



UNIVERSITAS PENDIDIKAN INDONESIA

SEMESTER LEARNING PLAN (RPS)

COURSE IDENTITY

Course Name	Course Code	Sks	Workload	Course Group	Semester	Prerequisite Course	Publication Date
REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS FOR TOURISM	SA535	2	90		2	MKKPS	2025-09-09 11:26:56

Prepared by	Reviewed by	Approved by
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COURSE DESCRIPTION AND GRADUATE LEARNING OUTCOMES

Course Description	RS and GIS for Tourism is a course that teaches the formulation of concepts and the management of tourism areas by utilizing Geographic Information Systems (GIS). Through a systematic approach, this course comprehensively considers various aspects, including tourism components, the socioeconomic and cultural dimensions of communities, and institutional aspects. Tourism, as a multisectoral, multidimensional, and multidisciplinary phenomenon, requires systematic, integrated, and holistic development and planning so as to generate greater benefits for communities, government, and the environment alike. Tourist attractions, as a critical component, represent substantial potential when their opportunities and constraints are carefully managed and examined. Through the medium of Remote Sensing and Geographic Information Systems, it is anticipated that destination development will be more comprehensive, accurate, and thorough. Upon completing this course, students are expected to understand the interconnection among various aspects of tourism, develop the components of a destination comprehensively so that tourists gain experience and learning, communities receive optimal benefits, and natural, cultural, and built environments remain sustainable, as well as to practice applying RS and GIS in destination development. Through this course, students are also developed in critical and creative thinking for tourism problem-solving.		
Graduate Learning Outcomes	1	Devoted to God Almighty and able to demonstrate religious attitudes and behavior in everyday life.	
	2	Capable of working collaboratively and possessing social sensitivity and concern for society and the environment (S6).	
	3	Proficient in the theoretical concepts of cartography and thematic mapping (P3).	
	4	Capable of analyzing regional characteristics and regionalization based on geographical principles and approaches (P6).	
	5	Capable of applying logical, critical, systematic, and innovative thinking in the context of developing or implementing science and technology while observing and applying appropriate humanistic values within the domain of expertise (KU1).	
	6	Capable of taking responsibility for the achievement of group work outcomes and of supervising and evaluating the completion of work assigned to those under their responsibility (KU7).	
	7	Capable of designing, developing, producing, utilizing, managing, and evaluating models of spatial information analysis and theory grounded in science and technology (KK1).	
	8	Capable of planning, interpreting, analyzing, classifying, extracting, validating, and visualizing data and information derived from remote sensing based on science and technology (KK3).	
Course Learning Outcomes (CPMK)	1	Master the theories and concepts of tourism within a geographical approach (S1, P6, KU1).	
	2	Analyze tourism as a system (P3, KU1, KK1).	
	3	Analyze the components of tourism (P3, KU1, KU7, KK1).	
	4	Develop tourism planning by taking into account theories, concepts, and principles of sustainable planning (P6, KU1, KK1, KK3).	
	5	Apply RS and GIS to develop tourism destinations and their components (P3, KU1, KU7, KK3).	
Sub-CPMK	1	CPMK - 1	Understand tourism as a human need and be able to distinguish among leisure, recreation, picnics, and tourism.

	2	CPMK - 1	Explain and apply a geographical approach in analyzing tourism.
	3	CPMK - 2	Explain tourism as a multidimensional and multisectoral system.
	4	CPMK - 2	Explain the linkage of tourism from the area of origin to the destination and back to the area of origin.
	5	CPMK - 3	Master the components of tourism including tourist attractions, accessibility, accommodation, and amenities.
	6	CPMK - 3	Master travel itineraries and the components that must be considered when assembling travel packages.
	7	CPMK - 4	Master the stages of the tourism planning process involving relevant theories, fundamental concepts, and appropriate planning principles as well as relevant analytical methods.
	8	CPMK - 4	Develop critical thinking skills in applying systematic and holistic planning in developing sustainable tourism.
	9	CPMK - 5	Understand the interconnection of natural, socio-cultural, economic, and institutional aspects in the management and development of tourism areas using Geographic Information Systems (GIS).
	10	CPMK - 5	Apply GIS technology to support the comprehensive and effective planning of tourism areas, and contribute to the advancement of knowledge and technology in the field of tourism.
	11	CPMK - 5	Capable of communicating the results of planning studies and presenting visualization of the planning outcomes.
Course Materials	1	Course Introduction	
	2	Tourism as a Human Need	
	3	Geographical Dimensions in Tourism	
	4	Destination Development	
	5	Destination Carrying Capacity	
	6	Tourism Planning	
	7	Sustainable Tourism	
	8	Data Inventory for Tourism Development	
	9	Site Suitability for Tourism Development (1)	
	10	Site Suitability for Tourism Development (2)	
	11	Physical Products in Tourism Planning	
	12	Technology in Presenting Data and Analysis of Tourism Area Planning Studies (1)	
	13	Technology in Presenting Data and Analysis of Tourism Area Planning Studies (2)	

	14	Communicating/Visualizing the Results of Tourism Planning Studies
Demonstrable Learning Outcomes at the End of the Course*)	The demonstrable learning outcomes include several evaluation aspects, namely the Midterm Examination (UTS), the Final Examination (UAS), and a project that constitutes the principal learning output. This project takes the form of a PowerPoint presentation containing a tourism area development plan utilizing Remote Sensing (RS) and Geographic Information Systems (GIS) technology. In addition, students are also expected to present the visualization of tourism destination development maps produced from spatial analysis using GIS applications. These outcomes will demonstrate students' understanding of tourism planning concepts and their skills in utilizing RS and GIS technology.	
Learning Strategy		Case Method
	✓	Team based Project
		Others
Learning Steps	In weeks 2–7, students will study the fundamental concepts of tourism, destination development, and tourism planning comprehensively. The main focus is on understanding the elements that influence the development of a destination, such as attractions, accessibility, and facilities. Subsequently, in weeks 9–15, students will be introduced to Remote Sensing (RS) and Geographic Information Systems (GIS) technology as tools for planning and developing tourism areas. As part of the assessment, students will undertake a project involving the preparation of a tourism destination development plan using GIS applications for spatial analysis and map visualization.	
References	1	Inskeep. 1991. Tourism Planning.
	2	Alexander, R Ernest. 1986. Approach to Planning. Milwaukee. The University of Winconsin
	3	Ching, F. 2002. Arsitektur : Bentuk, Ruang dan Tatahan. Erlangga. Jakarta
	4	Lagro,J. 2008. Site Analysis : A Contextual Approach to Sustainable Land Planning and Site Design. John Willey and Sons, Inc. New Jersey.
	5	Laurens, J. 2005. Arsitektur dan Perilaku Manusia. Grasindo. Jakarta
	6	Frick, H. 2007. Dasar-dasar Arsitektur Ekologis. Kanisius – ITB. Bandung
	7	Hakim, R dan Utomo, H. 2008. Komponen Perancangan Arsitektur Lanskap. PT Bumi Aksara. Jakarta
	8	Prasetyo, D.J. 2008. Desain 3 D menggunakan Google Sketch Up. CV. Andi Offset. Yogyakarta
	9	Haryono, P. 2007. Sosiologi Kota Untuk Arsitek. Bumi Aksara. Jakarta
	10	Walker, J.A. 2010. Desain, Sejarah dan Budaya. Jalasutra. Yogyakarta
	11	Maryani, E., 2019, Geografi Pariwisata, Yogyakarta : Ombak
	12	Pearce, 1989, Geography of Tourism, London : Hainneman
	13	Robinson, 1976, Geography of Tourism. London: Mc Donnal.
	14	Boniface, Brian G. dan Cooper, C., 1987, The Geography of Travel and Tourism, London : Heineman.
	15	Sumber lain Materi lain yang relevan sesuai dengan current issus dalam pariwisata

LEARNING PLAN

[illegible]

Week	Sub-CPMK	Sub-CLO Achievement Indicators Demonstrable by Students	Course Material	Assessment		Learning Form and Method		Duration(mi n)	Ref.No.	AccessTime
				Assessment Form(test /non-test)	Weight(%)	Synchronous(Face-to-Face& Online)	Asynchronous(Individual &Group Tasks)			
3	Explaining and apply geographic approach in analyzing	1. Students are able to understand tourism as a need that benefits physical and mental health. 2. Students are able to distinguish among the concepts of leisure, recreation, and tourism in a spatial and temporal context. 3. Students are able to use leisure time wisely	Geographical Dimensions in Tourism	Participatory	2	Face-to-face — Expository: lectures with audio-visual media	-	1.5	12,13	18-02-2025 04:46
4	Explain the relationship tourism from the region origin to destination area and get back to place of Origin	1. Students are able to explain the concept of destination. 2. Students are able to evaluate destination development in terms of space and time. 3. Students are able to provide examples of destination development in specific cases.	Destination Development	Participatory	2	Face-to-face — Expository: lectures with audio-visual media		1.5	11	25-02-2025 04:47

Week	Sub-CPMK	Sub-CLO Achievement Indicators Demonstrable by Students	Course Material	Assessment		Learning Form and Method		Duration(mi n)	Ref.No.	AccessTime
				Assessment Form(test /non-test)	Weight(%)	Synchronous(Face-to-Face& Online)	Asynchronous(Individual &Group Tasks)			
5	Mastering tourism components in the form of attraction, accessibility, accommodation and amenities	1. Students are able to explain the concept of carrying capacity. 2. Students are able to determine the factors influencing carrying capacity. 3. Students are able to calculate carrying capacity for a specific destination	Destination Carrying Capacity	Participatory	2	Face-to-face — Expository: lectures with audio-visual media	-	1.5	3	04-03-2025 04:48
6	Mastering tourist trips and components that must be considered when compiling a travel package	Students are able to identify the characteristics of tourism planning and formulate a tourism destination development plan.	Tourism Planning	Participatory	2	Face-to-face — Expository: lectures with audio-visual media	-	1.5	1,2	11-03-2025 04:49
7	Master the stages of the tourism planning process which involve theory, basic concepts and appropriate planning principles as well as relevant analysis methods.	Students are able to understand the meaning of sustainable tourism development (ecotourism) and the principles of sustainable tourism development.	Sustainable Tourism	Participatory	2	Face-to-face — Expository: lectures with audio-visual media	Individual activity: finding relevant journals; Collaborative activity: sharing materials during lectures.	1.5	1,2	18-03-2025 04:52
8	Midterm Examination				20					25-03-2025 04:52

Week	Sub-CPMK	Sub-CLO Achievement Indicators Demonstrable by Students	Course Material	Assessment		Learning Form and Method		Duration(mi n)	Ref.No.	AccessTime
				Assessment Form(test /non-test)	Weight(%)	Synchronous(Face-to-Face& Online)	Asynchronous(Individual &Group Tasks)			
9	Understand the relationship between natural, socio-cultural, economic and institutional aspects in the management and development of tourist areas using Geographic Information Systems (GIS)	Students are able to conduct a comprehensive inventory of data related to tourism area development, covering physical, hydrological, natural resource, social, economic, disaster-related, institutional, and other aspects.	Data Inventory for Tourism Development	Performance	5	Face-to-face — Expository: lectures with audio-visual media	Individual activity: searching for data related to tourism destination development; Collaborative activity: group discussion for data inventory.	1.5	1,2,4,5,6	01-04-2025 04:53
10	Applying GIS technology to support comprehensive and effective tourism area planning, as well as contributing to the development of knowledge and technology in the tourism sector.	Students are able to identify the potential and constraints of a tourism site using GIS technology to understand the appropriate locational characteristics for tourism development sector.	Site Suitability for Tourism Development (1)	Performance	5	Face-to-face — Expository: lectures with audio-visual media	Individual activity: searching for literature on site suitability parameters for tourism destination development; Collaborative activity: group discussion.	1.5	1,5,6	08-04-2025 04:54
11	Applying GIS technology to support comprehensive and effective tourism area planning, as well as contributing to the development of knowledge and technology in the tourism sector.	Students are able to identify the potential and constraints of a tourism site using GIS technology to understand the appropriate locational characteristics for tourism development.	Site Suitability for Tourism Development (2)	Performance	5	Face-to-face — Expository: lectures with audio-visual media	Individual activity: searching for literature on site suitability parameters for tourism destination development; Collaborative activity: group discussion	1.5	1,5,6	15-04-2025 04:56

Week	Sub-CPMK	Sub-CLO Achievement Indicators Demonstrable by Students	Course Material	Assessment		Learning Form and Method		Duration(min)	Ref.No.	AccessTime
				Assessment Form(test /non-test)	Weight(%)	Synchronous(Face-to-Face& Online)	Asynchronous(Individual &Group Tasks)			
12	Applying GIS technology to support comprehensive and effective tourism area planning, as well as contributing to the development of knowledge and technology in the tourism sector.	Students are able to understand the types of physical products in site planning, prepare a block plan, and formulate a concept for tourism area development using integrated GIS technology.	Physical Products in Tourism Planning	Performance	5	Face-to-face — Expository: lectures with audio-visual media	-	1.5	1,5	22-04-2025 04:57
13	Applying GIS technology to support comprehensive and effective tourism area planning, as well as contributing to the development of knowledge and technology in the tourism sector.	Students are able to utilize technology to display data and analysis in tourism area planning studies (design applications, style and form in 3D visualization, software applications for tourism area layout [SketchUp Pro 6.0], and software applications for assembling presentation posters).	Technology in Presenting Data and Analysis of Tourism Area Planning Studies (1)	Performance	5	Face-to-face — Expository: lectures with audio-visual media	Individual activity: searching for literature on technology in tourism area planning studies; Collaborative activity: group discussion.	1.5	1,2,5	29-04-2025 04:58

Week	Sub-CPMK	Sub-CLO Achievement Indicators Demonstrable by Students	Course Material	Assessment		Learning Form and Method		Duration(mi n)	Ref.No.	AccessTime
				Assessment Form(test /non-test)	Weight (%)	Synchronous(Face-to-Face& Online)	Asynchronous(Individual &Group Tasks)			
14	Applying GIS technology to support comprehensive and effective tourism area planning, as well as contributing to the development of knowledge and technology in the tourism sector.	Students are able to utilize technology to display data and analysis in tourism area planning studies (design applications, style and form in 3D visualization, software applications for tourism area layout [SketchUp Pro 6.0], and software applications for assembling presentation posters).	Technology in Presenting Data and Analysis of Tourism Area Planning Studies (2)	Performance	5	Face-to-face — Expository: lectures with audio-visual media	Individual activity: searching for literature on technology in tourism area planning studies; Collaborative activity: group discussion.	1.5	1,5	06-05-2025 05:00
15	Able to communicate the results of planning studies and display visualizations of planning results	Students are able to present the results of planning studies with effective and engaging visualization.	Communicating/Visualizing the Results of Tourism Planning Studies	Performance	10	Face-to-face — Expository: lectures with audio-visual media	—; Collaborative activity: group discussion	1.5	1	13-05-2025 05:01
16	Final Examination				20					20-05-2025 05:02

STUDENT LEARNING TIME (WORKLOAD)

LEARNING	Activity		Synchronous(Face-to-Face / Online)	Asynchronous(Structured / Independent)	Student LearningPreparation	Total Student Learningand Instructional Time
	Lectures / Recitation / Tutorial		7 × 120 min = 840 min	7 × 90 min = 630 min	7 × 30 min = 210 min	1,680 min (28.0 hrs)
	Project-Based Learning		2 × 120 min = 240 min	2 × 120 min = 240 min	2 × 60 min = 120 min	600 min (10.0 hrs)
	Discussion (Case-Based Learning)		4 × 60 min = 240 min	4 × 60 min = 240 min	4 × 30 min = 120 min	600 min (10.0 hrs)
	SUBTOTAL					2,880 min (48.0 hrs)
ASSESSMENT		Continuous Assessment				
		Participation During Learning	7 × 60 min = 420 min	7 × 30 min = 210 min	7 × 30 min = 210 min	840 min (14.0 hrs)
		Project Work	4 × 60 min = 240 min	4 × 90 min = 360 min	4 × 30 min = 120 min	720 min (12.0 hrs)
		Assignment	4 × 60 min = 240 min	4 × 60 min = 240 min	4 × 30 min = 120 min	600 min (10.0 hrs)
		Quiz	2 × 30 min = 60 min	2 × 30 min = 60 min	2 × 30 min = 60 min	180 min (3.0 hrs)
		Formative				90 min (1.5 hrs)
		Summative				90 min (1.5 hrs)
	SUBTOTAL					2520 min (42.0 hrs)
TOTAL WORKLOAD						5,400 min (90 hrs)
IDEAL CREDIT HOURS						90 Hours
CREDITS (SKS)						2
CONFORMITY WITH CREDIT LOAD						COMPLIANT

CLO ASSESSMENT CRITERIA

No	CPMK	CPL								Taxonomy	Weight	KRITERIA PENCAPAIAN CPMK
		CPL-1	CPL-2	CPL-3	CPL-4	CPL-5	CPL-6	CPL-7	CPL-8			
1	Master the theories and concepts of tourism within a geographical approach (S1, P6, KU1).									2	6	75% of all students achieve a minimum score of 65 (on a scale of 100)
2	Analyze tourism as a system (P3, KU1, KK1).									4	2	75% of all students achieve a minimum score of 65 (on a scale of 100)
3	Analyze the components of tourism (P3, KU1, KU7, KK1).									4	4	75% of all students achieve a minimum score of 65 (on a scale of 100)
4	Develop tourism planning by taking into account theories, concepts, and principles of sustainable planning (P6, KU1, KK1, KK3).									6	2	75% of all students achieve a minimum score of 65 (on a scale of 100)
5	Apply RS and GIS to develop tourism destinations and their components (P3, KU1, KU7, KK3).									6	40	75% of all students achieve a minimum score of 65 (on a scale of 100)

COLLABORATIVE ASSIGNMENT DESIGN

Assignment Title	Preparation of a Tourism Development Plan through Remote Sensing (RS) and Geographic Information Systems (GIS) Technology
Learning Method	Team based Project
Time	
Assessment Weight	14
SUB-CPMK	Apply GIS technology to support the comprehensive and effective planning of tourism areas, and contribute to the advancement of knowledge and technology in the field of tourism.

TASK DESCRIPTION

Students are expected to effectively communicate the results of their tourism planning studies, particularly in presenting data-based planning visualization obtained through Remote Sensing (RS) and Geographic Information Systems (GIS) technology. In sessions during weeks 9–15, students will develop the spatial analysis skills necessary to identify, plan, and map the potential of tourism destination development. The results of this analysis will be packaged in a clear and structured presentation, supported by digital map visualization depicting a comprehensive tourism area development plan. This competency encompasses the communication of analytical findings and data-based planning solutions grounded in spatial data.

TASK COMPLETION STEPS

1. Students conduct a comprehensive inventory of data related to tourism area development, covering physical, hydrological, natural resource (NR), social, economic, disaster-related, institutional, and other aspects.
2. Students identify the potential and constraints of the tourism site using GIS technology to understand the appropriate locational characteristics for tourism development.
3. Students determine the types of physical products in site planning, prepare a block plan, and formulate a tourism area development concept using integrated GIS applications.
4. Students use applications to present data and planning analysis, such as 3D design software (SketchUp Pro 6.0) to visualize the tourism area development plan.
5. Students utilize software applications to prepare an attractive and informative presentation poster, displaying the tourism area study in a clear and innovative 2D/3D style, format, and design.
6. The results of the planning study are presented in a visually effective, attractive, and professional format that can be clearly understood.

DETAILED EXPECTED OUTPUTS

The output of this assignment consists of a PowerPoint presentation containing a comprehensive tourism development plan, including destination management analysis and strategy. In addition, students will also produce a GIS technology-based plan visualization displaying detailed spatial maps and analysis of the tourism area.

ASSESSMENT INDICATORS, CRITERIA, AND WEIGHTS

1. **Data Completeness and Analysis (Inventory of data related to physical, hydrological, NR, social, economic, disaster-related, and institutional aspects; Accuracy and quality of analysis conducted using RS and GIS technology.) (10%)**
2. **Utilization of GIS and RS Technology (Students' ability to use RS technology for satellite image interpretation; Use of GIS in spatial analysis, thematic map production, and data visualization.) (10%)**
3. **Identification of Area Potential and Constraints (Accuracy in identifying tourism potential and development constraints based on spatial data analysis; Relevance between site analysis and development planning.) (10%)**
4. **Creativity in Planning and Design (Students' ability to prepare block plans and tourism area development concepts; Creativity in formulating the development plan by considering environmental and social factors.) (20%)**
5. **Quality of Plan Visualization (Quality of area planning visualization in the form of maps, diagrams, and 3D visualization; Use of design software [e.g., SketchUp] to produce clear and attractive visual representations.) (30%)**
6. **Preparation of the Presentation and Poster (Order, clarity, and professionalism in the preparation of the PowerPoint presentation and poster; Ability to present the development plan in an effective and communicative manner.) (10%)**
7. **Relevance of the Development Plan (Relevance of the development plan to sustainable tourism objectives; Innovative and strategic solutions proposed in the planning.) (10%)**

IMPLEMENTATION SCHEDULE

Note: The total number of days in one semester is $16 \times 7 = 112$ days. The schedule may be determined based on a day-count calculation.

Activity	Time of Implementation
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ADDITIONAL NOTES

LIST OF REFERENCES

1. Asikin, Sukendar. 1987. Buku Penuntun Geologi Lapangan. Geologi ITB. Tidak diterbitkan.
2. Inskeep. 1991. Tourism Planning.
3. Alexander, R Ernest. 1986. Approach to Planning. Milwaukee. The University of Winconsin
4. Ching, F. 2002. Arsitektur : Bentuk, Ruang dan Tatahan. Erlangga. Jakarta
5. Lagro,J. 2008. Site Analysis : A Contextual Approach to Sustainable Land Planning and Site Design. John Willey and Sons, Inc. New Jersey.
6. Laurens, J. 2005. Arsitektur dan Perilaku Manusia. Grasindo. Jakarta
7. Frick, H. 2007. Dasar-dasar Arsitektur Ekologis. Kanisius – ITB. Bandung
8. Hakim, R dan Utomo, H. 2008. Komponen Perancangan Arsitektur Lanskap. PT Bumi Aksara. Jakarta
9. Prasetyo, D.J. 2008. Desain 3 D menggunakan Google Sketch Up. CV. Andi Offset. Yogyakarta