



UNIVERSITAS PENDIDIKAN INDONESIA

SEMESTER LEARNING PLAN (RPS)

COURSE IDENTITY

Course Name	Course Code	Credits	Workload	Course Group	Semester	Prerequisite Course	Publication Date
REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS FOR VILLAGE STUDIES	SA541	2	90	Core Competency Course of Study Program	2		2025-09-09 11:26:56

Prepared by Lecturer	Reviewed by Study Program Academic Quality Team	Approved by Head of Study Program
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COURSE DESCRIPTION AND GRADUATE LEARNING OUTCOMES

Course Description	This course discusses the concepts, methods, and applications of Remote Sensing and Geographic Information Systems (GIS) in the context of village studies and rural development. The primary focus is the utilization of remote sensing technology to collect, analyze, and visualize spatial data in support of sustainable village planning and development.		
Graduate Learning Outcomes	1	Demonstrate scientific, educational, and religious attitudes and behaviors that contribute to improving the quality of life in society, the nation, and the state, in accordance with academic norms and ethics.	
	2	Collaborate and demonstrate social sensitivity and concern for society and the environment.	
	3	Master the theoretical concepts of cartography and thematic mapping.	
	4	Analyze regional characteristics and regionalization based on geographical principles and approaches.	
	5	Apply logical, critical, systematic, and innovative thinking in the context of developing or implementing science and technology with due regard to humanistic values relevant to their field of expertise.	
	6	Take responsibility for the achievement of group work results and supervise and evaluate the completion of tasks assigned to workers under their responsibility.	
	7	Design, develop, produce, utilize, control, and evaluate spatial information analysis models and theories based on science and technology.	
	8	Plan, interpret, analyze, classify, extract, validate, and visualize data and information derived from remote sensing using science and technology.	
Course Learning Outcomes (CPMK)	1	Understand the basic concepts of remote sensing and GIS in village studies.	
	2	Master techniques for processing and analyzing remote sensing and GIS data.	
	3	Apply remote sensing and GIS technology in spatial village studies.	
	4	Analyze and formulate GIS-based recommendations for village development.	
Sub-CPMK	1	CPMK - 1	Explain the basic principles of remote sensing in rural environmental analysis.
	2	CPMK - 1	Understand the types of spatial data used in village studies.
	3	CPMK - 2	Conduct spatial data analysis using GIS software.
	4	CPMK - 2	Produce thematic maps based on remote sensing and GIS data.
	5	CPMK - 3	Integrate spatial data into village development planning.
	6	CPMK - 3	Use remote sensing data to analyze the natural resource potential of villages.
	7	CPMK - 4	Analyze GIS data interpretation results to support decision-making.

	8	CPMK - 4	Formulate data-driven spatial policy recommendations for sustainable village development.
Course Materials	1	Concepts and Issues in Village Development	
	2	Spatial Data Analysis in Village Studies	
	3	Land Use Analysis in Village Areas	
	4	Utilization of GIS for Village Planning	
	5	Thematic Map Compilation for Village Studies	
	6	Implementation of GIS in Village Development Policy	
	7	GIS-Based Natural Resource Management	
	8	Land Cover Change Using Remote Sensing Data	
	9	Disaster Risk Assessment in Village Areas Using GIS	
	10	Village Infrastructure Planning with GIS	
	11	GIS-Based Socioeconomic Analysis of Villages	
	12	Concepts and Issues in Village Development	
	13	Spatial Modeling in Village Studies	
	14	Final Project	
	15	Introductory Lecture	
Learning Outcomes Demonstrable at the End of the Course *)	Mid-Term Examination (UTS), Final Examination (UAS), and Assignments		
Learning Strategy		Case Method	
	✓	Team based Project	
		Others	
Learning Steps	Students will study how satellite imagery data and GIS tools can be used to analyze natural resource potential, monitor land use changes, and formulate data-driven policies for village development. In addition, this course emphasizes practical skills in the use of GIS software and digital image analysis.		
References	1	1. Lillesand, T. M., Kiefer, R. W., & Chipman, J. W. (2015). Remote Sensing and Image Interpretation. Wiley.	
	2	2. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). Geographic Information Systems and Science. Wiley.	

3	3. Bappenas. (2020). Panduan Pembangunan Desa Berbasis Geospasial. Kementerian PPN/Bappenas.
4	4. Jurnal dan sumber referensi terbaru terkait penginderaan jauh dan SIG untuk kajian desa.

LEARNING PLAN

Week	Sub-CPMK	Sub-CPMK Achievement Indicators Demonstrable by Students	Course Materials	Assessment		Learning Methode		Duration (hrs)	Ref. No.	Access Time
				Assessment Form (test/non-test)	Assessment Weight (%)	Synchronous (face-to-face and online)	Asynchronous (individual and group assignments)			
1	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding the context of the course to be conducted.	Introductory Lecture	Participatory	1	Learning Form: Face-to-face/Online Lecture	Individual Assignment: reading literature related to village development	1.5	1	01-02-2025 23:14
2	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding the basic principles of RS and GIS in rural analysis.	Concepts and Issues in Village Development	Observation	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	1	02-02-2025 23:16
3	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding the concept of spatial data analysis and spatial modeling for village studies.	Spatial Data Analysis in Village Studies	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	3,4	16-02-2025 04:32
4	Explain the basic principles of remote sensing in rural environmental analysis.	Integrating RS and GIS for village studies.	Utilization of GIS for Village Planning	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,3,4	16-02-2025 04:33

Week	Sub-CPMK	Sub-CPMK Achievement Indicators Demonstrable by Students	Course Materials	Assessment		Learning Methode		Duration (hrs)	Ref. No.	Access Time
				Assessment Form (test/non-test)	Assessment Weight (%)	Synchronous (face-to-face and online)	Asynchronous (individual and group assignments)			
5	Conducting spatial data analysis using GIS software.	Conducting land use projections in village areas.	Land Use Analysis in Village Areas	Performance	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,3	16-02-2025 04:34
6	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding the importance of GIS for village planning.	Utilization of GIS for Village Planning	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,4	16-02-2025 04:35
7	Explain the basic principles of remote sensing in rural environmental analysis.	Identifying land cover changes using remote sensing.	Land Cover Change Using Remote Sensing Data	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,4	09-02-2025 04:36
8	MID-TERM EXAMINATION (UTS)				20					16-02-2025 04:37
9	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding the role of GIS in natural resource management in villages.	GIS-Based Natural Resource Management	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,4	16-02-2025 04:38

Week	Sub-CPMK	Sub-CPMK Achievement Indicators Demonstrable by Students	Course Materials	Assessment		Learning Methode		Duration (hrs)	Ref. No.	Access Time
				Assessment Form (test/non-test)	Assessment Weight (%)	Synchronous (face-to-face and online)	Asynchronous (individual and group assignments)			
10	Explain the basic principles of remote sensing in rural environmental analysis.	Understanding disaster risk assessment in village areas using GIS.	Disaster Risk Assessment in Village Areas Using GIS	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	3,4	16-02-2025 04:38
11	Conducting spatial data analysis using GIS software.	Understanding infrastructure mapping for village studies.	Village Infrastructure Planning with GIS	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	1,3	16-02-2025 05:13
12	Conducting spatial data analysis using GIS software.	Conducting social and economic mapping of villages using GIS.	GIS-Based Socioeconomic Analysis of Villages	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,3,4	16-02-2025 05:14
13	Conducting spatial data analysis using GIS software.	Conducting thematic mapping for village studies.	Thematic Map Compilation for Village Studies	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,3,4	16-02-2025 05:15
14	Explain the basic principles of remote sensing in rural environmental analysis.	Conducting spatial modeling in village studies.	Spatial Modeling in Village Studies	Others	1	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	2,3,4	16-02-2025 05:16

Week	Sub-CPMK	Sub-CPMK Achievement Indicators Demonstrable by Students	Course Materials	Assessment		Learning Methode		Duration (hrs)	Ref. No.	Access Time
				Assessment Form (test/non-test)	Assessment Weight (%)	Synchronous (face-to-face and online)	Asynchronous (individual and group assignments)			
15	Integrating spatial data into village development planning.	Presenting the results of village study mapping.	Final Project	Performance	30	Learning Form: Face-to-face Lecture Learning Method: Project-based Learning	-	1.5	1,2,4	16-02-2025 05:16
16	FINAL EXAMINATION (UAS)				37					17-02-2025 05:17

STUDENT LEARNING TIME (WORKLOAD)

Data for Student Learning Workload Not Yet Available

COURSE LEARNING OUTCOME (CPMK) ASSESSMENT CRITERIA

Data for CPMK Assessment Criteria Not Yet Available

COLLABORATIVE TASK DESIGN

Data for Collaborative Task Details Not Yet Available