



UNIVERSITAS PENDIDIKAN INDONESIA

SEMESTER LEARNING PLAN (RPS)

COURSE INFORMATION

Course Name	Course Code	Credits	Workload	Course Group	Semester	Prerequisite Course	Date of Issue
REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS FOR POPULATION STUDIES	SA418	2	90	Elective Study Regional Course	2	Cartography, GIS	2025-09-09 11:26:56

Prepared by	Reviewed by	Approved by
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COURSE DESCRIPTION AND LEARNING OUTCOMES

Course Description	This course two an application of Remote Sensing (RS) and Geographic Information Systems (GIS) GIS geospheric topics. This implementation two provides students with the knowledge Geographic Information Systems (GIS) and skills inclu in ang the in asplay geospheric population data, particularly those related to population dynamics, in the form of tables, graphs, and web-based maps.		
Regional Learning Outcome Assigned in the Course	1	P4 - Capable of mastering the theoretical concepts of and Sensing, inclu in ang both remote sensing systems — active and passive —, the theoretical interpretation of visual and in agital imagery, and the application of remote sensing for geospheric information;	
	2	P5 - Capable of mastering the theoretical concepts of Geographic Information Systems, spatial database concepts, and spatial analyticing concepts;	
	3	KU1. Capable of applying logical, critical, systematic, and Geographic Information Systems (GIS) innovative thinking in the context of developing or implementing knowledge and technology that observes and applies humanistic values in accor Geographic Information Systems (GIS) with the relevant field of expertise;	
	4	KU4. capable of making well-informed decisions in thinking in the context of problem-solving in a specific in a field of expertise, based on the results of analyticals information data analysis;	
	5	KK 4 - Capable of planning, interpreting, analyzing, classifying, extracting, validating, Geographic Information Systems (GIS) and anin azing data Geographic Information Systems (GIS) and information from geographic information systems based on science and technology	
Course Learning Outcome (CPMK)	1	Understanding Geographic Information Systems (GIS) and describing and theories of theories Geographic Information Systems (GIS) and scope of remote sensing remote sensing systems Geographic Information Systems (GIS) — information systems geospheric population population analysis (P4, P5, KU1)	
	2	Understanding the types of population data (P4, P5, KU1)	
	3	Understanding the concepts and stages of applying remote sensing and geographic information systems remote sensinges for population analysis (KU1, KU4, KK4)	
Sub-CPMK	1	CPMK - 1	Theories and concepts of remote sensing and geographic information systems for population analysis
	2	CPMK - 1	Population data sources and issues related to population data analysis
	3	CPMK - 2	Types of population analysis
	4	CPMK - 2	Analysis of population in astribution and structure in a specific using
	5	CPMK - 3	Spatial mapping and analysis of population analysis
	6	CPMK - 3	Mapping of health sector data and crime data
	7	CPMK - 3	Group Group: GIS Applications for Population Developmentes
Course Materials	1	Capable of producing population information based on GIS	
	2	Analyzing population data sources and issues related to population data analysis	

	3	Population Census
	4	Analyzing population in atribution and structure in a specific using
	5	Mortality
	6	Population Dot Density Map and Population Density Census
	7	Birth Rate Map and Mortality Rate Map
	8	Health Sector Data Visualization
	9	Crime Data Visualization
	10	Midterm Examination, Final Examination
	11	Group Group: GIS Applications for Population Developmentes
Learning outcomes demonstrated at the end of the course *)	Students have and knowledge of population data Geographic Information Systems (GIS) data and dynamics. topics. students are also able to in asplay in asplay capable population data in the form of tables, graphs, calculation results, and web-based maps	
Learning Strategy		Case Method
	✓	Team based Group
		Others
Learning Stages	The material commences using presenting the course identity, objectives, Geographic Information Systems (GIS) or and targets of to be achieved, along with various student requirements inclu in ang the midterm examination, final examination, assignments, and practicum	
References	1	Ariani, Dwi, Rina, and Hartwo (2012). Population Pressure on Agricultural Land. Jurnal Bumi Indonesia, Volume 1 (3)
	2	Ruhimat, Mamat (2016). Population Geography. Yogyakarta,: Ombak
	3	Clarfor, John I (1981). Population Geography. New York : Pergamon Press.
	4	Bintarto, R (1983). Rural-Urban Interaction and Its Problems. Jakarta: Ghalia Indonesia
	5	Levina, Norman D (1975). Human Ecology. California : Duxbury Press.
	6	Daldjoeni, N (1998). Urban and Rural Geography. Bandung: Alumni.
	7	Jackson, W.A. Douglas (1985). The Shaping of Our World ; A Human and Cultural Geography. New York : John Wiley and Sons.
	8	Mantra, Ida Bagus (2013). General Demography. Yogyakarta,: Pustaka Pelajar.

LEARNING PLAN

Week -	Sub-CPMK	Learning Indicator	Course Material	Assessment		Learning Method		Duration (hours)	Reference	Access Time
				Assessment Methode (test/non-test)	Assessment Weighting (%)	Synchronous	Asynchronous			
1	Theories and concepts of remote sensing and geographic information systems geospheric population analysis	Students are able to understand the concepts and theories of producing population information based on remote sensing and geographic information systems	Capable producing population information based on GIS	Others	5	Delivery of course material	Students study independently based on provided references and population relevant learning resources	5	1,2,3	03-02-2025 07:00
2	Population data sources data issues related to population data analysis	Students are able to understand methods for analyzing population data analysis	Analyzing population data sources and issues related to population data analysis	Others	5	Delivery of course material	Students study independently based on provided references and population relevant learning resources	5	4,6	10-02-2025 07:00
3	Population data sources data issues related to population data analysis	Students are able to understand methods for analyzing issues related to population data sources	Analyzing population data sources and issues related to population data analysis	Others	5	Delivery of course material	Students study independently based on provided references and population relevant learning resources	5	6,7	17-02-2025 07:00
4	Types of population analysis	Students understand the types of data population data, including data obtained through population censuses	Population Census	Others	5	Delivery of course material	Students study independently based on provided references and population relevant learning resources	5	8,9	24-02-2025 07:00
5	Analysis of population in distribution and structure in a specific region	Students are able to analyze the spatial distribution of population data	Analyzing population Geographic Information Systems (GIS) in distribution and structure in a specific region	Others	5	Delivery of course material	Independent Assignment	2	1,2,3	03-03-2025 07:00

Week -	Sub-CPMK	Learning Indicator	Course Material	Assessment		Learning Method		Duration (hours)	Reference	Access Time
				Assessment Methode (test/non-test)	Assessment Weighting (%)	Synchronous	Asynchronous			
6	Analysis of population in distribution and structure in a specific region	Students are able to analyze the population structure in a of a specific region using	Analyzing population Geographic Information Systems (GIS) in distribution and structure in a specific region	Others	5	Delivery of course material	Students study independently based on provided references and population relevant learning resources	3	4,5,6	10-03-2025 07:00
7	Types of population analysis	Students understand the types of data analysis : data birth data and mortality data	Mortality	Others	5	Delivery of course material	Independent Assignment	5	7,8,9	17-03-2025 07:00
8	Midterm Examination				10					24-03-2025 07:00
9	Spatial mapping and analysis of population data analysis	Students are able to produce a Population Dot Density Map Census and Population Density Census	Population Dot Density Map and Population Density Census	Performance	5	Delivery of course material data and practicum	Practicum and report and practicum	5	6,7	14-04-2025 07:00
10	Spatial mapping and analysis of population data analysis	Students are able to produce a Birth Rate Map Geographic Information Systems (GIS) Birth Rate Mortality Rate Map	Birth Rate Map and Mortality Rate Map	Performance	5	Delivery of course material data and practicum	Practicum and report and practicum	5	8,9	21-04-2025 07:00
11	Mapping of health sector data and data crime data	Students are able to produce a Health Sector Data Visualization	a Data Sector Visualization	Others	5	Delivery of course material data and practicum	Practicum and report and practicum	5	1,2	28-04-2025 07:00
12	Mapping of health sector data and data crime data	Students are able to produce a Data Visualization	a Data Visualization	Others	5	Delivery of course material data and practicum	Practicum and report and practicum	10	3,4	05-05-2025 07:00

Week -	Sub-CPMK	Learning Indicator	Course Material	Assessment		Learning Method		Duration (hours)	Reference	Access Time
				Assessment Methode (test/non-test)	Assessment Weighting (%)	Synchronous	Asynchronous			
13	Group : GIS Applications for Population Development	Students are able to complete the Group : GIS Applications for Population Development	Group : GIS Applications for Population Development	Participatory	5	Delivery of course material and in ascussion	RS and GIS and Geographic Information Systems (GIS) Applications for Population Developmentes	10	5,6	12-05-2025 07:00
14	Group : GIS Applications for Population Development	Students are able to work on the Group : GIS RS and GIS Applications for Population Development	Group : GIS Applications for Population Development	Others	10	Delivery of course material	RS and GIS and Geographic Information Systems (GIS) Applications for Population Developmentes	10	7,8,9	19-05-2025 07:00
15	Group : GIS Applications for Population Development	Students are able to complete the Group : GIS RS and GIS Applications for Population Development	Group : GIS Applications for Population Development	Others	10	Delivery of course material	RS and GIS and Geographic Information Systems (GIS) Applications for Population Developmentes	3	3,5	26-05-2025 07:00
16	Final Examination				10					26-05-2025 07:00

STUDENT LEARNING TIME (WORKLOAD)

	ACTIVITIES	SYNCHRONOUS (Face-to-Face / Virtual Meeting)	ASYNCHRONOUS (Structured / Independent)	STUDENT LEARNING PREPARATION	TOTAL STUDENT LEARNING AND INSTRUCTION TIME
LEARNING	Lectures/Responses/Tutorials	8 x 100 minutes = 800 minutes	8 x 90 minutes = 720 minutes	8 x 20 minutes = 160 minutes	16(scale of 100) minutes (28.0 hours)
	Group-based learning	4 x 100 minutes = 400 minutes	4 x 120 minutes = 4(scale of 100) minutes	4 x 20 minutes = (scale of 100) minutes	960 minutes (16.0 hours)
	Discussion (case-based learning)	4 x 100 minutes = 400 minutes	4 x 120 minutes = 4(scale of 100) minutes	4 x 20 minutes = (scale of 100) minutes	960 minutes (16.0 hours)
	TOTAL				3600 minutes (60.0 hours)
ASSESSMENT		Continuous Assessment			
	Participation During Learning	16 x 30 minutes = 4(scale of 100) minutes	16 x 30 minutes = 4(scale of 100) minutes	-x-	960 minutes (16.0 hours)
	Group Completion	4 x 60 minutes = 240 minutes	4 x 60 minutes = 240 minutes	-x-	4(scale of 100) minutes (8.0 hours)
	Assignments	4 x 30 minutes = 120 minutes	4 x 30 minutes = 120 minutes	-x-	240 minutes (4.0 hours)
	Quizzes	-x-	-x-	-x-	0 minutes (0.0 hours)
	Formative				60 minutes (1.0 hours)
	Summative				60 minutes (1.0 hours)
	TOTAL				1800 minutes (30.0 hours)
TOTAL WORKLOAD					5400 Minutes (90 Hours)
TOTAL IDEAL HOURS					90 Hours
CREDITS					2
CONFORMITY WITH THE NUMBER OF CREDITS					APPROPRIATE

CPMK ASSESSMENT CRITERIA

No	CPMK	CPL					TAXONOMY	Weight	CPMK ACHIEVEMENT CRITERIA
		CPL-1	CPL-2	CPL-3	CPL-4	CPL-5			
1	Understanding Geographic Information Systems (GIS) and describing and theories of theories Geographic Information Systems (GIS) and scope of remote sensing remote sensing systems data — information systems geosphere population analysis (P4, P5, KU1)						5	15	70% of all students obtain a minimum score of 65 (scale of 100)
2	Understanding the types of population data (P4, P5, KU1)						4	20	70% of all students obtain a minimum score of 65 (scale of 100)
3	Understanding the concepts and stages of applying remote sensing and — information systems geosphere population analysis (KU1, KU4, KK4)						6	45	70% of all students obtain a minimum score of 65 (scale of 100)

COLLABORATIVE ASSIGNMENT DESIGN

ASSIGNMENT TITLE	Group : Remote Sensing and GIS Applications for Population Development
LEARNING METHOD	Team based Group
TIME	
ASSESSMENT WEIGHT	35
SUB-CPMK	Group : GIS Applications for Population Development

ASSIGNMENT DESCRIPTION	
Students are required to form groups and develop a Group : Remote Sensing and GIS Applications based on population study themes and topics.	
TASK COMPLETION STEPS	
Form groups of then members, then prepare a Scientific	
Article/Research Paper with the General Theme:	
GIS and Remote Sensing, Geographic Information Systems (GIS) Sensing Information Geographic Information Systems in a the Field of Population Developementes (e.g., : residential quality based on population censuses, density, quality slum settlement mapping, poverty index analysis, etc.)	
DETAILS OF EXPECTED OUTPUTS	
Group Output: : • Scientific • Article/Paper Maps • Research Poster A0 size ((portrait)	
INDICATORS, CRITERIA, AND ASSESSMENT WEIGHT	
IMPLEMENTATION SCHEDULE	
Note: The number of days in one semester is $16 \times 7 = 112$ days. The implementation schedule may be determined based on the day count	
Activities	Implementation Time
OTHERS	
Reference websites for data sources: https://earthexplorer.usgs.gov/ https://patriotism.air.indonesia.go.id/ BPS https://remotepixel.ca/	

REFERENCES

1. Ariani, Dwi, Rina, and Hartwo (2012). Population Pressure on Agricultural Land. Jurnal Bumi Indonesia, Volume 1 (3)
2. Ruhimat, Mamat (2016). Population Geography. Yogyakarta,: Ombak
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