

Module Description

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|---|---|
| Module name: | Sustainable Infrastructure Planning |
| Module level, if applicable | - |
| Code, if applicable | 219D5223 |
| Subtitle, if applicable | - |
| Courses, if applicable | |
| Semester(s) in which the module is taught | 4 |
| Person responsible for the module | Dr.-Ing. Muh.Yamin Jinca, M.Str |
| Lecturers | Dr.-Ing. Muh.Yamin Jinca, M.Str Ir.Muh. Fathien Azmy, Msi Dr.Techn. Yashinta K.D. Sutopo, ST., MIP |
| Language | Bahasa Indonesia |
| Relation to curriculum | Sustainable infrastructure planning is the compulsory subject in the fourth semester/second year. The course is aimed to support the advance studio courses (Urban planning and regional planning studios). The course is aimed to equip the students with basic knowledge, concept, and principle in planning the sustainable infrastructure. |
| Type of teaching | The educational approach used is Student Centered Learning (SCL) by applying various methods, such as: small group discussions, collaborative learning, problem-based learning, and project-based learning. Students will implement theories /concepts in planning with the actual cases in different spatial scales. |
| Workload | This course consists of 3 credit points (CP) in one meeting/week. 1 credit consists of 50 minutes of face-to-face, 60 minutes of assignments/tutorials and 60 minutes self-study. |
| Credit points | 3 |
| Requirements according to the examination regulations | The number of student attendance is at least 80% of the total meeting. |
| Recommended prerequisites | - |
| Module objectives/intended learning outcomes | CLO 1 Students can implement logical, creative, and critical thinking's and have a good knowledge of concept/theories and principles in sustainable infrastructure planning, particularly in maritime culture (Supports ILO 1, PI-2/3). CLO 2 Students have a good understanding of concept/theories and principles in sustainable infrastructure planning and can implement the concept/theories and principles based on demand in urban and regional scale (Supports ILO 3, PI-2/3). CLO 3 Students can implement their knowledge and skill to solve the complex and multi-dimensional infrastructure problems in |

| | <p>urban and regional context (Supports ILO 1, PI-1/3 and ILO 3, PI-2/3).</p> <p>CLO 4 Students can response, analyze and synthesize various types of information such as text, numbers, graphics, and has an open-minded thought towards the development of knowledge (Supports ILO 6, PI-2/4 and ILO 8, PI-2/2).</p> <p>CLO 5 Students can participate in a teamwork as part of the process to solve the complex problems and appreciate the ethical codes and moral value in professional world as a planner (Supports ILO 7, PI-2/2 and ILO 10, PI-3/4).</p> <p>The following table is mapping of the ILO and CLO in this course:</p> <table border="1" data-bbox="610 627 1468 837"> <thead> <tr> <th></th> <th>ILO 1</th> <th>ILO 3</th> <th>ILO 6</th> <th>ILO 8</th> <th>ILO 7</th> <th>ILO 10</th> </tr> </thead> <tbody> <tr> <td>CLO 1</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO 2</td> <td></td> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO 3</td> <td>x</td> <td>x</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO 4</td> <td></td> <td></td> <td>x</td> <td>x</td> <td></td> <td></td> </tr> <tr> <td>CLO 5</td> <td></td> <td></td> <td></td> <td></td> <td>x</td> <td>x</td> </tr> </tbody> </table> | | ILO 1 | ILO 3 | ILO 6 | ILO 8 | ILO 7 | ILO 10 | CLO 1 | x | | | | | | CLO 2 | | x | | | | | CLO 3 | x | x | | | | | CLO 4 | | | x | x | | | CLO 5 | | | | | x | x |
|--|--|-------|-------|-------|-------|--------|-------|--------|-------|---|--|--|--|--|--|-------|--|---|--|--|--|--|-------|---|---|--|--|--|--|-------|--|--|---|---|--|--|-------|--|--|--|--|---|---|
| | ILO 1 | ILO 3 | ILO 6 | ILO 8 | ILO 7 | ILO 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO 1 | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO 2 | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO 3 | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO 4 | | | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLO 5 | | | | | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Content and relation to the studio works</p> | <p>The course’s discussion divided into four parts that represent four basic infrastructures i.e., 1) Water system; 2) Transportation, 3) Drainage, wastewater, and waste management; 4) Electrical and telecommunication. The discussion covers theories and principles for sustainable infrastructure planning, management of sustainable infrastructure planning, basic threshold is calculating the infrastructure demand based on a specific spatial scale, innovation in provision and planning for sustainable infrastructure.</p> <p>Sustainable Infrastructure Planning Course supports Urban Planning Studio. The linkage of this study and Urban Planning Studio can be seen from the assignment that has same study location. The assignment of this course is to explore issues related to water system, transportation, drainage, waste management and electrical and telecommunication in urban area. Students are also asked to calculate the infrastructure demand. It becomes basic to develop and plan sustainable urban infrastructure in Urban Planning Studio.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Study and examination requirements and forms of examination</p> | <p>This course will be graded as follows:</p> <ol style="list-style-type: none"> 1. Assignment in every part of the discussion themes: Case study, Analysis of given data/case, Planning (60%) 2. Class activities (20%) 3. Final Exam and report: Final Report and Presentation (20%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | <table border="1" data-bbox="703 239 1373 625"> <thead> <tr> <th>Percentage of Achievement</th> <th>Grade</th> <th>Conversion Value</th> </tr> </thead> <tbody> <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> </tbody> </table> | Percentage of Achievement | Grade | Conversion Value | 85 – 100 | A | 4.00 | 80 - <85 | A- | 3.75 | 75 - < 80 | B+ | 3.5 | 70 - < 75 | B | 3.0 | 65 - < 70 | B- | 2.75 | 60 - < 65 | C+ | 2.5 | 50 - < 60 | C | 2.00 | 40 - < 50 | D | 1.00 | < 40 | E | 0.00 |
|---------------------------|---|---------------------------|-------|------------------|----------|---|------|----------|----|------|-----------|----|-----|-----------|---|-----|-----------|----|------|-----------|----|-----|-----------|---|------|-----------|---|------|------|---|------|
| Percentage of Achievement | Grade | Conversion Value | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 85 – 100 | A | 4.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 - <85 | A- | 3.75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 - < 80 | B+ | 3.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 - < 75 | B | 3.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65 - < 70 | B- | 2.75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 - < 65 | C+ | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 - < 60 | C | 2.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 - < 50 | D | 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| < 40 | E | 0.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Media employed | SIKOLA, Zoom | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reading list | <p>Books:</p> <ol style="list-style-type: none"> 1. Adisasmita, S. 2012. Perencanaan Infrastruktur Transportasi Wilayah. Graha Ilmu. 2. Firehock, K & Walker, R.A. 2015. Strategic Green Infrastructure Planning: A multi-scale approach 3. Hall, T. 2015. The Robust City. Routledge, Taylor and Francis Group. London and New York. 4. Parkin, J & Sharma, D. 1999. Infrastructure Planning. Thomas Telford. 5. Sudrajat, H.R. 2006. Mengelola Sampah Kota. Penebar swadaya. 6. Sutantono. B. 2012. Manajemen Infrastruktur Wilayah. UI Press. 7. Rustiadi, E., Safulhakim, S., Panuju, D.R. 2009. Perencanaan and Pengembangan wilayah. Yayasan Pustaka Obor Indonesia. <p>Other supporting literature:</p> <ol style="list-style-type: none"> 1. Undang-Undang No. 32 Tahun 2009 tentang perlindungan dan pengelolaan lingkungan hidup 2. UU RI No. 26 Tahun 2007 Tentang Penataan Ruang 3. Peraturan Pemerintah RI No. 13 Tahun 2017 Tentang Perubahan Atas Peraturan Pemerintah No. 26 Tahun 2008 Tentang Rencana Tata Ruang Wilayah Nasional 4. Peraturan Pemerintah RI No. 14 Tahun 2016 Tentang Penyelenggaraan Perumahan Dan Kawasan Permukiman 5. Peraturan Menteri Pekerjaan Umum No. 05/PRT/M/2008 Tentang Pedoman Penyediaan Dan Pemanfaatan Ruang Terbuka Hijau di Kawasan Perkotaan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |