Module Description

Module name:	Urban and Regional Infrastructure Planning
Module level, if applicable	Basic
Code, if applicable	213D5213
Subtitle, if applicable	Introduction to Infrastructure planning in district/zone scale
Courses, if applicable	1st Meeting: Introduction: Spatial Structure in District/Zone Planning 2nd Meeting: Transportation Demand, Network and Facilities 3rd Meeting: Waste Management Demand, Network and Facilities 4th Meeting: Clean Water Demand, Network and Facilities 5th Meeting: Sewerage Demand, Network and Facilities 6th Meeting: Drainage Demand, Network and Facilities 7th Meeting: Electricity Demand, Network and Facilities 8th Meeting: Energy Demand, Network and Facilities 9th Meeting: Telecommunication Demand, Network and Facilities 10th Meeting: Mid Test, Case Study Discussion and Teamwork Division 11th Meeting: Secondary Data Collection 12th Meeting: Primary Data Collection 13th Meeting: Comparative Analysis and Issues/Problems Identification 14th Meeting: Mapping (Analysis Map and Infrastructure Planning Map) 15th Meeting: Team Presentation and Discussion 16th Meeting: Report Submission, Final Test, and Closing
Semester(s) in which the module is taught	3
Person responsible for the module	Prof. Dr-Ing. Muh. Yamin Jinca, M.STr.
Lecturer	Prof. Dr-Ing. Muh. Yamin Jinca, M.STr. Ir. Muh. Fathien Azmy, M.Si Dr.techn. Yashinta K.D. Sutopo, ST., MIP
Language	Bahasa Indonesia
Relation to curriculum	1. Supplementary knowledge and skills for the course core of "District/Zone Planning Studio" (offered in 3rd semester) within the 2nd key content, i.e., Spatial Structure Planning, that consists of 3 components: 1) the relationship between land-use and service centers with transportation and other infrastructure networks, and 2) the integration between public infrastructure networks 2. Supplementary knowledge and skills for another course core of "Undergraduate Thesis" (offered in 7th and 8th semester, both for the research and planning types), related to the ability to investigate, evaluate and analyze the issues and problems related to the existing condition (i.e., demand and supply) of public infrastructure 3. Supplementary knowledge and skill for other related courses that require basic understanding and analysis of public infrastructure,

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<tr><td></td><td>including “Internship Work” (offered in 5th semester) and “Community Service Program” (offered in 6th semester).</td></tr>
<tr><td>Type of teaching, contact hours</td><td>Interactive lecture
Problem based learning by teamwork assignment
Class and Team discussion</td></tr>
<tr><td>Workload</td><td>This course consists of 3 credits in one meeting/ week (1 credit consists of 50 minutes of face-to-face, 60 minutes of teamwork assignments/tutorials, and 60 minutes of self-study).</td></tr>
<tr><td>Credit points</td><td>3</td></tr>
<tr><td>Requirements according to the examination regulations</td><td>Students can attend Final Test if the class attendance ≥ 80% of the total 16 meetings</td></tr>
<tr><td>Recommended prerequisites</td><td>-</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>CLO 1 The students are able to explain or definition the role and scope of infrastructure planning in the scale of “District/Zone Plan (Rencana Detail Tata Ruang), the main components and regulation/standard used in 8 public infrastructures (i.e., transportation, waste, clean water, sewerage, drainage, electricity, energy, and telecommunication), the method to calculate the current and future demand (of at least one out of 8 infrastructures), the method to investigate, analyze and identify issues/problems in the existing condition of at least one out of 8 public infrastructures, related to: availability, quantity and quality of the components, the method and systematic process to create an analysis map (in the scale of District/Zone Scale) containing issues/problems related to the network and location facilities (of at least one out of 8 public infrastructures) (to support ILO 1, PI-2/3)
CLO 2 The students are able to estimate/calculate the current and future demand (of at least one out of 8 infrastructure) within a district/zone scale, investigate, analyze and identify issues/problems (of at least one out of 8 infrastructure) in case study area related to existing condition. (to support ILO 4, PI-2/3)
CLO 3 The students are able to create an analysis map of at least one out of 8 infrastructure and Infrastructure Planning Map (containing Network and Location of Facilities) of a District/Zone Plan. (to support ILO 9, PI-2/2)
CLO 4 The students are able to compile a team report containing the process and result. (to support ILO 6, PI-2/4)

The following table is mapping of the ILO and CLO in this course:

<table>
<tr><td></td><td>ILO 1</td><td>ILO 4</td><td>ILO 6</td><td>ILO 9</td></tr>
<tr><td>CLO 1</td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>CLO 2</td><td></td><td>x</td><td></td><td></td></tr>
<tr><td>CLO 3</td><td></td><td></td><td></td><td>x</td></tr>
<tr><td>CLO 4</td><td></td><td></td><td>x</td><td></td></tr>
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<tr><td>Content and relation to the studio works</td><td>This course supports the course of Site Planning Studio, Urban Planning Studio, and Regional Planning Studio. This course also has an inverse relationship with the course of housing and settlement system as an initial element of a city/region. Infrastructure provision is mainly based on the demand that represented by number of people in settlement area.

The overall content of the course:
1. The role and scope of infrastructure planning in the scale of “District/Zone Plan
2. The basic definition, main components, and regulation/standard
3. Demand calculation
4. Identification and Mapping Infrastructure Issues/problems
5. Mapping the Structure Plan of a District/Zone Plan

Students will practice the related content in the a case study in studio works.
The Content of Team Assignment: point 3, 4, and 5</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>Grading is based on:
- Written Mid Test (25% of total grade)
- Written Final Test* (25%)
- Team presentation (20%)
- Quality of question/respond during class discussion (10%)
- Quality of Team report (20% of total grade)
*1 chance for a Remedial Final Test

<table><tr><th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr><tr><td>85 – 100</td><td>A</td><td>4.00</td></tr><tr><td>80 - <85</td><td>A-</td><td>3.75</td></tr><tr><td>75 - < 80</td><td>B+</td><td>3.5</td></tr><tr><td>70 - < 75</td><td>B</td><td>3.0</td></tr><tr><td>65 - < 70</td><td>B-</td><td>2.75</td></tr><tr><td>60 - < 65</td><td>C+</td><td>2.5</td></tr><tr><td>50 - < 60</td><td>C</td><td>2.00</td></tr><tr><td>40 - < 50</td><td>D</td><td>1.00</td></tr><tr><td>< 40</td><td>E</td><td>0.00</td></tr></table></td></tr>
<tr><td>Media employed</td><td>SIKOLA, Zoom</td></tr>
<tr><td>Reading list</td><td>1. Ministry Regulation of Public Work No. 20 Year 2011 related to Guidance of Compilation of Detailed Spatial Plan (in Bahasa: Permen PU No. 20 Tahun 2011 tentang Pedoman Penyusunan Rencana Detail Tata Ruang), page 18 to 20 and appendix page L2-1 to L2-6.
2. Robert J. Kodoatie, Ph.D, 2005, Introduction to Infrastructure Management (in Bahasa: Pengantar Manajemen Infrastruktur), Yogyakarta: Pustaka Pelajar, ISBN: 979-3237-90-2. Page 8, 10, 30, 120, 121 (Drainage), 194 (Clean Water Supply), 215 (Solid Waste), 250 (Domestic Sewerage), 258 (Transportation)
3. Suripin, 2004, Sustainable Urban Drainage System (in Bahasa: Sistem Drainase Perkotaan yang Berkelanjutan), Yogyakarta: C.V Andi Offset, 2004.</td></tr>
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