Course Module

Silviculture of Urban Forest

Faculty of Forestry

Mulawarman University

Module name	Silviculture of Urban Forest
Modul level, if applicable	Graduates Programme
Code, if applicable	190401802P023
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. Kiswanto, S.Hut., M.P., Ph.D.
Language	Indonesia
Relation to curriculum	Programme, elective
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. understand the concept of urban ecosystems from various aspects. 2. understand the policy of managing urban forests and its relevance to actual conditions. 3. understand the concept of green space and its relationship with the urban forest. 4. understand the benefits of urban forests. 5. understand the multiple roles of urban forests for urban life. 6. understand the different forms, structures and types of urban forests.

<table>
<tr><td></td><td>7. understand the stages of establishing an urban forest.
8. understand the concept of urban forest zoning.
9. understand the concept of suitability of plant species and functions of urban forests.
10. understand the institutional condition of urban forests and alternative solutions.
11. analyze demographic conditions and their relevance to urban forests.
12. analyze the suitability of landscape conditions with urban forest designation.
13. understand the concept of urban forest management in Indonesia.
14. understand the concept of green city as the basis for urban forest development.
15. have an idea of urban forest development in terms of its various aspects.</td></tr>
<tr><td>Content</td><td>This course discusses the concept of urban ecosystems, urban forest policy studies, the relationship between urban forests and green spaces, the benefits and roles of urban forests, the form and structure of urban forests, types of urban forests, urban forest organization, zoning development, potential plant species and urban forest development ideas.</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>
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<tr><td>Media employed</td><td>Laptop, LCD</td></tr>
<tr><td>Reading list</td><td>1. Akbari, H., M. Pomerantz, H. Taha. (2001). Cool surfaces and shade trees to reduce energy use and improve air quality in urban areas. Solar Energy, 70: 295-310.
2. Biao, Z., L. Wenhua, X. Gaodi, X. Yu. (2010). Water conservation of forest ecosystem in Beijing and its value. Ecological Economic 69: 1416-1426.
3. Dobbs, C., F.J. Escobedo, W.C. Zipperer. (2011). A framework for developing urban forest ecosystem services and goods indicators. Landscape and Urban Planning, 99: 196-206.
4. Dwyer, J.F., E.G. McPherson, H.W. Schroeder, R.A. Rowntree. (1992). Assesing the benefits and costs of the urban forest. Journal of Arboriculture, 18: 227-234.
5. Greene, C.S., A.A. Millward, B. Ceh. (2011). Who is likely to plant a tree? The use of public socio-demographic data to characterize client participants in a private urban forestation program. Urban Forestry & Urban Greening, 10 : 29-38.</td></tr>
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6. Irawan, Z. D., 2008. Tantangan Lingkungan Lanskap Hutan Kota. Penerbit Bumi Aksara. Jakarta.
7. Joga, N. dan I. Ismaun, (2011). RTH 30% ! Resolusi Kota Hijau. PT. Gramedia Pustaka Utama, Jakarta.
8. Kuchelmeister, G. (2000). Trees for the urban millenium: urban forestry update. Unasylva, vol 51: 49-55.
9. Kuhns, M.R., D.K. Reiter, B. Lee. (2005). Characteristics of urban forestry program in Utah, US. Journal of Arboriculture, 31: 285-295.
10. Lafortezza, R., G. Carrus, G. Sanesi, C, Davies. (2009). Benefits and well-being perceived by people visiting green spaces in periods of heat stress. Urban Forestry & Urban Greening, 8: 97-108.
11. Martin, E dan Winarno, B. (2013). Peran Faktor Demografi dalam Pengembangan Hutan Kota. Jurnal Sosek Vol 9 No.1.2013. Pusat Penelitian dan Pengembangan Perubahan Iklim dan Kebijakan Kehutanan.
12. Miller, R.W. (1996). Urban Forestry: Planning and Managing Urban Greenspaces, 2nd ed. Prentice Hall. Englewood Cliffs, N.J.
13. Mulyana, S. (2013). Kajian jenis pohon potensial untuk pengembangan HK di Bandung. Jurnal Sosek Vol 9 No.1.2013. Pusat Penelitian dan Pengembangan Perubahan Iklim dan Kebijakan Kehutanan.
14. Nowak, D.J., D.E. Crane, J.C. Stevens. (2006). Air pollution removal by urban trees and shrubs in the United States. Urban Forestry & Urban Greening, 4: 115 - 123.
15. Rines, D., B. Kane, D.B. Kittredge, H.D.P Ryan, B. Butler. (2011). Measuring urban forestry performance and demographic associations in Masschusetts, USA. Urban Forestry & Urban Greening, 10: 113-118.
16. Schwab, J.C. ed. (2009). Planning the Urban Forest: Ecology, Economy, and Community Development. American Planning Association, Chicago, I.L.
17. Susanta, G. dan H. Sutjahjo. (2008). Akankah Indonesia Tenggelam Akibat Pemanasan Global? Penerbit Penebar Swadaya. Jakarta.