Course Module

Silviculture of Urban Forest

Faculty of Forestry

Mulawarman University

Module name	Silviculture of Tropical Forests
Modul level, if applicable	Graduates Programme
Code, if applicable	190401802W008
Subtitle, if applicable	
Courses, if applicable	Regular
Semester(s) in wich the module is taught	II (two)
Person resposible for the module	Prof. Dr. Ir. Marjenah, M.P.
Lecturer	Prof. Dr. Ir. Marjenah, M.P. Dr. Ir. Syahrinuddin. M.Sc. Dr. rer.nat. Harmonis, M.Sc. Dr. Ir. Wahjuni Hartati, M.P. Kiswanto, S.Hut., M.P., Ph.D.
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. explain the scope of tropical forest silviculture and its role. 2. explain the development of silviculture in the tropics. 3. explain about forest enrichment with meranti species. 4. analyze the implementation techniques, advantages, and development of agroforestry.

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<tr><td></td><td>5. conduct a study of the nutrient cycle in the tropics.
6. conduct an analysis of nutrient balance in tropical forest ecosystems.
7. conduct a study of the role of soil as a growing medium.
8. explain the process of soil formation and soil characteristics of tropical regions.
9. identify the characteristics and potential of forests in Indonesia.
10. analyze the concept of maintenance in natural forests.
11. analyze land requirements and nutrient consumption in plantation forest development.
12. identify and formulate about community plantation forests.
13. apply forest protection in tropical forest areas.
14. analyze infected plants and apply control techniques.</td></tr>
<tr><td>Content</td><td>This course discusses in detail about silviculture in the tropics, the development of silviculture and forest cultivation techniques in various functions and land tenure status. This course provides students with the knowledge and skills to be able to perform and determine forest cultivation techniques to increase land productivity in forest development activities.</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:
<table>
<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. Lampercht, H, 1996. Pertimbangan Silvikultur Di Wilayah Tropik. Silvikultur Hutan Alam di Indonesia. Fakultas Kehutanan Universitas Mulawarman. Samarinda.
2. Oldeman, R. A. A. 1990. Forests: Elements of Silvology. Springer-Verlag_Berlin Heidelberg. New York
3. Soekotjo. 2009. Teknik Silvikultur Intensif (SILIN). Gadjah Mada University Press. (Cetakan pertama). Yogyakarta.
4. Weidelt, H.J, 1995 Silvikultur Hutan Alam Tropika. Fakultas Kehutanan Universitas Mulawarman. Samarinda.
5. Whitmore, T.C. 1984. Tropical Rain Forest of The Far East (2nd ed.). Clarendon Press, Oxford. 352 hal.
6. Tata, H.L. dan A. Sasmianto.2016. Prospek Paludikultur Ekosistem Gambut Indonesia. Forda Press. Bogor.
7. Evans, J. 1982. Plantation forestry in the tropics. Oxford: Clarendon Press. 472 pp.
8. Jülich, W. 1988. Dipterocarpaceae and mycorrhizae. Special Issue, GFG Report of Mulawarman University 9: 103 h.</td></tr>
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	9. Kobayashi, T. 1986. Manual for forest tree diseases and their control measures in the Philippines. RP-Japan Forestry Development Project of the Pantambangan Area. 64 pp. 10. Lamarque, F., Anderson, J., Fergusson, R., Lagrange, M., Osei-Owusu, Y., Bakker, L., 2009. Human–Wildlife Conflict in Africa: Causes, Consequences and Management Strategies. Food and Agriculture Organization of the United Nations, Rome, p. 112. 11. Nair, K.S.S. 2000. Insect pests and diseases in Indonesian forests. SMT Grafika Desa Putera. Bogor, Indonesia. 12. Palmer, C. E. 2001. The extent and causes illegal logging: an analysis of a major cause of deforestation in Indonesia. CSERGE (Centre for Social and Economic Research on the Global Environment), London. 13. Satoo, T dan Madgwick, H. A.I., 1982. Forest Biomassa. Martinus Nijhoff-Netherland. 152 p 14. Ruhiyat, D. 1993. Dinamika Unsur Hara dalam Pengusahaan Hutan Alam dan Hutan Tanaman : Siklus Biogeokimia Hutan. Rimba Indonesia Vol 3 – 4 Desember 1993 15. Ruhiyat, D. 1999. Potensi Tanah di Kalimantan Timur Karakteristik dan Strategi Pendayagunaannya. Pidato Pengukuhan Jabatan Guru Besar Madya dalam Ilmu Tanah Hutan pada Fakultas Kehutanan Unmul. Rapat Terbuka Senat Unmul, 26 Oktober 1999. Samarinda 16. Sanchez, P. A. 1992. Sifat dan Pengelolaan Tanah Tropika. Jilid I. ITB, Bandung 17. Mackensen, J., Ruhiyat, D., dan H. Folster. 2001 . Kandungan Gizi Berbasis Volume Acacia mangium , Eucalyptus deglupta dan Paraserianthes falcataria di Hutan Tanaman Industri di Kalimantan Timur, Indonesia. J. Trop. Hutan Sci 13: 512 18. Sardjono, M. A., T. Djogo, H. S. Arifin., dan N. Wijayanto. 2003. Bahan Ajaran Agroforestri (Buku 1 s/d 6). World Agroforestri Centre. Bogor