		Document Code
	Universitas Negeri Surabaya **Faculty of Social and Legal Sciences** **Geography Education Undergraduate Study Program**	

SEMESTER LEARNING PLAN

Courses		CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
SMART CITY		8720202221	Integrated Geography	T=1	P=1	ECTS=3.18	5	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
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Learning model	**Project Based Learning**

Program Learning Outcomes (PLO)	**PLO study program that is charged to the course**	
	PLO-5	Able to make appropriate decisions to solve educational problems and transformative geography learning by utilizing various learning resources based on science and technology and the arts
	PLO-8	Able to obtain, process, analyze, present geosphere data and information using geospatial technology in integrated geographic studies with in-depth urban studies that support regional sustainability
	Program Objectives (PO)	
	PO - 1	Demonstrate a responsible attitude towards work in their field of expertise independently (CPL-2) (S-2)
	PO - 2	CPL-KK2 Able to formulate, process, analyze data, and present geosphere information both physical and human aspects using geospatial technology for geographical learning and research (CPL-8) (KK-2)
	PO - 3	Able to demonstrate independent and collaborative performance that produces quality and measurable results (CPL-5) (KU-2)
	PO - 4	Able to process, analyze, present geosphere data and information using geospatial technology for geographic learning and research (CPL-12) (P-3)
	PLO-PO Matrix	

P.O	PLO-5	PLO-8
PO-1		
PO-2		
PO-3		
PO-4		

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PO-1																
PO-2																
PO-3																
PO-4																

Short Course Description	This course explains smart cities, which are currently the goal of Indonesia's national development. This course explains the definition of smart city, concepts and models, strategies and challenges, measuring maturity levels, and smart city models applied in Indonesia.

References	**Main :**

1. Atmawidjaja dkk.2015.Kajian pengembangan Smart City di Indonesia. Dirjen Penataan Ruang Kementerian PU.
2. Hendro Kusumo.2020.Kematangan Kota Cerdas Berdasarkan SNI ISO 37122.Badan Standarisasi Nasional
3. Achmad Djunaedi, dkk. 2022. Membangun Kota dan Kabupaten Cerdas: Sebuah Panduan bagi Pemerintah Daerah. Yogyakarta: Gadjah Mada University Press.
4. Busch, R.,. 2012. The Green City Index. A summary of the Green City Index Research Series. Germany : Siemen.
5. Sucitawathi, I.G.A.A.G.D., Joniarta, W., Dewi., Y., 2018. Konsep Smart City dan Tata Kelola Pemerintahan di Kota Denpasar. Public Inspiration : Jurnal Administrasi Publik. Vol 3. No 1.
6. Perpres RI No 64 tahun 2022 tentang Rencana Tata Ruang Kawasan Strategis Nasional Ibu Kota Nusantara Tahun 2022 - 2042
7. http://youtube.com/BelajarQGIS

| **Supporters:** | |
| | |

| **Supporting lecturer** | Dr. Muzayanah, S.T., M.T.
Dr. Eko Budiyanto, S.Pd., M.Si.
Nurul Makhmudiyah, S.Si., M.T. |

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (offline)	Online (online)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Students become familiar with current urban development issues and problems	Students are able to describe the issues and problems developing in the city.	**Criteria:** Score **Form of Assessment** : Participatory Activities	Face to face Discussion 2 X 50		**Material:** Introduction to Smart Cities **Reference:** *Atmawidjaja et al. 2015. Study of Smart City development in Indonesia. Director General of Spatial Planning, Ministry of Public Works.*	5%
2	Students get to know the concept and model of Smart City development	Students are able to describe the definition of smart city	**Criteria:** score **Form of Assessment** : Participatory Activities	Face to face and discussion 2 X 50		**Material:** Definition of Smart City **Reference:** *Atmawidjaja et al. 2015. Study of Smart City development in Indonesia. Director General of Spatial Planning, Ministry of Public Works.* **Material:** Definition of Smart City **Reference:** *RI Presidential Decree No. 64 of 2022 concerning Spatial Planning for the National Strategic Area of the Archipelago Capital for 2022 - 2042* **Material:** Definition of Smart City **Reference:** *Achmad Djunaedi, et al. 2022. Building Smart Cities and Districts: A Guide for Local Governments. Yogyakarta: Gadjah Mada University Press.*	5%
3	Students get to know the concept and model of Smart City development	Students are able to explain the concept of smart city development	**Criteria:** Score **Form of Assessment** : Participatory Activities	Face to face and discussion 2 X 50		**Material:** Green City **Reference:** *Busch, R.,. 2012. The Green City Index. A summary of the Green City Index Research Series. Germany : Siemens.* **Material:** Smart City Concept **Reference:** *Achmad Djunaedi, et al. 2022. Building Smart Cities and Districts: A Guide for Local Governments. Yogyakarta: Gadjah Mada University Press.*	10%

			Criteria / Form of Assessment			Material / References	
4	Students understand the challenges and can then construct Smart City development strategies	Students are able to describe smart city development strategies in their hometown area	**Criteria:** Score **Form of Assessment :** Participatory Activities, Portfolio Assessment	Face to face and discussion 2 X 50		**Material:** City development conflicts **References:** *Sucitawathi, IGAAGD, Joniarta, W., Dewi., Y., 2018. Smart City Concept and Governance in Denpasar City. Public Inspiration: Journal of Public Administration. Vol 3. No 1.* **Material:** Smart city development **Reference:** *Achmad Djunaedi, et al. 2022. Building Smart Cities and Districts: A Guide for Local Governments. Yogyakarta: Gadjah Mada University Press.*	5%
5	Students are able to assess the maturity level of smart city development in a city	Students are able to assess the maturity of a city as a smart city in their hometown	**Criteria:** Score **Form of Assessment :** Portfolio Assessment	Face to face and discussion 2 X 50		**Material:** smart city maturity standards **Reference:** *Hendro Kusumo.2020. Smart City Maturity Based on SNI ISO 37122. National Standardization Agency*	10%
6	Students are able to assess the maturity level of smart city development in a city	Students are able to assess the maturity of a city as a smart city in their hometown	**Criteria:** Score **Form of Assessment :** Participatory Activities, Portfolio Assessment	Face to face and discussion 2 X 50		**Material:** smart city maturity standards **Reference:** *Hendro Kusumo.2020. Smart City Maturity Based on SNI ISO 37122. National Standardization Agency*	10%
7	Students know and understand the smart city development model that has been implemented in several cities in Indonesia	Students are able to explain the smart city model in Indonesian cities that have developed the smart city concept	**Criteria:** Score **Form of Assessment :** Participatory Activities, Portfolio Assessment	Face to face and discussion 2 X 50		**Material:** Smart city models in several cities in Indonesia **Reference:** *Atmawidjaja et al. 2015. Study of Smart City development in Indonesia. Director General of Spatial Planning, Ministry of Public Works.*	1%
8	UTS	Students are able to solve all questions related to meeting material 1 to 7	**Criteria:** 10 **Form of Assessment :** Test	offline 2 X 50		**Material:** Meeting material 1 - 7 **References:** **Material:** smart city indicators **Reference:** *Hendro Kusumo.2020. Smart City Maturity Based on SNI ISO 37122. National Standardization Agency*	1%
9	Students master logical decisions and artificial intelligence to apply information to the surrounding environment	Students are able to explain facility designs that can help smart city transformation in a simple way	**Criteria:** Score **Form of Assessment :** Participatory Activities, Practice/Performance	Face to face and discussion 2 X 50		**Material:** Smart city transformation model **Reference:** *Atmawidjaja et al. 2015. Study of Smart City development in Indonesia. Director General of Spatial Planning, Ministry of Public Works.*	5%

No							
10	Design and develop web-based smart city tools for dissemination of environmental information	Students are able to create webgis for dissemination of environmental information	**Criteria:** Score **Form of Assessment** : Participatory Activities	Face to face and discussion 2 X 50 Minutes		**Material:** smart city maturity standards **Reference:** *Hendro Kusumo.2020. Smart City Maturity Based on SNI ISO 37122. National Standardization Agency* **Material:** Webgis development techniques **Library:** *http://youtube.com/...*	5%
11	Design and develop web-based smart city tools for dissemination of environmental information	Students are able to create webgis for dissemination of environmental information	**Criteria:** Score **Form of Assessment** : Participatory Activities	Face to face and discussion 2 X 50 Minutes		**Material:** smart city maturity standards **Reference:** *Hendro Kusumo.2020. Smart City Maturity Based on SNI ISO 37122. National Standardization Agency* **Material:** Webgis development techniques **Library:** *http://youtube.com/...*	5%
12	Students are able to build IoT-based systems/devices for the development of Smart Environment and Smart Mobility	Students are able to create IoT devices for environmental resource conservation and transportation	**Criteria:** Score **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Face to face and discussion 2 X 50 minutes		**Material:** IoT development techniques **Library:** *http://youtube.com/...*	5%
13	Students are able to build IoT-based systems/devices for the development of Smart Environment and Smart Mobility	Students are able to create IoT devices for environmental resource conservation and transportation	**Criteria:** Score **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Face to face and discussion 2 X 50 minutes		**Material:** IoT development techniques **Library:** *http://youtube.com/...*	10%
14	Students are able to build IoT-based systems/devices for the development of Smart Economy and Smart Living	Students are able to create IoT devices to be used in developing the community's economy and social life	**Criteria:** Score **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Face to face and discussion 2 X 50 minutes		**Material:** IoT development techniques **Library:** *http://youtube.com/...*	10%
15	Students are able to build IoT-based systems/devices for the development of Smart Economy and Smart Living	Students are able to create IoT devices to be used in developing the community's economy and social life	**Criteria:** Score **Forms of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment, Practices / Performance	Face to face and discussion 2 X 50 minutes		**Material:** IoT development techniques **Library:** *http://youtube.com/...*	10%
16	UAS	portfolio	**Criteria:** portfolio **Form of Assessment** : Portfolio Assessment	offline		**Material:** Meeting material 9 - 15 **References:**	3%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	52.16%
2.	Project Results Assessment / Product Assessment	11.66%
3.	Portfolio Assessment	21%
4.	Practice / Performance	14.16%
5.	Test	1%
		99.98%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.