



SEMESTER LEARNING PLAN

DEPARTMENT: URBAN AND REGIONAL PLANNING

FACULTY: CIVIL, PLANNING, AND EARTH

COURSES NAME	ADVANCED PLANNING INFORMATION SYSTEM			
COURSES CODE	DK184715			
SEMESTER	VII			
CREDITS	3			
LECTURER	Nursakti Adhi Pratomoatmojo (NAP)			
	Fendy Firmansyah (FF)			
STUDY MATERIALS	1	2	3	4
	Theories and concepts of space	Spatial approach	Spatial Analysis Technique	Model of spatial optimization
PROGRAM LEARNING OUTCOME (PLO)				
SPECIFIC KNOWLEDGE	1.1	Able to understand and apply the theoretical concept of urban and regional planning in the aspects of urban studies, regional studies, spatial science, data science & computer application, socio-political, environmental management, built environment design, infrastructure and transportation system, coastal studies, management, economics		
	1.3	Able to apply the methods of spatial planning/aspatial in decision making		
SPECIFIC SKILLS	2.1	Able to compile the planning concept and direction of the plan through the study of strategic issues in the context of urban, regional, and coastal planning problems with understanding through observation and utilization of the data of physical/spatial, social, economic and environmental		
	2.2	Able to utilize ICT in the management of data to produce information that is easily understood by the public and the decision makers		
	2.5	Able to produce creative, innovative, sustainable planning that are accommodating public interest in which the resulted plans are reviewed on the rules and theories of planning and communicating them visually, verbally and in writing so that can be accounted academically		
COURSE LEARNING OUTCOME (CLO)	1. Students are able to explain the concept of satellite image data and remote sensing			
	2. Students are able to explain the characteristics of satellite image data			
	3. Students are able to utilize and analyze satellite image data for spatial planning purposes			
	4. Students are able to explain the concept of spatial data of raster format			
	5. Students are able to analyze raster data using "Raster Calculator"			
	6. Students are able to explain the concept of spatial linear regression analysis			
	7. Students are able to apply spatial linear regression analysis in case studies			
	8. Students are able to explain the concept of model builder			
	9. Students are able to apply concept builder model in case study			

ADVANCED PLANNING INFORMATION SYSTEM COURSE LEARNING PLAN
ODD SEMESTER OF ACADEMIC YEAR 2021–2022

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
Week 1	Students are able to perceive principles and philosophies and articulate in comprehending issues in scope of urban and regional planning	Students are able to understanding the spatial data concept	Theories and concepts of space	Students are able to explain the concept of spatial data raster format	Spatial data concept and type	W1	160	Lecture, Discussion	Individual liveliness	
	1. Students are able to to comprehend technics and processes urban and regional planning in urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics 2. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban	Students are able to understanding the raster data concept	Spatial approach		Raster data concept	W1, W5	160	Lecture, Discussion	Individual liveliness	
	design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope									
Week 2	1. Students are able to implement urban studies, regional studies, spatial	Students are able to practice several case	Spatial Analysis Technique	Students are able to analyze	Examples of raster data applications	W1, W3, W5	320	Lecture, Practice	Kemampuan mengasai materi praktikum	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope 2. Students are able to analyze the characteristic of urban, regional and coastal characteristic and able to comprehend the correlation among aspatial and spatial aspects so that students earn information and compose the model and concept of planning	studies using "Raster Calculator" tools		raster data using "Raster Calculator"	using "Raster Calculator"					
Week 3	1. Students are able to implement logical, critical, systematic, innovative thinking in context of developing or implementing knowledge and technology which	Students are able to practice using "Raster Calculator" tools into specific case studies	Spatial Analysis Technique		Case Studies	W1, W3, W5	320	Practice, Case Studies, Assignment 1	1. Abilities to choose case studies 2. Group abilities 3. The accuracy of choosing a method	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	<p>having perspective and implementing humanities value which suitable in each specialities</p> <p>2. Able to show independent performance, quality, and measurable</p> <p>3. Students are able to compose scientific description in form of paper and upload to website</p> <p>4. Able to responsible for achievement of teamwork and supervise also evaluate work completion that assign to people under their responsible</p>									
Week 4	<p>1. Students are able to to comprehend technics and processes urban and regional planning in urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics</p> <p>2. Students are able to implement urban studies, regional studies, spatial</p>	Students are able to understanding spatial regression analysis concept	Spatial approach	Students are able to explain the spatial regression analysis concept	Spatial regression analysis concept	W1, W5	160	Lecture, Discussion	Individual liveliness	
			Spatial approach		Spatial regression analysis concept using spatial data	W1, W5	80	Lecture, Discussion	Individual liveliness	
		Students are able to understand sampling method concept for spatial data	Spatial approach		Spatial data sampling method	W1, W5	80	Lecture, Discussion	Individual liveliness	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in scope of urban and regional planning									
Week 5	<p>1. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope</p> <p>2. Students are able to analyze the characteristic of urban, regional and coastal characteristic and able to comprehend the correlation among aspatial and spatial aspects so that students earn information and compose the model and concept of planning</p> <p>3. Students are able to</p>	Students are able to understand some examples of spatial regression utilization	Spatial Analysis Technique	Students are able to apply spatial linear regression analysis in a case studies	Examples of linear regression analysis in spatial planning	W1, W3, W5	320	Lecture, Practice	Abilities to mastering practice materials	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	formulate models with approach of qualitative and quantitative to simulate scenarios for urban, regional, and coastal area setting									
Week 6	1. Students are able to implement logical, critical, systematic, innovative thinking in context of developing or implementing knowledge and technology which having perspective and implementing humanities value which suitable in each specialities 2. Able to show independent performance, quality, and measurable 3. Students are able to compose scientific description in form of paper and upload to website 4. Able to responsible for achievement of teamwork and supervise also evaluate work completion that assign to people under their responsible	Students are able to practice spatial regression analysis applications into specific case studies	Spatial Analysis Technique		Case Studies	W1, W3, W5	320	Practice, Case Studies, Assignment 2	1. Abilities to choose a case studies 2. Group abilities 3. The accuracy of choosing a method	
Week 7	1. Students are able to comprehend techniques and processes urban and regional planning in urban studies, regional	Students are able to understand model builder concept	Spatial approach	Students are able to explain model	Model Builder Concept	W1, W5	160	Lecture, Discussion	Individual liveness	

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1	2	3	4	5	6	7	8	9	10	11
	<p>studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics</p> <p>2. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in scope of urban and regional planning</p>			builder concept						
	1. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in scope of	Students are able to understand some examples of model builder utilization	Spatial Analysis Technique	Students are able to apply some examples of model builder utilization	Examples of applications model builder	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	

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1	2	3	4	5	6	7	8	9	10	11
Week 9	Students are able to perceive principles and philosophies and articulate in comprehending issues in scope of urban and regional planning	Students are able to understanding remote sensing concept and its application	Theories and concepts of space	Students are able to explain remote sensing concept and its application	Definition of satellite image data concept and remote sensing	W1	60	Lecture, Discussion	Individual liveliness	
					How remote sensing satellites work	W1	60	Lecture, Discussion	Individual liveliness	
					Band recognition and its characteristics	W1	60	Lecture, Discussion	Individual liveliness	
					The types of satellite imagery and its resolution	W1	60	Lecture, Discussion	Individual liveliness	
					Examples of satellite imagery data use for spatial planning	W1	80	Lecture, Discussion	Individual liveliness	
Week 10	1. Students are able to to comprehend technics and processes urban and regional planning in urban studies, regional studies, spatial science,	Students are able to practice how to get satellite data and read its characteristic	Spatial approach	Students are able to explain satellite data and its	How to obtain satellite imagery data for surface / land data	W1, W5	160	Lecture, Practice	Abilities to mastering practice materials	
	data science and computer application, social-politics, environmental management, urban design, infrastructure			characteristic	How to obtain satellite imagery data for aquatic data	W1, W5	80	Lecture, Practice	Abilities to mastering practice materials	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	system, coastal studies, management, and economics 2. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in scope of urban and regional planning				How to read a satellite image data	W1, W5	80	Lecture, Practice	Abilities to mastering practice materials	
Week 11	1. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope	Students are able to practice the utilization of image data through composite band	Spatial Analysis Technique	Students are able to utilize and analyze satellite image data for spatial planning purposes	Satellite image analysis (Geometric correction and composite band)	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	
		Students are able to practice image analysis	Spatial Analysis Technique		Example of satellite image data	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	2. Students are able to analyze the characteristic of urban, regional and coastal characteristic and able to comprehend the correlation among aspatial and spatial aspects so that students earn information and compose the model and concept of planning 3. Students are able to formulate models with approach of qualitative and quantitative to simulate scenarios for urban, regional, and coastal area setting	data for land use analysis			for land use analysis					
Week 12	1. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope 2. Students are able to analyze the characteristic of urban, regional and coastal characteristic and able to comprehend the	Students are able to practice image data analysis for vegetation greenness index analysis	Spatial Analysis Technique		Example of satellite image data for vegetation index analysis	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	
		Students are able to practice the analysis of image data for the analysis of land surface temperature	Spatial Analysis Technique		Example of satellite image data for land surface temperature analysis	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
	correlation among aspatial and spatial aspects so that students earn information and compose the model and concept of planning 3. Students are able to formulate models with approach of qualitative and quantitative to simulate scenarios for urban, regional, and coastal area setting									
Week 13	1. Students are able to implement urban studies, regional studies, spatial science, data science and computer application, social-politics, environmental management, urban design, infrastructure system, coastal studies, management, and economics in urban and regional planning scope 2. Students are able to analyze the characteristic of urban, regional and coastal characteristic and able to comprehend the correlation among aspatial and spatial aspects so that students earn information and compose the model and	Students are able to practice image analysis for sea surface temperature analysis	Spatial Analysis Technique		Example of satellite image data for sea surface temperature analysis	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	
		Students are able to practice the analysis of image data for the analysis of the distribution of chlorophyll-A in water	Spatial Analysis Technique		Example of satellite image data for the distribution of chlorophyll-A analysis	W1, W3, W5	160	Lecture, Practice	Abilities to mastering practice materials	

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
1	2	3	4	5	6	7	8	9	10	11
Week 15	<p>1. Mampu menerapkan pemikiran logis, kritis, sistematis, dan inovatif dalam konteks pengembangan atau implementasi ilmu pengetahuan dan teknologi yang memperhatikan dan menerapkan nilai humaniora yang sesuai dengan bidang keahliannya</p> <p>2. Mampu menunjukkan kinerja mandiri, bermutu, dan terukur</p> <p>3. Mampu menyusun deskripsi saintifik hasil kajian tersebut di atas dalam bentuk skripsi atau laporan tugas akhir, dan mengunggahnya dalam laman perguruan tinggi</p> <p>4. Mampu bertanggung jawab atas pencapaian hasil kerja kelompok dan melakukan supervisi serta evaluasi terhadap penyelesaian pekerjaan yang ditugaskan kepada pekerja yang berada di bawah tanggungjawabnya</p>	Students are able to practice the use of image data by choosing one of the case studies	Spatial Analysis Technique		Studi kasus	W1, W3, W5	320	Practice, Case Studies, Assignment 4	<p>1. Abilities to choose case studies</p> <p>2. Group abilities</p> <p>3. The accuracy of choosing a method</p>	
Week 16		Students are able to communicate verbally, visually, and written analysis	Spatial Analysis Technique	Task Collection	Evaluation 1		80	Assignment 1 collection Presentation	<p>1. The accuracy of the results of the analysis</p> <p>2. Abilities to expose the material</p>	15%

WEEK	Course Learning Outcome	Module Learning Outcome	MODULE	Learning Outcome	Scope	Learning Methods	Course Duration	Modes of Delivery	Grading Policy	SCORE
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		of satellite image data utilization, raster calculator tools application, spatial regression analysis application, and model builder application in accordance with their respective case study example			Evaluation 2		80	Assignment 2 collection Presentation	1. The accuracy of the results of the analysis 2. Abilities to expose the material	20%
					Evaluation 3		80	Assignment 3 collection Presentation	1. The accuracy of the results of the analysis 2. Abilities to expose the material	20%
						Evaluation 4		80	Assignment 4 collection Presentation	1. The accuracy of the results of the analysis 2. Abilities to expose the material

TYPE OF EVALUATION

No	Type of Evaluation	Weights	For	Output of Evaluation	The Period of Implementation	Deadline
1	Practice Raster Calculator with ArcGIS	15%	Individual	Practice	Week 3	Week 3
2	Practice Analysis Of Spatial Linear Regression	15%	Individual	Practice	Week 5	Week 5
3	Practice modeling of GIS with the Model Builder ArcGIS	10%	Individual	Practice	Week 7	Week 7
4	Make a paper in accordance with the choice of topic (Raster Calculator, Linear Spatial Regression, Model Builder)	20%	Group	Report	Week 8	Week 14
5	Practice analysis of Pre-processing Image Data	10%	Individual	Practice	Week 11	Week 11
6	Analysis of Pre-processing Image Data	10%	Group	Report	Week 12	Week 15
7	Practice Analysis Of Image Data	10%	Individual	Practice	Week 13	Week 16
8	Practice Analysis Of Image Data	10%	Group	Report	Week 13	Week 16

EVALUATION-01

Individual Task

Practice Raster Calculator with ArcGIS

Purpose :

The students are able to practise analysis with ArcGIS raster calculator uses data that already provided.

Output:

Practice

The Format Of Practical:

Students do practical work according with instructions of the laboratory assistant

Time to submit the task :

Assessed on Day H (when practical take place)

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Self-reliance in experiment	30%	Very independent, there is no constraint in its execution, no doubt, be able to follow the given direction	Well in its execution, follow direction, follow all directives	Enough in its execution, the start was no indication of doubt in experiment	Less reliant, not daring to experiment as it's been directed by the Assistant	Do not follow directives, often ask the Assistant as well as to his friends, did not dare to do it yourself
Ability exploration experiment	30%	Explore the possibilities are very good in doing practical work, there are new things to try out yourself	In both explore the possibilities of doing practical work	Simply explore, starting there are some who do not follow referrals	Less is explored, many do not follow referrals in deepening experiment	Not doing more exploration with, ask and see his friend's activities
Ability to conclude of the practical work	40%	Very good in finding interesting facts, questions the possibilities begin asked.	both in concluding however cannot capture interesting fact	Deep enough to conclude the activities of the lab course	Less can conclude the activities of teaching, an indication of lacking understanding of the theory	Cannot provide a conclusion for practical

EVALUATION-02

Individual Task

Practice Analysis Of Spatial Linear Regression

Purpose:

Students are able to practise the spatial analysis of linear regression with ArcGIS and SPSS uses data that is already given. Students are also free to bring similar data for independent exploration.

Output:

Practice

The Format Of Practical:

Students do practical work according with instructions of the laboratory assistant

Time to submit the task :

Assessed on Day H (when practical take place)

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Self-reliance in experiment	30%	Very independent, there is no constraint in its execution, no doubt, be able to follow the given direction	Well in its execution, follow direction, follow all directives	Enough in its execution, the start was no indication of doubt in experiment	Less reliant, not daring to experiment as it's been directed by the Assistant	Do not follow directives, often ask the Assistant as well as to his friends, did not dare to do it yourself
Ability exploration experiment	30%	Explore the possibilities are very good in doing practical work, there are new things to try out yourself	In both explore the possibilities of doing practical work	Simply explore, starting there are some who do not follow referrals	Less is explored, many do not follow referrals in deepening experiment	Not doing more exploration with, ask and see his friend's activities
Ability to conclude of the practical work	40%	Very good in finding interesting facts, questions the possibilities begin asked.	both in concluding however cannot capture interesting fact	Deep enough to conclude the activities of the lab course	Less can conclude the activities of teaching, an indication of lacking understanding of the theory	Cannot provide a conclusion for practical

EVALUATION-03

Individual Task

Practice modeling of GIS with the Model Builder ArcGIS

Purpose:

Students are able to practise modelling with the Model Builder ArcGIS. Students are also free to bring similar data for independent exploration.

Output:

Practice

The Format Of Practical:

Students do practical work according with instructions of the laboratorium assistant

Time to submit the task :

Assessed on Day H (when practical take place)

Criteria of Assessment

Dimention	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Self-reliance in experiment	30%	Very independent, there is no constraint in its execution, no doubt, be able to follow the given direction	Well in its execution, follow direction, follow all directives	Enough in its execution, the start was no indication of doubt in experiment	Less reliant, not daring to experiment as it's been directed by the Assistant	Do not follow directives, often ask the Assistant as well as to his friends, did not dare to do it yourself
Ability exploration experiment	30%	Explore the possibilities are very good in doing practical work, there are new things to try out yourself	In both explore the possibilities of doing practical work	Simply explore, starting there are some who do not follow referrals	Less is explored, many do not follow referrals in deepening experiment	Not doing more exploration with, ask and see his friend's activities
Ability to conclude of the practical work	40%	Very good in finding interesting facts, questions the possibilities begin asked.	both in concluding however cannot capture interesting fact	Deep enough to conclude the activities of the lab course	Less can conclude the activities of teaching, an indication of lacking understanding of the theory	Cannot provide a conclusion for practical

EVALUATION-04

Group Task

Make a paper in accordance with the choice of topic (Raster Calculator, Linear Spatial Regression, Model Builder)

Purpose:

Students understand and are able to interpret each subsection in the process modeling taught as material in CIVIL. In addition students are expected to study a related theory examines each subsections in each type of analysis.

Output:

Report

The Format of The Report:

1. The report is written in the format of the paper, A4 paper, fonts Arial, spacing 1
2. The pages is maximum 10 pages
3. Include a clear reference source
4. The implementation of tasks performed independently, it is not permissible to do plagiarism,if you're doing it then ypur score will be reduce.

Time to submit the task

The task have to be submit in week 15. You have to collect it hardcopy and softcopy. For softcopy, you have to change to pdf and upload it (drive/dropbox that used together of the course). For hardcopy, you have to print it and collect in the place that already provided.

Criteria of Assessment

Dimention	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Depth of introductory topics that are discussed	20%	Very deep and very good in giving an introduction, many references cited	Excellent in providing an introduction, reference is enough	Enough to give a little introduction and reference	Less good in giving an introduction	Cannot provide an introduction to the appropriate topic
The study of related theories that are discussed	20%	Very much gives the theory of literature, newness, and explanations of each library. Use many of the international journal	Good in theory gives the reader, newness, and explanations of each library	Provide enough theory reader, use many libraries in the country	Lacking in providing the relevant library theory related topics	There is no literature that are relevant to the discussion and use little of journal
The depth of the discussion in the delivery of material	20%	Very in-depth material presented	A good discussion of the related submission material with	Quite in depth material, simple, and lack of discussion	Less provides enough material for the depth of the chosen topic, too stiff in the discussion	The depth of the material does not give enough to the selected topics

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
			sufficient depth			
Organize, delivery and completeness of graph/example/picture	20%	Very coherently to develop the material from beginning to end, making it easier for readers to understand. More graphs, examples, illustrations, table etc.	Coherently to develop the material from beginning to end, making it easier for readers to understand. More graphs, examples, illustrations, table etc.	Enough material development from beginning to end, but the content is lacking. Pretty graphs, examples, illustrations, table etc.	Less coherently to develop the material from beginning to end, there is an error the placement of the sub-sub material. Minimal graphics, examples, illustrations, table etc.	No material development in order from beginning to end, thus confusing the reader. Minimal graphics, examples, illustrations, table etc.
References	20%	very good in taking references, relevant, updated, from journals outside and accredited	very good in taking references, relevant, updated, from local journals	enough in the literature/references that are discussed	lacking in the literature/references are discussed. Less than 5 citations against the reference used	Not give references and not clear enough

EVALUATION-05

Individual Task

Practice analysis of Pre-processing Image Data

Purpose:

Students are able to practise pre-processing image data before it is exploited further.

Output:

Practice

The Format Of Practical:

Students do practical work according with instructions of the laboratory assistant

Time to submit the task :

Assessed on Day H (when practical take place)

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Self-reliance in experiment	30%	Very independent, there is no constraint in its execution, no doubt, be able to follow the given direction	Well in its execution, follow direction, follow all directives	Enough in its execution, the start was no indication of doubt in experiment	Less reliant, not daring to experiment as it's been directed by the Assistant	Do not follow directives, often ask the Assistant as well as to his friends, did not dare to do it yourself
Ability exploration experiment	30%	Explore the possibilities are very good in doing practical work, there are new things to try out yourself	In both explore the possibilities of doing practical work	Simply explore, starting there are some who do not follow referrals	Less is explored, many do not follow referrals in deepening experiment	Not doing more exploration with, ask and see his friend's activities
Ability to conclude of the practical work	40%	Very good in finding interesting facts, questions the possibilities begin asked.	both in concluding however cannot capture interesting fact	Deep enough to conclude the activities of the lab course	Less can conclude the activities of teaching, an indication of lacking understanding of the theory	Cannot provide a conclusion for practical

EVALUATION-06

Individual Task

Analysis of Pre-processing Image Data

Purpose:

Students are able to perform analysis of pre-processing image data by taking one of the example image as a case study.

Output:

Report

The Format Of The Report:

Students perform analysis of pre-processing of data in accordance with case studies taken.

Time to submit the task :

Week 15

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
INTRODUCTION	-	The Empirical facts and theoretical concept are completed and very relevant, the urgency of the problem is high	The Empirical facts and theoretical concept are completed and very relevant, but the urgency is not high	The empirical facts and theoretical concept are stated but not relevant and urgent	The empirical facts and theoretical concept is not completed, not relevant and not urgent	Empirical facts and theoretical concept is not stated and couldnt for the research question
LITERATURE REVIEW	-	Literature review substance is completed and has stated more than the refrence, the literature synthesis is completed and suitable	Literature review substance is stated accordingly to TOR, the literature synthesis is suitable	Suitable for the topic but not completed, the literature synthesis is unsuitable	Unsuitable for the topic and not completed, the literature synthesis is irrelevant	Not completed and irrelevant, the literature synthesis is not completed
METHOD	-	Data needed, how to obtain data and techniques to process data precisely and explained in detail	Data needed and how to get the right data but the technique of processing data is not right	How to get the right data, the data needed is less, the data processing technique is not right	Data needed, how to obtain data and data processing techniques is not right	Data needed, how to obtain data and data processing techniques are not appropriate

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
DATA AND ANALYSIS	-	Complete data, analysis right with the appropriate interpretation	Complete data, precise analysis without interpretation	Complete data with inappropriate analysis	Complete data but not suitable and without analysis	Data is incomplete and not suitable and without analysis
CONCLUSION AND RECOMMENDATION	-	The quality of conclusions is appropriate according to the results of the analysis and answers the research objectives	The quality of conclusions is appropriate according to the results of the analysis but does not answer the research objectives	The quality of conclusions is appropriate according to the results of the analysis but does not answer the research objectives	Conclusion quality is not in accordance with the analysis and does not answer the research objectives	The quality of conclusions is very inappropriate
Processed Image Data	-	Image data is complete, the data structures are correct and in accordance with the presented in report	the substance of the review of the complete library	the substance of the review of the literature less complete	the substance of the review of the literature is not complete	There is no review of the literature

EVALUATION-07

Individual Task

Practice Analysis Of Image Data

Purpose:

Students are able to practise image data analysis for the benefit of the region and city planning

Output:

Practice

The Format Of Practical:

Students do practical work according with instructions of the laboratory assistant

Time to submit the task :

Assessed on Day H (when practical take place)

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
Self-reliance in experiment	30%	Very independent, there is no constraint in its execution, no doubt, be able to follow the given direction	Well in its execution, follow direction, follow all directives	Enough in its execution, the start was no indication of doubt in experiment	Less reliant, not daring to experiment as it's been directed by the Assistant	Do not follow directives, often ask the Assistant as well as to his friends, did not dare to do it yourself
Ability exploration experiment	30%	Explore the possibilities are very good in doing practical work, there are new things to try out yourself	In both explore the possibilities of doing practical work	Simply explore, starting there are some who do not follow referrals	Less is explored, many do not follow referrals in deepening experiment	Not doing more exploration with, ask and see his friend's activities
Ability to conclude of the practical work	40%	Very good in finding interesting facts, questions the possibilities begin asked.	both in concluding however cannot capture interesting fact	Deep enough to conclude the activities of the lab course	Less can conclude the activities of teaching, an indication of lacking understanding of the theory	Cannot provide a conclusion for practical

EVALUATION-08

Individual Task

Image Data Analysis Reports (Case Studies)

Purpose:

Students are able to perform analysis of data image by taking one example case studies it is used for planning regions and cities.

Output:

Report

The Format Of The Report:

Students perform image data analysis in accordance with case studies taken.

Time to submit the task :

Week 15

Criteria of Assessment

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
INTRODUCTION	-	The Empirical facts and theoretical concept are completed and very relevant, the urgency of the problem is high	The Empirical facts and theoretical concept are completed and very relevant, but the urgency is not high	The empirical facts and theoretical concept are stated but not relevant and urgent	The empirical facts and theoretical concept is not completed, not relevant and not urgent	Empirical facts and theoretical concept is not stated and couldnt for the research question
LITERATURE REVIEW	-	Literature review substance is completed and has stated more than the refrence, the literature synthesis is completed and suitable	Literature review substance is stated accordingly to TOR, the literature synthesis is suitable	Suitable for the topic but not completed, the literature synthesis is unsuitable	Unsuitable for the topic and not completed, the literature synthesis is irrelevant	Not completed and irrelevant, the literature synthesis is not completed
METHOD	-	Data needed, how to obtain data and techniques to process data precisely and explained in detail	Data needed and how to get the right data but the technique of processing data is not right	How to get the right data, the data needed is less, the data processing technique is not right	Data needed, how to obtain data and data processing techniques is not right	Data needed, how to obtain data and data processing techniques are not appropriate

Dimension	Weight of Assessment	86-100	76-85	66-75	56-65	0-55
DATA AND ANALYSIS	-	Complete data, analysis right with the appropriate interpretation	Complete data, precise analysis without interpretation	Complete data with inappropriate analysis	Complete data but not suitable and without analysis	Data is incomplete and not suitable and without analysis
CONCLUSION AND RECOMMENDATION	-	The quality of conclusions is appropriate according to the results of the analysis and answers the research objectives	The quality of conclusions is appropriate according to the results of the analysis but does not answer the research objectives	The quality of conclusions is appropriate according to the results of the analysis but does not answer the research objectives	Conclusion quality is not in accordance with the analysis and does not answer the research objectives	The quality of conclusions is very inappropriate
Processed Image Data	-	Image data is complete, the data structures are correct and in accordance with the presented in report	the substance of the review of the complete library	the substance of the review of the literature less complete	the substance of the review of the literature is not complete	There is no review of the literature