation of Soil Properties. Advances in Biological Sciences Research 11 (1), 403-409.
2. Syahrinudin, Hartati, W., Sudarmadji, T., Krisdianto, N., Ibrahim. 2019. Biochar enriched with organic fertilizer improves the survival and growth rate of Anthocepalus cadamba seedlings planted on degraded Spodosols. Biodiversitas 20 (12), 3741-3750.
3. Syahrinudin. 2005. The potential of oil palm and forest plantations for carbon sequestration on degraded land in Indonesia. Ecology and Development Series No.28. Cuvillier Verlag, Gottingen.
4. Harjowigeno, S. 2003. Ilmu tanah. Akademika Pressindo, Jakarta
5. Foth, H.D. 1990. Fundamentas of soil science. Wiley, New York. 360pp
6. Binkley, D. 1986. Forest nutrition management. Wiley, New York. 290pp
7. Millar, C.D. 1959. Soil fertility. Wiley, New York. 436pp.</td></tr>
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