



**Kampus
Merdeka**
INDONESIA JAYA

FAKULTAS
PERTANIAN

COURSE PORTFOLIO

Soil and Water Conservation

Subject Code

BACHELOR DEGREE PROGRAM
AGROTECHNOLOGY
FACULTY OF AGRICULTURE

**UNIVERSITAS PEMBANGUNAN NASIONAL
"VETERAN" JAWA TIMUR**

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MODUL HANDBOOK
<<MATA KULIAH>>
BACHELOR DEGREE PROGRAM OF AGROTECHNOLOGY
Universitas Pembangunan Nasional "Veteran" Jawa Timur
Nomor Pengesahan: xxx – xxx - xxxx

Process	Person in Charge			Date
	Name	Position	Signature	
Review and Control				
Approval				
Determination				

MODULE HANDBOOK
<<MATA KULIAH>>

Module name	Agroforestry	
Module level	Undergraduate	
Code	PG191117	
Course (if applicable)	Soil and Water Conservation	
Semester	5 th Semester (Gasal)	
Person Responsible for the Module		
Lecturer	Dr. Ir. Bakti Wisnu Widjajani, MP. Ir. Purwadi, MP. Fitri Wijayanti, SP., MP.	
Language	Bahasa Indonesia and English	
Relation to Curriculum	Undergraduate degree program, mandatory, 5 th Semester	
Type of Teaching, Contact Hours	Lectures, +- 50-60 students	
Work load	Kuliah tatap muka : 2 x 50 = 100 menit per minggu Lectures : 2 x 50 = 100 minutes per week Tugas : 1 x 50 = 50 menit per minggu Assignments : 1 x 50 = 50 minutes per week Studi kasus : 1 x 50 = 50 menit per minggu Case study : 1 x 50 = 50 minutes per minggu Praktikum : 1 x 170 = 170 menit per minggu Practice : 1 x 170 = 170 minutes per minggu	
Credit point	2 credits point (SKS)	
Requirements according to the examination regulations	A Students must have attended at least 80% of the lectures to sit in the exams	
Mandatory prerequisites	Elective Course	
Learning outcomes and their corresponding plos	CLO 1: Able to explain the concept and principle of soils and water conservation which refers to sustainable agriculture principles, and is based on the local wisdom	PLO-05

	<p>CLO 2: Capable Analyze factors causing erosion and type of erosion</p> <p>CLO 3: Able to calculate and estimated erosion in an area</p> <p>CLO -4: Able to describe and analyze various types of conservation technology, both technical and vegetation</p> <p>CLO-5: Able to plan conservation actions according to regional conditions and regional problems</p>	<p>PLO-07</p> <p>PLO-07</p> <p>PLO-09</p> <p>PLO-11</p>
<p>Content</p>	<p>A Soil and Water Conservation course is an educational program designed to provide students with a comprehensive understanding of the principles, practices, and techniques involved in the conservation of soil and water resources. The primary goal of a Soil and Water Conservation course is to educate students about the significance of protecting soil and water resources. Students learn to appreciate the crucial roles these resources play in sustaining life and ecosystems. The course aims to foster an understanding of how human activities impact these resources and how they can be managed and conserved for future generations.</p> <p>Students learn about the properties of soil, erosion processes, water management, and the importance of maintaining soil health through practices like contour farming, terracing, and cover cropping. Students are introduced to various techniques and tools used in soil and water conservation, such as soil erosion control practices, rainwater harvesting, sediment control structures, and the use of vegetative buffers. Soil and water conservation courses often delve into broader environmental science concepts, discussing the interconnectedness of soil and water conservation with broader environmental issues, climate change, and biodiversity. Students explore land use planning, zoning, and the integration of conservation practices into urban and rural development to minimize environmental impact. The course emphasizes sustainability principles, focusing on how responsible land and water management can contribute to long-term sustainability and the protection of natural ecosystems.</p> <p>Fieldwork and Practical Experience: Many Soil and Water Conservation courses include hands-on fieldwork where students apply their knowledge to real-world situations, helping them gain practical experience in soil and water management practices.</p> <p>Research and Case Studies: Students often engage in research projects or study case examples of successful soil and water conservation efforts worldwide. These studies provide insights into different approaches and their outcomes.</p>	
<p>Study and examination requirements and forms of examination</p>	<ul style="list-style-type: none"> • In-class exercises • Assignment 1, 2, 3 (Discussion, Group Learning Discussion, Individual Learning, Practice) • Mid-term examination • Final examination (Project base learning evaluations) 	


Media employed	LC, Whiteboard, website (E-Learning), zoom
Reading list	<ol style="list-style-type: none"> 1. Toward Integrated Natural Resource Management in Forest margins of the Humid Tropics: local action and global concerns ICRAF, 2001, 2003 2. An Introduction to Agroforestry P.K. R. Nair, 1993 3. Agroforest khas Indonesia H.D. Foresta, A. Kusworo, G. Michon dan W.A. Djatmiko, 2000 4. Tree-Crop Interactions: A Physiological Approach Chin K. Ong and Peter Huxley 5. Agroforestry for Soil Conservation A. Young, 1990

1. Programme Learning Outcome

No	Code	Learning Outcomes
1	PLO-1	Commit to the ethical, moral, and character values of defending the country as a professional in agriculture
2	PLO-2	Able to think critically and analytically, solve problems, be responsible for work independently, and make appropriate decisions based on information that can be accounted
3	PLO-3	Able to maintain and develop collaborative networks with mentors, colleagues, both inside and outside their respective workplace
4	PLO-4	Able to apply the knowledge of plant Science, the basic concepts of plant production, land resources and soil science, and integrated concept of plant protection against of pests and diseases
5	PLO-5	Able to apply the principles of agricultural technology to solve agricultural problems
6	PLO-6	Able to analyze, plan and implement lowland agricultural systems referring to the principles of sustainable agriculture, both modern and local wisdom, effectively and productively
7	PLO-7	Able to study the implementation of sustainable agricultural systems that pay attention to and apply scientific principles, procedures and ethics in order to produce solutions, ideas and designs based on the results of information and data analysis
8	PLO-8	Able to apply the knowledge of plant propagation technology, and crop management in accordance with the agro-climate zone
9	PLO-9	Able to apply knowledge of identifying, formulating, analyzing, planning and applying land resource management
10	PLO-10	Able to apply knowledge to identify, diagnose, analyze, plan and apply integrated pest and plant disease control
11	PLO-11	Able to manage lowland agricultural systems and related environmental issues

12	PLO-12	Able to communicate orally and in writing, work in a team, interact with other people from different backgrounds, skilled in organizing and leading in various situations.
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LESSON PLAN : COURSE SUBJECT: Soils and Water Conservation

	UNIVERSITY OF PEMBANGUNAN NASIONAL “VETERAN” JAWA TIMUR AGRICULTURE FACULTY AGROTECHNOLOGY PRODI: S1					
SUBJECT COURSE	Code	Classes of Courses	Weight (credit unit)		SEMESTER	Tgl Penyusunan
Soils and Water Conservation		Soil Sciences	3	1	V (Five)	
AUTHORIZATION	Lesson Plan Maker		COORDINATOR of COURSE		Head of The Study Programme	
			Dr. Ir. Bakti Wisnu Widjajani, MP		Dr.Ir. Bakti Wisnu Widjayani, MP	
Learning Outcome (LO)	<p>Determination of the Weight of Learning Output on This Course</p> <p>PLO-05: Able to apply the principles of agricultural technology to solve agricultural problems PLO-07: able to study the implementation of sustainable agriculture systems Base on scientific rules aplication, procedures and ethics order to produce solutions, ideas, and designs based on the results of information and data analysis PLO-09: Capable of identifying, formulating, analyzing, and solving land resources problems PLO-11: Able to manage lowland agricultural systems and related environmental issues</p> <p>Learning outcome: Capable of applying the concept of agroforestry to developing marginal land to become productive land</p> <p>Course Learning Outcome</p> <p>CLO 1: Able to explain the concept and principle of soils and water conservation which refers to sustainable agriculture principles, and is based on the local wisdom CLO 2: Capable Analyze factors causing erosion and type of erosion CLO 3: Able to calculate and estimated erosion in an area CLO 4: Able to describe and analyze various types of conservation technology, both technical and vegetation CLO 5: Able to plan conservation actions according to regional conditions and regional problems</p>					

		PLO-01 CPL-01	PLO-02 CPL-02	PLO-03 CPL-03	PLO-03 CPL-04	PLO-05 CPL-05	PLO-06 CPL-06	PLO-07 CPL-07	PLO-08 CPL-08	PLO-09 CPL-09	PLO-10 CPL-10	PLO-11 CPL-11	PLO-12 CPL 12
	CPMK 1/CLO1					v							
	CPMK 2/CLO2					v							
	CPMK 3/CLO 3									v			
	CPMK 4/CLO 4									v			
	CPMK 5/CLO 5											v	

Short Description of the Course The primary goal of a Soil and Water Conservation course is to educate students about the significance of protecting soil and water resources. Students learn to appreciate the crucial roles these resources play in sustaining life and ecosystems. The course aims to foster an understanding of how human activities impact these resources and how they can be managed and conserved for future generations.

Main subject This course consists of : Definition of Soils and water conservation and the importance, Type of erosion, erosion mechanism and Affecting factors, how to calculate and estimate erosion in an area, analyze problem in an area or landscape, type of conservation technology (Ohys and vegetation), How to apply and plan conservation technology in an area or landscape

Literature

Mandatory:

No.	Judul	Penulis
1.	Toward Integrated Natural Resource Management in Forest margins of the Humid Tropics: local action and global concerns	ICRAF, 2001, 2003
2.	An Introduction to Agroforestry	P.K. R. Nair, 1993
3.	Agroforest khas Indonesia	H.D. Foresta, A. Kusworo, G. Michon dan W.A. Djatmiko, 2000
4.	Tree-Crop Interactions: A Physiological Approach	Chin K. Ong and Peter Huxley
5.	Agroforestry for Soil Conservation	A. Young, 1990
6.	Agroforestry for Soil Fertility	A. Young, 1990
7.	WaNuLCAS, Model Simulasi untuk Sistem Agroforestri	K. Hairiah, Widiyanto, S.R. Utami dan B. Lusiana, 2002
8.	Dll.	

Optional :

	Article/journal related with the topics of Soil and Water Conservastion						
Media Pembelajaran	Software :			Hardware :			
				LCD Projector & PC			
Team Teaching							
The requirement lesson							
Weeks -	Final abilities at each stage of lesson learning (Sub-CP-MK)	Evaluation		Learning Model, Learning method, and student assignment [Estimated time]		Learning material [Literature]	Weight evaluatio (%)
		Indicator of Evaluation	Criteria & assessment form	Daring (online)	Daring(online)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	The students are able to : 1. Describes : Land problems and land damage, soil and air conservation, soil maintenance.	The ability to describe correctly, accurately, and precisely The definition of Land problems and land damage, soil and air conservation, soil maintenance.	Test Assess the student's ability in describing accurately and correctly related with: the Soil and Water Conservation concept, include land problems in various area	Show the film and video:	The lesson explains: The Lesson plan Learning contract semester Describing the definition of the Soil and Water Conservation concept, include land problems in various area Workhome discussion on 1 semester Journal review / journal summary	An Introduction to Soil and Water Conservatio n	5%

				TM = 2 X 2 X 50 minute BT = 2 X 2 X 60 minute BM = 2 X 2 X 60 minute			
2 & 3	The students were able to describe The erosion process that causes soil damage	<p>The ability to describe the process of erosion, various type of erosion, the factors caused erosion</p> <p>The practices report contains (a) the result of field observation (b) discussion of the observation results The report must be arranged properly, coherent, and clearly according to the practical guidelines</p>	<p>Non test</p> <p>1. Assignment collection The student's ability to deliver the results of their discussion related to the erosion process in an official report</p> <p>2. Practical report (Group) Practises report and diagram book of component of erosion process</p>	Internet (Browsing, description)	presentation/video / learning material about the process of erosion, various type of erosion, the factors caused erosion Forming a group discussion for all students Make a summary of the learning materials and the article	An Introduction to Soil and Water Conservation	5%
				<p>Courses</p> <p>TM = 2x 50 BT = 2 X 60. BM = 2 X 60</p>	<p>Practices</p> <p>2 X 1 X 100 3 X 2 X 1 X 70</p>		
4	The students were able to analyze and explain about Students can explain the ease of soil or the sensitivity of soil to erosion	<p>The ability to calculate and analyze the ease of soil or the sensitivity of soil to erosion</p> <p>The practices report contains (a) the result of field observation (b) discussion of the observation results</p>	<p>Non test</p> <p>Practises Report (Group)</p> <p>1. Students' ability in delivering their observations, analyze the sensitivity of soils and the factors that influenced</p> <p>2. Practises report to calculate erodibility of soils</p>		<p>Presentation/video o/ learning material about the types of agroforestry systems Forming a group discussion for all students</p> <p>Make a summary of the learning materials and the article</p>	Introduction to Soil and Water Conservation	10 %

					Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X60	Practices 3 X 2 X 1 X 100 3 X 2 X 1 X 70		
5.	The students were able to explain and analyze the the role of rain on erosion	The student's ability to explain and analyze: the role of rain on erosion and student able to calculate erosivity	Non test Individual Assignment (Literature review) The students take one data sample from BMKG in an area and try to calculate the erosivity in an area	Internet E-learning: Reading the module, literature, and the lecture learning materials	1.Presentation/vid eo/ learning material about the tree-soil-crop interaction and their effect on light, water, and nutrient 2.Forming a group discussion for all students 3.Making a summary of the learning materials and the article	Erosivity in an area, sample Data from BMKG	10 %	
					Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X60	Practices 3 X 2 X 1 X 100 3 X 2 X 1 X 70		

6 & 7	The students were able to explain Students can explain the function of plants in relation to erosion and soil and water conservation strategies	The students ability to explain, summarize, and review about How plants influence the erosion process This activity conducted by reviewing some journal with related issue	Non test Individual Assignment The assignment (summary, review journal) must be related with these topics : The influence of plant and land management on the occurrence of erosion	Internet E-Learning : Reading the module, literature, and the lecture learning materials	1.Presentation/vid eo/ learning material about The influence of plant and land management on the occurrence of erosion 2.Forming a group discussion for all students 3.Making a summary of the learning materials and the article	Plant and Land management influence the process og erosion	5%
				Course TM = 2 x 50 BT = 60 BM =60			
8	MIDDLE EVALUATION SEMESTER						
9	The students were able to explain and assess land capabilities in accordance with land use requirements for sustainable land	The ability to summarize and write about how to assess land capabilities to develop sustainable land or environmental.	Non test Individual assignment: Characterizing and Analyzing the Land Capabilities	Internet E-learning : Reading the module, literature, and the lecture learning materials	Presentation/video / learning material, About land capabilities in accordance with land use requirements for sustainable land	Land Capabilities	

				TM = 2 X 50 minutes BT = 60 minutes BM = 60 minutes			
10	The students were able to explain and practice mechanical erosion control.	The student's ability to (a) explain about the mechanical technology conservation (b) describe the various type of physic technology conservation (c) able to consider the conservation technology used	Non test Group assignment: Presentation and group discussion. The presentation must be present clearly, fluently, and comprehensively in understanding the learning materials (closed and opened nutrient cycle)	Internet E-Learning : Reading the module, literature, and the lecture learning materials	Presentation/Video / learning material, about the various type physic/mechanical technology conservation	Physic technology conservation	
				Course Practices TM = 2 x2x 50 1 X 100 BT =2 X 60. 1 X 70 BM = 2 X60			
11	Students can explain and practice Soil and Water Conservation using biological methods (vegetation)	The student's ability to explain about technonlogy conseravatio using Biological Methods (vegetation)	Non test Group assignment (a) Presentation and group discussion. The presentation must be present clearly, fluently, and comprehensive in understanding the learning materials (b) Journal resume	Internet E-Learning : Reading the module, literature, and the lecture learning materials	Presentation/Video / learning material, Tree domestication	Biological Technology Conservation	

				Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X 60	Practices 2 X 2 X 1 X 100 2 X 2 X 1 X 70	
12 & 13	The students were able to explain and practice how to estimate erosion.	The student's ability to calculate and estimate actual erosion	Non test Group assignment 1. Presentation and group discussion. The presentation must be present clearly, fluently, and comprehensively in understanding the learning materials erosion cases in different land use and elevation 2. Journal resume	Internet E-Learning : Reading the module, literature, and the lecture learning materials	Presentation/video / learning material, Agroforestry function at global and landscape scale	USLE approach
				Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X60	Practices 1 X 100 1 X 70	
14	Students can describe the importance of soil and water conservation for land management as well as environmental and agricultural sustainability	The student's ability to design land management plans using conservation principles The students must read some journals related to the topics and resume the article	Non test Group assignment 1. Presentation and group discussion. The presentation must be presented clearly, fluently, and comprehensively in understanding the learning materials (land management using conservation principles)	Internet E-Learning : Reading the module, literature, and the lecture learning materials	Presentation/Vide o/ learning material, the principle of management and development of land using conservation Principal Project Base Learning: Designing the	Land management using Conservation Principles

			2. Journal resume		land management using technology conservation		
				Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X60	Practices 1 X 100 1 X 70		
15	Students can identify environmental problems and diagnose the causes of problems, then describe how to overcome problems based on knowledge of soil and water conservation	The student's ability to identify and analyze environmental problems, make solution and also desing a landuse management The students must read some journals related to the topics and resume the article and find an area as the project take place	Non test Group assignment 1. Presentation and group discussion. The presentation must be present clearly, fluently, and comprehensively in understanding the learning materials and tehs result of the project	Internet E-Learning : Reading the module, literature, and the lecture learning materials	Presentation/Vide o/ learning material, Present the result of the project	Design for land management using Conservation Principles	
				Course TM = 2 x2x 50 BT =2 X 60. BM = 2 X60	Practices 1 X 100 1 X 70		
16	FINAL SEMESTER EVALUATION - Present Project Result Evaluation of the learning outcome achievement						15%
Total							

Notes :

- The learning outcome of the graduates of the study programme (CPL-Prodi)** are the abilities of each study programme graduate through the learning processes which are the internalization of attitudes, knowledge, and skills that got through the learning processes
- The learning outcomes that are charged on the course** are several learning outcomes of the study programme (LO-STUDY PROGRAMME) which is taken for course development, and consisting of several aspects, i.e. attitude, general skill, special skills, and knowledge.
- The learning outcomes of the course (LO-C)** are the abilities that are specifically described from the learning outcomes that are charged into the course, and are specific to the learning material for the course.
- Sub learning outcomes (Sub-CPMK) of the course** are abilities that are specifically spelt out from the learning outcomes of the course (LO-C), it could be measured or observed, specific for the learning materials of the course, and it becomes the final abilities that are planned to achieve at the end of the learning session

5. **Indicator of ability assessment** of learning processes or learning outcomes of the students is a specific and measurable criterion that identifies the student's ability or student activity.
6. **Evaluation criteria** are measurements or benchmarks of the learning outcomes achievement based on the determined indicator. The criteria of the indicator were the manual for the reviewer in evaluating the learning outcomes achievement. Therefore, the evaluation will be consistent and unbiased. The criteria could be a quantitative or qualitative question
7. **Evaluation method** : Test and Non-test.
8. **Learning method** : Lecture, Discussion, Tutorial , Field Practices, Review and Literature Analysis , Class practices, study case presentation (group or individual)
9. **Learning method** : Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other similar methods.
10. **Learning material** are the details or descriptions of the study material that can be presented in several main and sub-topics.
11. **The weight of assessment of learning outcome** of the course achievement is determined from the difficulty level of the sub-learning outcomes (sub-LO), and total of the weight is 100%.
12. **TM**=Face to face, **PT**=Structured assignment, **BM**=self study

ASSESSMENT AND EVALUATION

	ASSESSMENT AND EVALUATION UNDERGRADUATE PROGRAMME, AGROTECHNOLOGY, AGRICULTURE FACULTY		AP&E
	AGROFORESTRY		
			Edition :
Code :	Credit Unit (Course/Practises : (2/1)	Class of Course : soil Science	Semester :
Authorization	Author of AP&E	Coordinator of CCS	Coordinator of Study Program
	Dr. Ir. Rosyda Priyadarshini, MP		Dr. Ir. Bakti W.W

Task/ Weeks	Sub CP-MK (2)	Bentuk Asesmen (Penilaian) (3)	Bobot(%) (4)
1	Able to explain the concept and principle of soils and water conservation which refers to sustainable agriculture principles, and is based on the local wisdom	Assignment 1: Test describing accurately and correctly related with: The concept of soil and water conservation, type of land that need conservation action, how important conservation principles should apply in land management	25%
2	Capable Analyze factors causing erosion and type of erosion	Assignment 2 Non test Presentation and group discussion about erosion process and the factor that influence the process	5%
3	Able to calculate and estimated erosion in an area	Assignment 3 The students take data from field observation and trying to calculate the actual erosion of the area and make conclusion about the result	25%
4	Able to describe and analyze various types of conservation technology, both technical and vegetation	Assignment 4 Project Base Learning : Presentation and group discussion about the problem that student found on field and describe about the actual land management	20%
5	Able to plan conservation actions according to regional conditions and regional problems	Assignment 5 Project Base Learning: Student presented the result from field observation, problem that they found, analyze data, make solutiona and design for the better land management	25%

RUBRIC OF ORAL ANSWERED – ASSIGNMENT PRESENTATION

RUBRIC ARGUMEN

GRADE	SCORE	PERFORMANCE INDICATOR
<i>More Less</i>	<41	<i>The argument</i> • <i>does not make sense and</i> • <i>there is no logical relationship</i>
<i>Less</i>	41–55	<i>The argument is</i> - <i>quite logical, but</i> - <i>it doesn't make sense</i>
<i>Enough</i>	56– 70	<i>The argument:</i> <i>Logical argument,</i> <i>Logical argument,</i> <i>reasonable, but</i> <i>less innovative</i>
<i>Good</i>	71- 85	<i>rgument:</i> <i>Logical argument,</i> <i>reasonable, and</i> <i>innovative</i>
<i>Very Good (Excellent)</i>		<i>The argument:</i> <i>Logical argument,</i> • <i>innovative and</i> <i>can be easily implemented in the real world</i>

1 = *very bad / very non-constructive*

6 = *very good / very constructive*

6.3 ANSWER RUBRIC WRITING AN ARTICLE 7

Current Event Article Summary Grading Rubric

CATEGORY	4 - Above Standards	3 - Meets Standards	2 - Approaching Standards	1 - Below Standards
Introduction	The introduction has a strong hook or attention. This could be a strong concept sentence, a relevant quotation, statistic, or question addressed to the reader.	The introduction has a hook or attention grabber. Includes a good concept sentence and/or interesting quote.	The author has a weak introductory paragraph, the connection to the topic is not clear. Paragraph includes a weak concept sentence or quote.	The introductory paragraph is not interesting AND is not relevant to the topic. No concept sentence or quote.
Quotes and Concept Words	All of the examples are specific, relevant and full explanations are given.	Most of the evidence and examples are specific, relevant and explanations are given.	Some of the pieces of evidence and examples are relevant and include an explanation.	Evidence and examples are NOT relevant AND/OR most are not explained.
5 W's	All supportive facts and statistics are reported accurately. Article is fully explained and summarized in own words.	Almost all supportive facts and statistics are reported accurately. Article is mostly explained and summarized in own words.	Some supportive facts and statistics are reported accurately. Weak explanation and summary that is partially plagiarized.	Most supportive facts and statistics were inaccurately reported. Article is poorly explained and summary is mostly plagiarized.
Grammar & Spelling	Author makes no errors in grammar, sentence structure, or spelling that distract the reader from the content.	Author makes 1-3 errors in grammar, sentence structure, or spelling that distract the reader from the content.	Author makes 4-6 errors in grammar, sentence structure, or spelling that distract the reader from the content.	Author makes more than 6 errors in grammar, sentence structure, or spelling that distract the reader from the content.
Conclusion	The conclusion is strong and leaves the reader solidly understanding the writer's response and personal reaction to the article.	The conclusion is good. Includes the author's response and personal reaction to the article.	Conclusion is weak or incomplete. Limited response and personal reaction to the article.	There is no conclusion - the paper just ends.
Proper Format and Organization	Article summary is typed, has a heading, title, and is submitted on time. Summary is organized into 4 or more paragraphs. A challenging newspaper article of sufficient length is attached.	Article summary is typed, has a heading, title, and is submitted on time. Summary is organized into 4 paragraphs. Acceptable newspaper article of sufficient length is attached.	Article summary is typed but submitted late. Incomplete heading and title. Summary has 3 or less paragraphs. Attached item is not a current event newspaper article and/or it is not a sufficient length.	Article summary is not typed. No heading. No article is attached. No title.

INDIKATOR PENCAPAIAN CPL PADA MK
INDICATOR OF PLO ACHIEVEMENT CHARGED TO THE COURSE

CPL yang dibebankan pada MK / PLO charge to the course	CPMK / Course Learning Outcome (CLO)	Minggu ke- / Week	Bentuk Assessment / Form of Assessment	Bobot / Load (%)
CPL-04/PLO-04	CPMK 1/CLO 1	Week-8	Mid Exam Question..	10
		Week-6	Taks 1	15
CPL-09/PLO-09	CPMK 2/CLO 2	Week-8	Mid Exam Question ..	5
		Week-6	Taks 1	10
CPL-09/PLO-09	CPMK 3/CLO 3	Week-8	Mid Exam Question ..	10
		Week-10	Taks 2	10
CPL-11/PLO-11	CPMK 4/CLO 4	Week-16	Final Exam Question..	5
		Week-14	Final taks	20
CPL-11/PLO-11	CPMK 5/CLO 5	Week-16	Final Exam Question..	25
				Total = 100%

No	Form of assessment	CPL 1	CPL 2	CPL 3	CPL 4	CPL 5	CPL 6	CPL 7	CPL 8	CPL 9	CPL 10	CPL 11	CPL 12	Total
1	Taks 1					0,25								0,25
2	Mid Exam					0,05								0,05
3	Taks 2									0,20				0,20
4	Final Taks									0,25		0,10		0,35
5	Final Exam											0,15		0,15
						0,30				0,45		0,25		1,00

TUGAS KELOMPOK

MATA KULIAH KONSERVASI TANAH DAN AIR

1. Menyusun paper/makalah terkait dengan permasalahan yang sedang dihadapi oleh bangsa Indonesia dengan **tema/topik/pokok bahasan yang telah ditentukan** (tiap kelompok tidak boleh sama).
2. Tugas disusun dalam format *ms.word*, *Time New Roman* 12 spasi 1,5 (**minimal 12 halaman**)
3. **Membuat *power point (PPT)* dari paper tersebut diatas minimal 12 slide (untuk dipresentasikan dikelas).**
4. **Sumber bahan materi paper dari : Jurnal dll.**

FORMAT PENULISAN PAPER

BAB I PENDAHULUAN

1.1. LATAR BELAKANG

1.2. IDENTIFIKASI DAN RUMUSAN MASALAH

1.3. TUJUAN

BAB II KERANGKA KONSEP/TINJAUAN PUSTAKA

BAB III PEMBAHASAN (Solusi Permasalahan)

BABA IV PENUTUP

4.1.KESIMPULAN

4.2.REKOMENDASI/SARAN

BAB V. DAFTAR PUSTAKA

TEMA/TOPIK/POKOK BAHASAN :

1. Permasalahan dan tantangan konservasi tanah dan air di Indonesia
2. Problematika konservasi tanah dan air pada lahan kering dataran tinggi.
3. Problematika konservasi tanah dan air pada tanah yang terdegradasi.
4. Problematika konservasi tanah dan air berbasis masyarakat sekitar hutan
5. Penggunaan Teknologi Konservasi Tanah dan Air di Indonesia
6. Beberapa Model Pendugaan erosi: Prinsip, Keunggulan dan Keterbatasannya.
7. Beberapa Metode Konservasi Tanah dan Air : keunggulan dan kekurangannya.

KET :

1. Jumlah kelompok tiap kelas maksimal 7 kelompok.
2. Tema/Topik/Pokok Bahasan tiap kelompok tidak boleh sama.
3. Sumber materi Pustaka/materi dari jurnal, buku teks, atau sumber yang lain.

4. Paper dikumpulkan tanggal **paling lambat 2 (dua) hari** sebelum jadwal Presentasi, by email ke: pur.upnjatim@gmail.com dengan subject : KTA_KLP1-7 (**jika melebihi batas waktu yang telah ditentukan maka akan dikenakan *penalty* berupa pengurangan nilai**).
5. Penilaian didasarkan pada 2 aspek :
 - a. ***paper content* (format, permasalahan, kedalaman analisis, dan ketepatan pemecahan masalah);**
 - b. **Diskusi (baik sebagai penyaji, penyanggah, dan penengah)**

FORMAT DISKUSI

1. Penyajian & Diskusi paper dibagi menjadi 3 (tiga) Sesi yaitu
 - Sesi I** : penyajian paper oleh Kelompok Penyaji dengan alokasi waktu maksimal 20 menit,
 - Sesi II**: (Tanya jawab) dengan 5 (lima) pertanyaan dari **Kelompok Penyanggah (masing-masing kelompok penyangga menyiapkan 1 pertanyaan)**.
Jika pertanyaan dari **Kelompok Penyanggah kurang dari 5 (lima)** maka alokasi pertanyaan dapat diberikan ke **Kelompok Penengah**, dan dilanjutkan **Sesi III** : Kesimpulan singkat hasil diskusi **oleh moderator**.
2. Setelah diskusi, Dosen memberikan *review* terkait materi dan jalannya diskusi.
3. Jadwal diskusi sebagai berikut:

Minggu ke	Kelompok Penyaji	Kelompok Penyanggah	Kelompok Penengah	Moderator (1 org dari kelompok)
I	Perkuliahan (Pendahuluan)			
II	Perkuliahan			
III	1	2, 3, 4,5,6	7	7
IV	Perkuliahan			
V	2	3, 4,5, 6,7	1	1
VI	Perkuliahan			
VII	3	1,4, 5, 6,7	2	2
UTS				
VIII	Perkuliahan			
IX	4	1,2, 5, 6,7	3	3
X	Perkuliahan			
XI	5	1,2,3,6,7	4	4
XII	Perkuliahan			
XIII	6	1, 2, 3,4,7	5	5
XIV	7	1, 2, 3,4,5	6	6
UAS				

**FORMAT PENILAIAN TUGAS
MATA KULIAH KTA**

KELOMPOK : **NAMA:** **NPM:**

NO.	KRITERIA PENILAIAN	RENTANG NILAI	NILAI AKHIR (max 100)
<i>PAPER CONTENT</i>			
1.	Latar belakang penetapan & identifikasi Permasalahan	0 - 10	
2.	Kedalaman analisis, dan ketepatan pemecahan masalah	0 - 30	
3.	Format penulisan	0 - 10	
Jumlah max. 50 (a)			
<i>DISCUSSION/DEBATE</i>			
1.	Sebagai Penyaji (<i>performance, ketepatan argument, etc</i>)	0 - 30	
2.	Sebagai Penyanggah (keaktifan, ketepatan argument, etc)	0 - 10	
3.	Sebagai Penengah (keaktifan, ketepatan argument, etc)	0 - 10	
Jumlah max. 50 (b)			
Jumlah Nilai Akhir max. 100 (a+b)			

Surabaya, Agustus 2023

Ttd

Ir. Purwadi, MP.

Dr.Ir. Bakti Wisnu, Wijayani, MP.

Fitri Wijayani, SP, MP.

.....

Example of Student Assessment Result

KONSERVASI TANAH DAN AIR
“PROBLEMATIKA KONSERVASI TANAH DAN AIR PADA LAHAN
KERING DATARAN TINGGI”



DISUSUN OLEH :
KELOMPOK 2

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PROGRAM STUDI AGROTEKNOLOGI
FAKULTAS PERTANIAN
UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN”
JAWA TIMUR
SURABAYA
2023

BAB III

PEMBAHASAN

3.1 Perubahan Iklim Dan Konservasi Tanah-Air Di Dataran Tinggi

Perubahan iklim merupakan tantangan global yang mendalam dan kompleks yang mempengaruhi berbagai aspek kehidupan di seluruh dunia. Salah satu dampak yang signifikan dari perubahan iklim adalah pada konservasi tanah dan air di dataran tinggi. Dataran tinggi adalah wilayah dengan ketinggian yang signifikan di atas permukaan laut, seringkali dengan karakteristik iklim dan tanah yang unik. Perubahan iklim, seperti peningkatan suhu global, pola hujan yang berubah, dan intensifikasi kekeringan, telah mengubah dinamika alam di dataran tinggi.

Konservasi tanah dan air di dataran tinggi menjadi semakin penting dalam konteks perubahan iklim ini. Kondisi lingkungan yang berubah mempengaruhi ketersediaan air, kerapatan vegetasi, dan struktur tanah. Tanah yang erodibel, kekeringan, longsor, dan risiko bencana alam lainnya semakin memburuk. Oleh karena itu, upaya konservasi tanah dan air yang efektif dan terarah sangat diperlukan untuk menjaga keberlanjutan ekosistem dataran tinggi dan menyediakan sumber daya air yang memadai bagi manusia dan lingkungan.

Upaya yang bisa kita lakukan untuk meningkatkan perlindungan dan keberlanjutan sumber daya tanah dan air yaitu , menerapkan rotasi tanaman untuk mempertahankan kesuburan tanah dan mengurangi erosi, memanfaatkan teknik pengairan yang efisien seperti irigasi tetes dan pengelolaan air, mengeksekusi program reforestasi untuk meningkatkan penyerapan air dan mencegah erosi tanah, melakukan penanaman pohon di sekitar sungai dan danau untuk memperkuat pinggir air dan menjaga keberlanjutan ekosistem air dan menggunakan sistem drainase yang baik di area perkotaan untuk mengatasi banjir dan meminimalkan erosi.

3.2 Erosi Lahan Kering pada Dataran Tinggi

Erosi tanah telah menjadi ancaman besar terhadap kualitas tanah sejak awal pertanian. Penebangan dan pembakaran serta pengolahan tanah sebelum atau