MODUL
NATURAL RESOURCES AND ENVIRONMENT CONSERVATION

MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATED STUDIES
DIPONEGORO UNIVERSITY

Modul Description:

Modul Name	Conservation of Natural Resources and Environment
Modul level, if applicable	
Code, if applicable	P-CIL-8-205
Subtitles, if any	
Course, if applicable	
Semester(s) in which the Modul is taught	Semester 2
Modul responsible	Dr. Fuad Muhammad, SSi, MSi
Teaching Lecturer	1. Dr. Fuad Muhammad, SSi, MSi 2. Dr.Hartuti Purnaweni, MPA 3. Dr. JafronWasiq Hidayat, M.Sc
Language	*Indonesian and English*
Relationship with curriculum	
Type of teaching, hours of contact	*Lectures: 1 x 180 minutes x 16 meetings = 48 hours/week* *Q&A: 1 x 30 minutes x 16 meetings = 8 hours/week* *Discussion: 1 x 30 minutes x 16 meetings = 8 hours/week* *Presentation: 1 x 30 minutes x 16 meetings = 8 hours/week* *Individual assignment: 60 minutes/day = 5 hours/week Total work for 1 semester = 150 hours = 6 ECTS*
Workload	*(Estimated) workload, divided into contact hours (lectures, exercises, laboratory sessions, etc.) and personal study, including test preparation, specified in hours,[1]and overall.*
credit points	*3 credits/ 6 ECTS*
Requirements according to the exam regulations	*Lecture attendance of at least 75%*
Recommended prerequisites	*For example, competence in…*
Modulthe desired learning objectives/outcomes	Students can understand and explain the conservation of natural resources and the environment, master the basic concepts of integrated conservation with ecological diversity, plant diversity, and animal diversity carefully, critically and systematically, be able to find and analyze problems in the field of natural resource conservation and design, investigate through a scientific approach to obtain accurate and accountable data and analyze data to formulate creative and innovative solutions to problems in the field of conservation and the environment.

Fill	Conservation of Natural Resources and EnvironmentThis course aims to equip students with knowledge, understanding and application of nature and environmental conservation and equip students to go into the field to learn to identify problems and their solutions.
Study and examexam requirements and forms	• *Open the book and close the book* • *Multiple choice, case studies, interviews*
Media used	*Powerpoint, youtube, website*
Read reference	● Dyke, FV, and Lamb, RL 2020. Conservation Biology: Foundations, Concepts, Applications 3rd ed. Spinger Publishing. ● Jhariya, M., et al. 2021. Conservation of Natural Resources and Progress for Sustainability. United States of America: Elsevier Publishing. ● Kareiva, P., and Marvier, M. 2017. Conservation Science: Balancing Human and Natural Needs Both. WH Freeman publications ● Sangeetha, J., et al. 2021. Characterization and Utilization of Biodiversity and Conservation of Plants, Microbes and Natural Resources for Sustainable Development and Ecosystem Management. Apple Academic Press.

SEMESTER STUDY PLAN

Study program: Master of Environmental Science				**Faculty: School of Postgraduate**			
Subject:	**Natural Resources and Environment Conservation**	**Code: P-CIL-8-205**		**Credit:3 (6 ECTS)**		**smt:2**	
Supporting lecturer:	**1. Dr. Fuad Muhammad, SSi, MSi** **2. Dr. Hartuti Purnaweni, MPA** **3. Dr. Jafron Wasiq Hidayat, M.Sc**						
Learning Outcomes Subject:	• Students can understand and explain about the conservation of natural resources and the environment • Mastering the basic concepts of conservation integrated with ecology, diversity plants, and animal diversity carefully, critically and systematically. • Able to find and analyze problems in the field of natural resource conservation and design investigation through a scientific approach in order to obtain accurate and accountable data. • Analyze data to formulate solutions to problems in the field of conservation and the environment creatively, and innovatively						
Short Description of Courses:	This Solid Waste Management Engineering course aims to equip students with knowledge, understanding and application of natural and environmental conservation as well as equip students to enter the field to learn to identify problems and their solutions.						

1	2	3	4	5	6	7	
Week	**Final Ability of each learning stage**	**Study Materials/ Subjects**	**Learning methods**	**Workload**	**Student Learning Experience**	**Evaluation**	
						Criteria & Indicators	**Weight (%)**
1.	Introduction/ Lecture contract	Understand the preparation before face-to- face lectures andthe obligation to report face-to- face lectures	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30minutes* • *Presentation : 30minutes*	Students knowthe lecture system	Activity	5

				Individual tasks: 60 minutes/day (16 weeks)			
2	Students have broad insight on natural resource conservation and the environment	Natural Resources Conservation Water, Soil, etc And the implications for the environment	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	Read recommended Modules and libraries; Discussion of learning outcomes; Presentation of the results of the discussion	Criteria: Accuracy and mastery of theory Non-test form: Student activity and Task Presentation	5
3	Students have broad insight on natural resource conservation and the environment	Natural Resources Conservation Water	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	Read recommended Modules and libraries; Discussion of learning outcomes; Presentation of the results of the discussion	Criteria: Accuracy and mastery of theory Non-test form: Student activity and Task Presentation	5
4	Students have broad insight on natural resource conservation and the environment	Soil Conservation, etc And the implications for the environment	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	Read recommended Modules and libraries; Discussion of learning outcomes; Presentation of the results of the discussion	Criteria: Accuracy and mastery of theory Non-test form: Student activity and Task Presentation	5

5	Students are able to explain about Threats to diversity biological,	(1) extinction rate, (2) island biogeography, (3) local extinction,	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	. Discussion of the previous week's homework . Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss	Accuracy and Completeness and the truth explanation as well accuracy understanding	5
6	Students are able to explain about Threats to diversity biological,	(1) habitat destruction, (2) habitat fragmentation, (3) habitat degradation, (4) global climate change, (5) exploitation of alien species	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	. Discussion of the previous week's homework . Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss	Accuracy and Completeness and the truth explanation as well accuracy understanding	5
7	Students are able to explain about Conservation at the level Species and Population	(1) population is small, (2) shrinkage of diversity genetics, (3) cross pressure, (4) the size of the population that effective, (5) demographic variation, (6) continuity analysis population life,	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	. Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss . Discussion of the results of the previous week's group assignments	Completeness and the truth explanation as well accuracy understanding	5

		(7) metapopulation, (8) ex-situ and in-situ conservation					
8	Students are able to explain about Conservation Level Community	(1) protected area, (2) determination system priority, (3) species approach, (4) ecosystem and community, (5) wild area, (6) international treaties, (7) area size conservation, (8) edge effect, (9) corridor, (10) protected area management, (11) habitat management, (12) ecosystem management	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss	Completeness and the truth explanation as well accuracy understanding	5
9	**UTS**	**Meeting Material 1-7**	**Independent Written Test**	**330 minutes of processing time or the equivalent of 0.25 ECTS**	**Students working on UTS questions**	**Completeness and the truth explanation as well accuracy understanding**	**10**
10	**Field Work**	Ex-situ conservation and in-situ:	**Discussion**	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes*	**College student design format observation for**	Completeness and the truth explanation as well accuracy	5

		area management cover, habitat management, ecosystem management		• *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	**ex-situ conservation and in-situ**	understanding	
11	students can understand the concept of conservation use	convention biodiversity, conservation and development sustainable (1) land trust, laws and regulations about conservation	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	). Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss). Discussion of the results of the previous week's group assignments (influence diagram)	Completeness and the truth explanation as well accuracy understanding	5
12	students can understand the concept of conservation use	(1) land trust, laws and regulations about conservation	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	). Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss). Discussion of the results of the previous week's group assignments (influence diagram)	Completeness and the truth explanation as well accuracy understanding	5
13.	students can understand the concept of conservation use	(1) statutory regulations	Lectures, questions and	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes*	a. Students listen to the lecturer's explanation and	Completeness and the truth explanation as well	5

		about conservation	answers, and discussions	• *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	answer the lecturer's questions, as well as discuss b. Discussion of the results of the previous week's group assignments (influence diagram)	accuracy understanding	
14	Students can understand, observing, communicating environmental pollution problem	Pollution Environment Understanding Pollution Water Pollution	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	a. Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss b. Discussion of the results of the previous week's group assignments	Completeness and the truth explanation as well accuracy understanding	5
15	Students can understand, observing, communicating environmental pollution problem	Pollution Environment 1. Air Pollution 2. Land Pollution 3. Trash 4. B3	Lectures, questions and answers, and discussions	330min (0.375 ECTS) Consist of: • *Lecture:180 minutes* • *Q&A: 30 minutes* • *Discussion : 30 minutes* • *Presentation : 30 minutes* *Individual tasks: 60 minutes/day (16 weeks)*	a. Students listen to the lecturer's explanation and answer the lecturer's questions, as well as discuss b. Discussion of the results of the previous week's group assignments	Completeness and the truth explanation as well accuracy understanding	5
16	**Final Examination**	**Meeting Materials 1-15**	**Written test**	**330 minutes of processing time or the**	**Students working on UAS questions**	**Completeness and the truth**	**20**

		(resume material)		**equivalent of 0.25 ECTS**		**explanation as well collection time**	
8.Reference List:		1. Meffe, G. K and C. Ronald Carroll. 1994. Principles of Conservation Biology. Sinauer Associates, Inc. Sunderland Publishers, 2. Primack, RB 1993. Essentials of conservation Biology. Sinauer Associates, Inc. Sunderlan, Massachusetts. USA Sherwood, Lauralee.					