

Forest Ecology (SVK212)

Module designation	<i>Forest Ecology (SVK212)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Cecep Kusmana</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory Course</i>
Teaching methods	<i>Small group discussion, collaborative learning, cooperative learning</i>
Teaching media and tools	<i>Powerpoint, textbooks, laboratory equipments (example: PPE (Protective Personal Equipment), haga hypsometer, thermometer, phi band, clinometer, etc.)</i>
Workload	<i>Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours Practice class: 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours Exam: 120 minutes x 2 times = 240 minutes = 4 hours Self-study: 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours Total: 8100 minutes = 135 hours</i>
Credit points	<i>3 SCH x 1.44 = 4.32 ECTS</i>
Required and recommended prerequisites for joining the module	<i>Dendrology</i>
Module objectives/intended learning outcomes	<i>Explaining forest ecology as a branch of ecology that studies the interrelationship between forest communities and their environment as a basis tropical forest management.</i>
Course description	<i>Forest ecology is one of the basic science courses in the field of forestry which describes the definition of forest ecology, the concept of tropical forest ecosystems, forests as plant communities, the relationship between plant communities and the environment, dynamics of forest communities, classification of forest vegetation, forest formations in Indonesia, how to study forest vegetation and understorey, selection of tree species, ecological approaches in critical land rehabilitation, the impact of forest disturbances and soil aspects in forest ecology.</i>
Examination forms	<i>Lecture examination (writing test in the midterm and final semester), practicum examination (writing test in the final semester and quiz)</i>
Study and examination requirements	<i>Assessment of students's achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of quiz (15%), practicum (Ethics, cooperation, conformity of procedures, punctuality, activeness) (25%), report (40%), and practicum examination (20%).</i>

Module designation	<i>Forest Ecology (SVK212)</i>
Reading list	<ol style="list-style-type: none"> 1. Barnes BV, Zak DR, Denton SR, Spurr SH. 1998. <i>Forest Ecology</i>. John Wiley & Sons Inc. New York. 2. Cox GW. 1972. <i>Laboratory Manual of General Ecology Second Edition</i>, WMC. Publ. Dubuque Iowa. 3. De Santo RS. 1978. <i>Concept Of Applied Ecology</i>. Springer Verlag. New York. Heidelberg, Berlin. 4. Ewusie JY. 1980. <i>Element of Tropical Ecology</i>. Heineman Educational Books Ltd. London. 5. Misra R. 1968. <i>Ecology Workbook</i>. Oxford & IBU. Publ. House, New Delhi, Bombay, Calcuta. 6. Mueller – Dumbois D, Ellenberg DH. 1974. <i>Aims and Methods of Vegetation Ecology</i>. John Wiley & Sons, New York. 7. Odum EP. 1971. <i>Fundamentals of Ecology</i>. 3rd ed. Saunders, Philadelphia, Pennsylvania. 8. Smith DM. 1997. <i>The Practice of Silviculture: Applied Forest Ecology</i>. John Wiley & Sons Inc. New York. 9. Smith RL. 1986. <i>Elements of Ecology</i>. Harper & Row, Publishers, New York. 10. Soerianegara I, Indrawan A. 2006. <i>Ekologi Hutan Indonesia</i>. Laboratorium Ekologi Hutan. Jurusan Manajemen Hutan Fakultas Kehutanan Institut Pertanian Bogor. 11. Turner IM. <i>The Ecology of Trees</i>. Cambridge University Press. New York. 12. Vickery ML. 1984. <i>Ecology of Tropical Plant</i>. John Wiley & Sons. New York. 13. Whitmore TC, Burnham CP. 1984. <i>Tropical Rain Forest of the Far East</i>. Oxford University Press.

Silviculture (SVK225)

Module designation	<i>Silviculture (SVK225)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Sri Wilarso Budi</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Cumpolsory Course</i>
Teaching methods	<i>Small group discussion, collaborative learning, cooperative learning</i>
Teaching media and tools	<i>Powerpoint, textbooks, videos, films, drone, laboratory equipments (example: PPE (Protective Personal Equipment), drone, microscope, etc.)</i>
Workload	<p><i>Lecture class: 50 minutes x 2 sch x 14 weeks = 1400 minutes = 23 hours</i></p> <p><i>Practice class: 60 minutes x 3 sch x 14 weeks = 2520 minutes = 42 hours</i></p> <p><i>Exam: 120 minutes x 2 times = 240 minutes = 4 hours</i></p> <p><i>Self-study: 60 minutes x 5 times x 14 weeks = 3940 minutes = 66 hours</i></p> <p><i>Total: 8100 minutes = 135 hours</i></p>
Credit points	<i>3 SCH x 1.44 = 4.32 ECTS</i>
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> <i>1. Analyze problems and formulate alternative solutions for tropical forest management in general and specifically for the field of silviculture, based on data analysis and information using relevant theories and approaches of mathematics, statistics, biology, physics and chemistry, forest engineering, forestry economics and policy, sensory utilization, forest product management, and conservation of biological natural resources, and environmental ethics.</i> <i>2. Produce high quality seeds, seedlings and trees in terms of genetic, physiological and physical through conventional or biotechnological approaches.</i> <i>3. Design appropriate models and techniques in building, managing, monitoring and evaluating nurseries, planting, maintenance, protection and harvesting in various silvicultural systems.</i> <i>4. Relate science and technology in the field of silviculture including forest productivity, silviculture systems, agroforestry, ecological fields including dendrology, forest ecology, forest syn-ecology, tropical tree ecology, and forest protection including pest, disease and forest fire management with forest dynamics and the environment to improve the quality and productivity of natural forests and plantations for the achievement of sustainable forest and environmental management.</i> <i>5. Apply the basic and applied science of silviculture based on the principles of scientific research and writing.</i>

Module designation	<i>Silviculture (SVK225)</i>
Course description	<i>The Silviculture course is a compulsory subject which is followed by fourth semester students (department of silviculture) and five (department of forest management, department of forest product technology, and department of forest resource conservation and ecotourism) at the Faculty of Forestry, IPB. This course discusses: the meaning of silviculture, tree growth, the relationship of silviculture with other sciences, tree growth and reproduction, tree ecophysiology, nursery technology and forest development, silvicultural systems, planning for plantation forest development, nursery technology, maintenance and inventory of saplings in Indonesia. natural forest.</i>
Content	<ol style="list-style-type: none"> 1. <i>The importance of silviculture in forestry, Definition and relation of silviculture with other sciences, The role and paradigm shift of silviculture in the future</i> 2. <i>Photosynthesis, Respiration, Translocation, Transpiration</i> 3. <i>Definition of tree growth, Shoot and trunk growth, Root growth, Tree reproductive system, Factors affecting tree growth</i> 4. <i>Definition and characteristics of plantation forests, Why are plantation forests needed, Legal basis for plantation forest development, Prerequisites for plantation forest development, Industry plantation forest (HTI) application procedure, IUPHHK-HTI area requirements, IUPHHK-HTI spatial layout, Silviculture system, Plant types and planting patterns</i> 5. <i>The Importance of Intensive Silviculture, Concept of Intensive Silviculture, Application of Intensive Silviculture</i> 6. <i>Nursery planning, Germination and vegetative propagation, Seedling media production, Rhizobium technology, Mycorrhiza technology, Weaning and maintenance, Seedling quality control, and seedling transportation, Prospects for seed or seedling business</i> 7. <i>Planting planning, Land preparation, Planting techniques and systems, Evaluation of planting</i> 8. <i>Forest and land rehabilitation in arid/semi-arid areas, Forest and land rehabilitation in former mining areas, Peatland rehabilitation</i> 9. <i>Weeding and weeding, Fertilization, Mulching, Wiwilan</i> 10. <i>Purpose of pruning, Pruning and wood quality, Pruning method</i> 11. <i>Clear-cutting, Selective logging, Shelterwood, Other systems</i>
Examination forms	<i>Lecture examination (writing test in the midterm and final semester), practicum examination (writing test in the final semester and quiz)</i>
Study and examination requirements	<i>Assessment of students's achievement using proportion as follow: midterm exam (35%), final exam (35%), practicum (30%). The proportion of practicum score consists of report (50%), quiz (15%), attendance (10%), and practicum examination (25%).</i>

Module designation	<i>Silviculture (SVK225)</i>
Reading list	<ol style="list-style-type: none"> 1. Anonim. 1993. <i>Pedoman dan Petunjuk Teknis Tebang Pilih Tanam Indonesia (TPTI) Pada Hutan Alam Daratan</i>. Departemen Kehutanan, Direktorat Jenderal Pengusahaan Hutan. Jakarta. 2. Budi, S.W. 2009. <i>Petunjuk Praktikum Silvikultur</i>. Laboratorium Silvikultur Fakultas Kehutanan IPB. 3. Daniels, T.W., J.A. Helms dan F.S. Baker. 1987. <i>PrinsipPrinsip Silvikultur</i>. Gadjah Mada University Press. Yogyakarta. 4. Departemen Kehutanan. 2003. <i>Eksekutif Data Strategis Kehutanan. Bidang Statistik Kehutanan-Departemen Kehutanan</i>. Jakarta 5. Departemen Kehutanan dan Perkebunan. 1999. <i>Panduan Kehutanan Indonesia. Koperasi Karyawan Dephutbun</i>. Jakarta 6. Dransfield, S. and E.A. Widjaja (Eds.). 1995. <i>Bamboos</i>. PROSEA. Bogor. 7. Evans, J. 1992. <i>Plantation Forestry in the Tropics</i>. Clarendon Press. Oxford. 8. Hartmann, H.T, D.E. Kester and F.T. Davies. 1990. <i>Plant Propagation: Principles and Practices</i>. Prentice-Hall International. New Jersey. 9. Haygreen, J.H. and Bowywr, J.L. 1989. <i>Hasil hutan dan Ilmu Kayu, Suatu Pengantar</i>. Gadjah Mada University Press. 10. Kobayashi, S. et al. (Eds.). 2001. <i>Rehabilitation of Degraded Tropical Forest Ecosystems</i>. CIFOR. Jakarta 11. Kozlowski, T.T and Pallardy, S.G. 1996. <i>Physiology of Woody Plants</i>. Academic Press. London. 12. Lamprecht, H. 1989. <i>Silviculture in the Tropics</i>. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Technical Cooperation-Federal Republic of Germany. Eschborn. 13. Prasetyo, L. et al. (Eds.) 2003. <i>Survey on Silvicultural Techniques and Plantation Promoting Policies in Indonesia</i>. FORDA-JICA. Bogor 14. Manan, S. 1976. <i>Silvikultur. Proyek Pengembangan/Peningkatan Perguruan Tinggi</i>. IPB. Bogor. 15. Matthews, J.D. 1989. <i>Silvicultural Systems</i>. Clarendon Press, Oxford. 16. Oliver, C.D and Larson, B.C. <i>Forest Stand Dynamics</i>. McGraw-Hill, Inc. 17. Princhett, W.L. 1979. <i>Properties and Management of Forest Soils</i>. John Wiley & Sons, New York 18. Schmidt, L. 2000. <i>Guide to Handling of Tropical and Sub Tropical Forest Seed</i>. Danida. Humlebaek, Denmark. 19. Yasman, I. Dan W.T.M. Smits. 1988. <i>Metoda Pembuatan Stek Dipterocarpaceae. Asosiasi Panel Kayu Indonesia</i>. Jakarta

Communication and Social Science Conservation (KSH1222)

Module designation	<i>Communication and Social Science Conservation (KSH1222)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Dr. Ir. Arzyana Sunkar, M.Sc</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory course for students of Department of Forest Resources Conservation and Ecotourism IPB University</i>
Teaching methods	<i>Lecturer presentation, discussion, literature content observation, group discussion, case study, blended learning</i>
Workload	<p><u>Total Workload</u></p> <p><i>Contact hour(s) (lecture session): 50 minute per week</i></p> <p><i>Contact hour(s) (practicum session): 3 hours per week</i></p> <p><i>Structured academic activities (doing in-class/take home assignment or homework): 2 hours per week</i></p> <p><i>Private in-depth study (literature reading): 2 hours per week</i></p>
Credit points	1 (2-1)
Required and recommended prerequisites for joining the module	<i>No prerequisite</i>
Module objectives/intended learning outcomes	<p><i>By the end of this course, students will have developed:</i></p> <ol style="list-style-type: none"> <i>1. Knowledge of the importance of communication strategies and understanding of the human dimension in achieving conservation goals; effective communication methods through social media; communication and public engagement; and theory and practice in behavior change.</i> <i>2. Skills in writing effectively about conservation and applying storytelling techniques in conservation activities;</i> <i>3. Create and develop conservation marketing messages and programs; develop conservation campaigns and materials through social media; plan a social media strategy for engagement in conservation activities;</i> <i>4. Critically evaluate the choice of practices in communication.</i> <i>5. Ability to approach the theoretical and empirical material critically, to use the new material in the interpretation and analysis of other texts as well as in approaching applied problems.</i> <i>6. Improved analytic thinking skills, better scholarly research abilities, and greater aptitude in oral and written communication</i>

Module designation	<i>Communication and Social Science Conservation (KSH1222)</i>
Course descriptions	<p><i>The conservation of biodiversity and its ecosystem will succeed if supported by the community. Unfortunately, community engagement is frequently hindered by ineffective communication. This course provides the basis for communication approaches and social methods to engage the community in conserving natural resources and the environment. The materials are given to prepare students as leaders who can engage the community to become agents of change in conservation. Students will be given materials related to the basic principles of human behaviour, conservation psychology, traditional and cultural communication, ethnography, mass communication, environmental, socio-ecology, digital and social media, conservation education, conservation leadership and innovation, political communication, conservation partnerships, conservation and development, as well as diverse methods of social communication and their application in the areas of social, economic, political, ecological, tourism and environmental services. This course takes the form of class lectures including practicums. At the end of the course, the students will lead a biodiversity conservation campaign</i></p>
Content	<p><i>. This course is comprised of the following topics:</i></p> <ol style="list-style-type: none"> 1. Introduction to Communication and Social Science Conservation <ol style="list-style-type: none"> <i>a. Background on the importance of understanding the social sciences</i> <i>b. Understanding the importance of communicating nature</i> <i>c. Natural interpretation</i> <i>d. Communication Science</i> <i>e. Explanation of the subject matter of lectures and practicum</i> 2. Fundamentals of Conservation Communication <ol style="list-style-type: none"> <i>a. Communication for conservation, communication concepts and theories related to conservation challenges; the role of communicator in conservation organizations is also given; various methods of delivering conservation messages are emphasized to achieve goals in conservation communication.</i> <i>b. Communication as a tool in conservation</i> <i>c. The role of communication in enhancing conservation efforts through education and research</i> <i>d. Variety of communication media and examples</i> <i>e. How to communicate and things that must be mastered by a science communicator</i> <i>f. Design conservation messages and examples</i> <i>g. The role of social media, citizen science, environmental educators in communicating conservation</i> 3. Environmental Sociology <ol style="list-style-type: none"> <i>a. Definition of socioecology</i> <i>b. Human-nature relationships</i> <i>c. The concept of People, Planet, Profit</i> <i>d. Nature conception according to socioecology</i> 4. Traditional Communications <p><i>Various methods should be used to make sure that people have a good understanding of conservation messages. Some of the advantages of traditional communication channels are that they are realistic and based on the everyday lives of ordinary people. They can motivate people to change their behaviour and they can demonstrate problem-solving skills. This sub topic will explore and develop various local means, materials and methods of communication, such as songs and dances, puppet performances, poems, games stories</i></p>

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	<p>5. Multispecies Ethnography</p> <p>a. An introduction to modern debates on multi-species ethnography in anthropology and related disciplines.</p> <p>b. Current ecological issues, as well as emerging demands for the inclusion of alternative human-centred approaches in contemporary programmes, make emerge the redefinition of the aims of observing the human in its environment.</p> <p>c. Multispecies ethnographic approaches focus the multiple webs intermingling humans with other beings in both synchronic and diachronic perspectives</p> <p>6. Community and Science:Communication Media and Conservation</p> <p>Fundamentals of digital and social media, and online communication; new and emerging digital media platforms to communicate conservation; conservation organizations and the use of social media, podcasting, and video in communicating conservation</p> <p>7. Community Based Conservation Education</p> <p>Effective conservation is about integrating the needs of human with biological communities. This sub-topic provides guidance on the planning, implementation, and assessment of techniques for linking classrooms and communities with conservation. Conservation education techniques such as community-based research, participatory mapping and citizen science.</p> <p>8. Leadership and Social Marketing</p> <p>Principles in social marketing and conservation marketing are explained and evaluated. Students learn the techniques and tactics of political communication and leadership, including public speaking, government outreach and witnessing, and collaborative communications planning. The material will be filled in by guest lecturers who have field experience in conservation social science through behavior change. The topics in this material can be adjusted to the background of the guest lecturer.</p> <p>9. Political Communications and Public Opinion</p> <p>Political and leadership communication techniques and tactics, including public speaking skills, conservation diplomacy and collaborative communications planning.</p> <p>10. Conservation Partnership</p> <p>a. Definition</p> <p>b. Social associative processes</p> <p>c. Aims of Partnership</p> <p>d. Types and Forms of Partnerships in Conservation</p> <p>e. Study case examples</p> <p>11. Conservation and Development: Mini Project on Conservation Campaign</p> <p>a. The importance of students communicating conservation on campus</p> <p>b. Discussion of themes and topics to be communicated</p> <p>12. Fundamentals of conservation campaigns</p>
Examination forms	<i>Oral presentation, Research Essay, Critical Summary, written examination, presentations</i>
Study and examination requirements	<p><i>Cognitive : midterm exam, final exam, quizzes, assignments</i></p> <p><i>Psychomotor : practice</i></p> <p><i>Affective : Assessed from the element /variables achievement, namely (a) Contributions (attendance, active participation, initiative, language), (b) Being on time, (c) Effort</i></p>

Module designation	<i>Communication and Social Science Conservation (KSH1222)</i>
Reading list	<ol style="list-style-type: none"> 1. Carson, R., 2002. <i>Silent spring</i>. Houghton Mifflin Harcourt. 2. Meadows, D.H., Meadows, D.L., Randers, J. and Behrens, W.W., 2018. <i>The limits to growth</i>. In <i>Green planet blues</i> (pp. 25-29). Routledge. 3. Welford, R., 1997. <i>Hijacking of. Hijacking Environmentalism: Corporate Responses to Sustainable Development</i>. 4. Gore, A., 2007. <i>An inconvenient truth: The crisis of global warming</i>. Penguin. 5. Diamond, J., 2011. <i>Collapse: how societies choose to fail or succeed: revised edition</i>. Penguin. 6. McKenzie-Mohr, D., 2011. <i>Fostering sustainable behavior: An introduction to community-based social marketing</i>. New society publishers. 7. Attenborough, D. 2020. <i>A life on our planet: My witness statement and a vision for the future</i>. Random House. 8. Clayton, S. and Myers, G., 2015. <i>Conservation psychology: Understanding and promoting human care for nature</i>. John Wiley & Sons. 9. Locke, P & U Münster. 2015. <i>Multispecies Ethnography Oxford Bibliographies Online</i> 10. Ogden, L, Hall, B & K Tanita. 2013. <i>Animals, Plants, People, and Things: A Review of Multispecies Ethnography Environment and Society: Advances in Research 4 (1) 5-24</i>.

Conservation Education (KSH1252)

Module designation	<i>Conservation Education (KSH1252)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Prof. Dr. E. K. S. Harini Muntasib, M.S.</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory course for students of Department of Forest Resources Conservation and Ecotourism IPB University and elective course for other IPB University students</i>
Teaching methods	<i>Lecture session, discussion and practicum session</i>
Teaching media and tools	<i>Powerpoint, textbooks, videos, films, drone, laboratory equipments (example: PPE (Protective Personal Equipment), drone, microscope, etc.)</i>
Workload	<p><i><u>Total Workload</u></i></p> <p><i>Contact hour(s) (lecture session): 2 hours per week</i></p> <p><i>Contact hour(s) (practicum session): 3 hours per week</i></p> <p><i>Structured academic activities (doing in-class/take home assignment or homework): 2 hours per week</i></p> <p><i>Private in-depth study (literature reading): 2 hours per week</i></p>
Credit points	<i>3 SCH x 1.44 = 4.32 ECTS</i>
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> <i>1. Students acquire ability to understand the theoretical concept of conservation education.</i> <i>2. Students acquire ability to organize conservation education.</i>
Content	<p><i>This course is consisted of 14 topics, namely:</i></p> <ol style="list-style-type: none"> <i>1. The definition and the importance of conservation education</i> <i>Students are expected to be able to explain the definition and the importance of conservation education through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i> <i>2. The basic concept and communication for conservation education</i> <i>Students are expected to be able to explain the basic concept and communication for conservation education through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i> <i>3. Learning methods in conservation education</i> <i>Students are expected to be able to explain and distinguish different approaches that can be used conservation education and various learning methods in conservation education through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i> <i>4. Development of learning media for conservation education</i> <i>Students are expected to be able to explain the roles of learning media in conservation education and steps to develop learning media through this topic. Assessment indicator for this topic is</i>

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	<p><i>the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>5. Designing conservation education program <i>Students are expected to be able to name various conservation education programs, explain the components of a conservation education program, and steps in developing conservation education program through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>6. Introduction to examples of conservation education <i>Students are expected to be able to give various examples of conservation education based on target groups and areas through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>7. Designing non-formal conservation education program <i>Students are expected to be able to explain the steps in designing non-formal conservation education program and composing non- formal conservation education program design through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>8. Implementing non-formal conservation education program <i>Students are expected to be able to explain the strategy and various examples of implementing non-formal conservation education program through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>9. Non-formal conservation education program monitoring and evaluation <i>Students are expected to be able to explain the definition, the importance, the methods and instruments of monitoring and evaluation in non-formal conservation education program through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>13. Non-formal conservation education program monitoring and evaluation</p> <p>14. <i>Students are expected to be able to explain the definition, the importance, the methods and instruments of monitoring and evaluation in non-formal conservation education nprogram through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>15. Designing formal conservation education program</p> <p>16. <i>Students are expected to be able to explain the steps in designing formal conservation education program and composing non- formal conservation education program design through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>17. Practitioner in developing conservation education</p> <p>18. <i>Students are expected to be able to explain the various tips used by practitioners in developing conservation education through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>19. Implementing formal conservation education program</p>

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	<p>20. Students are expected to be able to explain the strategy and various examples of implementing formal conservation education program through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</p> <p>21. Formal conservation education program monitoring and evaluation</p> <p>22. Students are expected to be able to explain the definition, the importance, the methods and instruments of monitoring and evaluation in formal conservation education program through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final</p> <p>23. score of this course.</p>
Examination forms	Written examination
Study and examination requirements	Acquire a final score that qualifies for letter grade D at the minimum; Mid-semester Examination : 30%, Final-semester Examination : 30%, Assessment method : 25%, Online Study : 15%
Reading list	<ol style="list-style-type: none"> 1. Braus J. A. and D. Wood. 1994. <i>Environmental Education in the Schools: Creating a Program That Works</i>. North American Association for Environmental Education. 2. Clayton, S. and G. Myers. 2009. <i>Conservation Psychology: Understanding and Promoting Human Care for Nature</i>. Wiley-Blackwell, A John Wiley & Sons, Ltd., Publication. West Sussex. 3. Dissinger, J. and M. C. Monroe. 1994. <i>Defining Environmental Education</i>. University of Michigan. Ann Arbor. 4. Ford, P. M. 1981. <i>Principles and Practices of Outdoor/Environmental Education</i>. John Wiley & Sons. Toronto. 5. [KLH] Kementerian Lingkungan Hidup. 2004. <i>Kebijakan Pendidikan Lingkungan Hidup di Indonesia</i>. Jakarta: Kementerian Lingkungan Hidup. 6. Monroe, M. C (Ed.). 1999. <i>What Works: A Guide to Environmental Education and Communication Projects for Practitioners and Donors</i>. New Society Publishers. Gabriola Island. 7. [Pokja PKSDHL] Kelompok Kerja Pendidikan Konservasi Sumberdaya Hutan dan Lingkungan. 2001. <i>Model Pendidikan Hutan dan Lingkungan bagi Anak Sekolah</i>. Bogor: Kerjasama Pusat Bina Penyuluhan Kehutanandan Fakultas Kehutanan Institut Pertanian Bogor. 8. Stokking, H., van Aert, L., Meijberg, W. and A. Kaskens. 1999. <i>Evaluating Environmental Education</i>. IUCN. Gland, Switzerland and Cambridge, UK. 9. Wholey, J. S., Hatry, H. P. and K. E. Newcomer (Eds.). 2004. <i>Handbook of practical program evaluation</i>. 2nd ed. Jossey-Bass, A Wiley Imprint. San Fransisco. 10. Wittmann, H. 1997. <i>Materi Pendidikan Lingkungan Hidup</i>. Hanns Seidel Foundation. Jakarta. 11. Wood, D. S. and D. W. Wood. 1985. <i>Conservation Education: A Planning Guide</i>. Peace Corps, Information Collection and Exchange Division. Washington, DC. 12. Wood, J. T. 2007. <i>Interpersonal Communication, Everyday Encounters</i>. 5th Ed. Thomson Wadsworth. Belmont. 13.

Inventory and Monitoring of Wildlife (KSH1213)

Module designation	<i>Inventory and Monitoring of Wildlife (KSH1213)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Dr. Ir. Mirza Dikari Kusriani, MS</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory course for students of Department of Forest Resources Conservation and Ecotourism IPB University</i>
Teaching methods	<i>Lecture session, discussion and practicum session</i>
Teaching media and tools	<i>Powerpoint, textbooks, videos, films, drone, laboratory equipments (example: PPE (Protective Personal Equipment), drone, microscope, etc.)</i>
Workload	<p><u>Total Workload</u></p> <p>Contact hour(s) (lecture session): 2 hours per week</p> <p>Contact hour(s) (practicum session): 3 hours per week</p> <p>Structured academic activities (doing in-class/take home assignment or homework): 2 hours per week</p> <p>Private in-depth study (literature reading): 2 hours per week</p>
Credit points	<i>3 SCH x 1.44 = 4.32 ECTS</i>
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. <i>Students acquire ability to analyze roles of wildlife and measure wildlife potential.</i> 2. <i>Students acquire ability to plan wildlife management.</i>
Content	<p><i>This course is consisted of 9 topics, namely:</i></p> <ol style="list-style-type: none"> 1. Introduction <i>Students are expected to be able to understand the objectives of the course and to understand the definition, scope, and benefits of the knowledge of inventory and monitoring of wildlife through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i> 2. Determining wildlife spatial distribution pattern <i>Students are expected to be able to explain various kinds of wildlife spatial distribution pattern in its relation with sampling for inventory and monitoring of wildlife through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i> 3. Statistics methods and sampling procedure in inventory and monitoring of wildlife <i>Students are expected to be able to explain the statistical theory in its relation with wildlife inventory, including its parameters, through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i>

Module designation	<i>Inventory and Monitoring of Wildlife (KSH1213)</i>
	<p>4. Animal census methods <i>Students are expected to be able to explain the use of census methods in inventory and monitoring of wildlife activities through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>5. Sampling method of inventory and determining animal's distribution pattern based on index or ordinal method <i>Students are expected to be able to explain the sampling method and index and ordinal method in determining animal's distribution pattern through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>6. Indirect methods <i>Students are expected to be able to explain the use of indirect methods in inventory and monitoring of wildlife through this topic. Assessment indicator for this topic is the completeness and correctness of explanation which accounts for for 5% of the final score of this course.</i></p> <p>7. Bird population inventory methods <i>Students are expected to be able to explain and implement the use of bird inventory methods in wildlife management through this topic. Assessment indicator for this topic is the completeness and correctness of explanation as well as skill and correctness of analysis which accounts for for 20% of the final score of this course.</i></p> <p>8. Herpetofauna inventory methods <i>Students are expected to be able to explain and implement the use of herpetofauna inventory methods in wildlife management through this topic. Assessment indicator for this topic is the completeness and correctness of explanation as well as skill and correctness of analysis which accounts for for 25% of the final score of this course.</i></p> <p>9. Wildlife population monitoring methods <i>Students are expected to be able to explain and implement the use of inventory methods learned beforehand for wildlife monitoring in conservation activities through this topic. Assessment indicator for this topic is the completeness and correctness of explanation as well as skill and correctness of analysis which accounts for for 25% of the final score of this course.</i></p>
Examination forms	<i>Written examination</i>
Study and examination requirements	<i>Acquire a final score that qualifies for letter grade D at the minimum; Mid-semester Examination : 30%, Final-semester Examination : 30%, Assessment method : 25%, Online Study : 15%</i>
Reading list	<ol style="list-style-type: none"> <i>1. Seber, G. 1982. The Estimation of Animal Abundance & Related Parameters. 2nd ed. Edward Arnold. London</i> <i>2. Norton-Griffiths, M. 1975. Counting Animals. African Wildlife Leadership Foundation. Kenya.</i> <i>3. Cochran, W. G. 1991. Teknik Penarikan Contoh. UI-Press.Jakarta.</i>

Forestry Field Practices (FHT200)

Module designation	<i>Forestry Field Practices (FHT200)</i>
Semester(s) in which the module is taught	4
Person responsible for the module	<i>Imam Wahyudi</i>
Language	<i>Bahasa Indonesia</i>
Relation to curriculum	<i>Compulsory Course</i>
Teaching methods	<i>Provisioning course, field practices, mentoring, and supervision.</i>
Teaching media and tools	<i>Powerpoint, videos, hygrothermometer, haga-hypsometer, binocular lens, rope, compass, phi-band, kadukul, bor, GPS.</i>
Workload	<i>Lecture session (provisioning) : 20.5 hours Practice field : 7 hours x 21 days = 147 hours Self-learning : 1.5 hours x 21 days = 31.5 hours TOTAL : 199 hours</i>
Credit points	<i>4 SCH x 1.44 = 5.76 ECTS</i>
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. <i>Students are able to identify types of forest ecosystems and their components, interactions, processes, roles and functions of each type of forest ecosystem in Indonesia from coast to mountains.</i> 2. <i>Students are able to identify and measure parameters of ecosystem components from coastal to mountainous.</i> 3. <i>Students gain practical experience in forest management by deepening and stabilizing the understanding of concepts or theories through extracting information and understanding the implementation of theories by forest management units. information and understanding of the implementation of the theory by the forest management unit as well as the development of technical skills through the work of applying the theory at the practice location</i> 4. <i>Students acquire and build personality, teamwork skills, work ethic, work ethics, and professional ethics.</i>
Course description	<i>Practice of recognizing the types of forest ecosystems and their constituent components, as well as practice of introduction to the various aspects (production, environmental, social, etc.) of production forest management activities. In this field practice, students are given the opportunity to see, recognize, observe, and measure the various parameters of forest ecosystem components, recognize and practice production forest management activities (plantation forests) and conservation in the field.</i>
Content	<ol style="list-style-type: none"> 1. <i>Forest Planning</i> 2. <i>Forest Development</i> 3. <i>Forest Protection</i> 4. <i>Forest Harvesting</i> 5. <i>Conservation of Living Natural Resources</i> 6. <i>Community Forestry</i>
Examination forms	<i>Written, daily quiz, group reports, presentation.</i>

Module designation	<i>Forestry Field Practices (FHT200)</i>
Study and examination requirements	<i>Provisioning course quiz (15%), supervisor assignment (10%), forest field practices examination (15%), activity report (15%), field implementation (15%), and forestry field practices seminar quiz (30%)</i>
Reading list	<i>NA (Not Applicable)</i>