CP234315 - Urban and Regional Infrastructure

Module Name	Urban and Regional Infrastructure
Module level, if applicable	Intermediate BoURP
Code, if applicable	CP234315
Subtitle, if applicable	-
Course, if applicable	Urban and Regional Infrastructure
Semester(s) in which the module is taught	3rd Semester
Person responsible for the module	Ema Umilia, S.T., M.T.
Lecturer	Ema Umilia, S.T., M.T.
Language	Indonesian, English
Relation to curriculum	Compulsory Courses for undergraduate program in Urban and Regional Planning
Type of teaching, contact hours	M1: Group discussion Lecture (Face to face lecture): 2.5 hours x 14 weeks 35 hours per semester
Workload	Regular (3 SKS) Class: 2.5 hours x 14 weeks = 35 hours Structured activities: 4 hours x 14 weeks = 56 hours Independent Study: 3 hours x 14 weeks = 42 hours Exam: 1.5 hours x 4 time = 6 hours Total = 133 hours
Credit points	3 SKS ~ 4.8 ECTS
Requirements according to the examination regulations	Registered in this course Minimum 80% attendance in this course
Recommended prerequisites	-
Module objectives/intended learning outcomes	*General knowledge:* 1. Students are able to understand the theoretical concepts of urban and regional planning in the aspects of urban studies, regional studies, coastal studies, spatial science, planning science, data science, built environment design, infrastructure and transportation systems, environmental management, social systems, economics, management studies, and research /project. 2. Students are able to understand spatial and non-spatial planning methods in decision making in the field of urban and regional planning. 3. Students are able to apply planning formulation techniques and develop alternative spatial/spatial models through qualitative and quantitative approaches in the form of scenarios for setting spatial patterns and spatial structures of cities, regions, coasts.

	4. Students are able to analyze potentials and problems in spatial and non-spatial contexts of cities, regions, and coasts through analysis of aspatial and spatial aspects linkages. ***Specific knowledge:*** 1. Students are able to apply the concept of infrastructure development, techniques and infrastructure service standards as well as the formulation of infrastructure provision scenarios. 2. Students are able to explain the basic principles and concepts of infrastructure systems. 3. Students are able to explain the challenges and opportunities for infrastructure development. 4. Students are able to apply standard infrastructure management and provision in regional and city development including electricity infrastructure, telecommunications, clean water and sanitation systems, solid waste systems, drainage systems, energy infrastructure and transportation infrastructure. 5. Students are able to think logically and systematically to make the right decisions in developing regional and city infrastructure.
Content	1. Understanding of infrastructure as well as challenges and opportunities for infrastructure development 2. The concept of green infrastructure 3. City infrastructure in the form of social facilities 4. City infrastructure in the form of green open space 5. City infrastructure in the form of solid waste infrastructure 6. City infrastructure in the form of clean water and sanitation infrastructure 7. City infrastructure in the form of drainage and clean water 8. City infrastructure in the form of telecommunications infrastructure and fire fighting 9. Understanding of regional infrastructure material 10. Regional infrastructure in the form of green energy infrastructure 11. Regional infrastructure in the form of land transportation infrastructure 12. Regional infrastructure in the form of sea transportation

	13. Regional infrastructure in the form of air transportation 14. Understanding of urban infrastructure and regional infrastructure in the case study
Study and examination requirements and forms of examination	*4 assessments:* | Evaluation	Method	Weight
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1	Weekly presentation	20%
2	Writing test 1 and 2 (Individual)	30%
3	Task report	20%
4	Task presentation (Individual)	30%	 1. **Weekly presentation – week 1-7 and week 9-12** 2. **Writing test – week 8 and week 13** 3. **Task report – week 14-15** 4. **Task presentation – week 14-15**
Media employed	Classical teaching tools with white board and power point presentation, audiovisual, zoom meeting, ITS online classroom.
Reading list	**Main:** 1. Suryokusumo, R. Ferry Anggoro. (2008). Pelayanan Publik dan Pengelolaan Infrastruktur. Sinergi Publishing. Yogyakarta. 2. Kodoatie, Robert J. (2005). Pengantar Manajemen Infrastruktur. Pustaka Pelajar. Yogyakarta. 3. Rainer, George, PE. (1990). Understanding Infrastructure: A Guide for Architect and Planners. John Wiley & Sons. New York. 4. Sinulingga, B.D. (1999). Pembangunan Kota: Tinjauan Regional dan Lokal. Pustaka Sinar Harapan. Jakarta. **Supporting:** 1. Diktat Infrastruktur Wilayah dan Kota 2. Suripin (2003). Sistem Drainase Perkotaan yang Berkelanjutan. Penerbit ANDI. Yogyakarta. 3. Kodoatie, Robert J. dan Roestam Sjarief. (2010). Tata Ruang Air: Pengelolaan Bencana, Pengelolaan Infrastruktur, Penataan Ruang Wilayah, Pengelolaan Lingkungan Hidup. Andi Offset. Yogyakarta. 4. Kodoatie, Robert J. dan Roestam Sjarief. (2005). Pengelolaan Sumber Daya Air Terpadu. Penerbit ANDI. Yogyakarta 5. Benedict, Mark A. (2000) Green Infrastructure: A Strategic Approach to Land Conservation. American Planning Association PAS Memo

	6. McMahon, Edward T. (2000). Green Infrastructure. Planning Commissioners Journal, Number 37. 7. Hoctor, T.S., M.H. Carr and P.D. Zwick. (2000). Identifying a Linked Reserve System Using a Regional Landscape Approach: The Florida Ecological Network. Conservation Biology 14:4:984-1000. 8. Weber T., and J. Wolf. (2000). Maryland's Green Infrastructure: Using Landscape Assessment Tools to Identify a Regional Conservation Strategy. Environmental Monitoring and Assessment 63:265-277.