

## PL2132 Urban and Regional Infrastructure

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| Module designation                                            | Urban and Regional Infrastructure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Semester(s) in which the module is taught                     | 3 <sup>rd</sup> Semester (second year of undergraduate program)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Person responsible for the module                             | Dr. Ir. Binsar Parasian Naipospos, M.SP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Language                                                      | Indonesian                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Relation to curriculum                                        | Compulsory course for the Undergraduate Program in Urban and Regional Planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Teaching methods                                              | 1. Lecture, 2. Case study, 3. Problem-based learning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Workload (incl. contact hours, self-study hours)              | (Estimated) Total workload: around 9 hours per week x 16 weeks = 144 hours <ul style="list-style-type: none"> <li>• Face to face teaching: 42 hours (lecture)</li> <li>• Structured activities: 24 hours (lecture) and 24 hours</li> <li>• Independent study: 24 hours (lecture) and 24 hours</li> </ul> Exam: 6 hours                                                                                                                                                                                                                                                                                                                            |
| Credit points                                                 | 3 CU/5 ECTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Required and recommended prerequisites for joining the module | Basic course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Module objectives/intended learning outcomes                  | <ol style="list-style-type: none"> <li>1. Ability to classify the elements of each type of regional and urban infrastructure and transportation system</li> <li>2. Ability to demonstrate the ability to know the components and principles of demand and supply for regional and urban transportation and infrastructure.</li> </ol>                                                                                                                                                                                                                                                                                                             |
| Content                                                       | Introduction to Urban and Regional Infrastructure course is aimed to give an understanding of elements in regional and urban infrastructure and transportation system to the students. The regional and urban infrastructure consists of water supply, wastewater, stormwater, solid waste, energy and electricity, telecommunication, transportation, irrigation, and public and social facilities. In this course, students learn demand aspect of infrastructure and transportation, the physical component of infrastructure or supply aspect, as well as social, economic, financial, and environmental issues in the infrastructure system. |
| Examination forms                                             | Midterm Exam (40%) Final Exam (40%) Assignment(s) (20%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Study and examination requirements                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Reading list                                                  | <ol style="list-style-type: none"> <li>1. Michael R. Penn and Philip J. Parker, Introduction to Infrastructure: An Introduction to Civil and Environmental Engineering, , 2011</li> <li>2. George Rainer, Understanding Infrastructure: A Guide for Architects and Planners, , Wiley &amp; Sons, 1990</li> </ol>                                                                                                                                                                                                                                                                                                                                  |