

## University Gadjah Mada

Faculty of Forestry Study Program of Doctor in Forestry Science **Module Handbook** 

Name (Code)	: Methodology and Ethic of Forestry Research thrust Silviculture (KTDU22802)								
ECTS   Type   Status	: 7.5   Class lecture   Compulsory								
Semester   OfL:OnL	: 1   60:40   elok.ugm.ac.id								
Ratio   LMS									
Pre-Requisite	:-								
Description of	: This course raises the basics of developing forestry science through research, including scientific theory and its								
content	benefits for research, components and characteristics of theory, research propositions, basics of analysis in								
	research, principles of measurement and experimental analysis. The discussion also raises cases of field and								
	laboratory research on silvicultural aspects, tree breeding, environmental manipulation and integrated control								
	of pests and diseases.								
Course Outcomes	Finishing this course, student will be able to identify the basic theory and basic analysis for research plans								
and PLO mandated	(CLO1/PLO1), to determine the problems that form the basis of dissertation research in the field of silviculture								
	(CLO2/PLO2), to formulate scientific questions and research approaches for a dissertation plan in the field of								
	silviculture (CLO3/PLO4), and to draft a proposal for dissertation research (CLO4/PLO4)								
Lecturer(s)	1. Prof. Dr. Ir. Mohammad Naiem, M.Agr.Sc4. Dr. Ir. Eny Faridah, M.Sc.								
	2. Prof. Dr. Ir. Suryo Hardiwinoto, M.Agr.Sc 5. Prof. Dr. Ir. Sumardi, M.For.Sc								
	3. Prof. Dr. Ir. Sri Rahayu, MP								
Workload	: Total workload per semester is for 14 weeks, with weekly activities: 2*(50' lectures, 60' structured								
	activities, 60' independent study), and 2 mid exam and final exam weeks.								
Learning Method	: Class Lecture and Discussion								
Student Learning	: Actively discuss the class material and research cases, structured assignment, group work, quiz, material								
Experience	reflection, review of literature and problem in forestry sectors								
Mapping CO-syllabus	CLO Syllabus						rning for	Meetings	
	1	1 1. History of science development					s lecture	5	
	2. Basics of UGM values and ethics for research discussion								
	3. Theory and Preposition: Characters and Components								
	<ol> <li>Measurement and Experiment</li> <li>Result Analysis and Synthesis</li> </ol>								
	2	2 6. Research cases in Silviculture					Class lecture,		
	2	7. Research cases in Tree Improvement					ussion,	4	
		8. Research cases in Environmental Manipulation					gnment		
	9. Research cases in Forest Protection						Siment		
	3	10. Identifying scientific problems					s lecture	2	
	5	11. Raising research question from the problems					ussion	-	
	4	4 12. Sub-research approach					s lecture	3	
	13. Raising research purposes						ussion,	-	
	14. Composing coherent research flow						presentation		
Assessment method	Base of	Evaluation	Component of Evaluation	n	CLO1	CLO2	CLO3	CLO4	Total (%)
	Participati	ive activity	Assignment, quiz, presentation						35
	Cognitive	&	Mid exam						30
	Psychomo	otoric							
	Case Study	y result	Final exam/ presentation						35
References	1. Bastian O & Steinhardt U. 2002. Development and Perspectives of Landscape Ecology. Dordrecht: Kluwer								
	Academic Publishers. 498p.								
	2. Ford, ED. 2004. Scientific Method for Ecological Research. Cambridge: Cambridge University Press. 588p.								
	3. Nyland RD. 2002. Silviculture: Concepts and Applications. 2nd Edition. Boston, McGraw-Hill. 681p								
	4. Orcutt DM & Nilsen ET. 1996. Physiology of Plant under Stress. Abiotic Factors. New York, John Wiley &								
	Sons. 683p.								
	5. Sumardi. 2008. Kerangka Ilmu dan Metodologi Kehutanan KTU 801. Bahan Ajar. Program Studi								
	Pascasarjana Fakultas Kehutanan UGM.								