

PL6233 Infrastructure and Transportation Planning

Module designation	Infrastructure and Transportation Planning
Semester(s) in which the module is taught	2 nd Semester (first year of master program)
Person responsible for the module	Shanty Yulianti Rachmat, S.T., M.T., M.Sc., Ph.D.
Language	Indonesian
Relation to curriculum	Compulsory - elective for Infrastructure and Transportation System concentration
Teaching methods	Lectures and discussions, empirical studies / case studies, class debates, brainstorming, talk shows / panels, roundtables, guest lectures
Workload (incl. contact hours, self- study hours)	(Estimated) Total workload: around 9 hours per week x 16 weeks = 144 hours • Contact hours: 2 hours per week = 2 x 16 = 32 hours • Self-study hours: 7 hours per week = 7 x 16 = 112 hours
Credit points	3 CU/5 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	Students are able to structure the latest issues and challenges in the field of Infrastructure and Transportation, as well as mastery of the principles, processes, theories, and types of analysis used in infrastructure and transportation planning.
Content	Elaborating characteristic of goods and passengers' movement, the linkage components in the transportation system, the basic concepts of transport planning: scope, context dan phase analysis. Survey methods and data analysis. Concepts and methods of transportation system performance analysis. Identify transportation problems. Formulation of objectives and goals. An alternative formulation of the planning scheme. Transportation planning policy analysis. Identification and quantification methods of the impact. The basic concept of transportation demand forecasting, planning alternative evaluation methods.
Examination forms	Written exam (mid-term and final), assignments
Study and examination requirements	Take home test/ Midterm exam (25%) Final paper/ Final exam (25%) Assignments (50%)

Reading list	1. Clifford, B. M. 2023. Major Infrastructure Planning and Delivery: Exploring Nationally Significant Infrastructure Projects (NSIPs) in England and Wales. (n.p.): UCL PRESS. 2. Elmer, V., Leigland, A. 2013. Infrastructure Planning and Finance: A Smart and Sustainable Guide. United States: Taylor & Francis. 3. Parkin and Sharma, Infrastructure Planning, Thomas Thelford, 1999. Perpustakaan PWK 658.4 PARI 4. Goodman and Hastak, 2015, Infrastructure Planning, Engineering, and Economics, Second Edition 5. https://www.accessengineeringlibrary.com/browse/infrastructure-planning-engineering-and-economics-second-edition 6. Uddin and Haas, 2013, Public Infrastructure Asset Management, Second Edition 7. https://www.accessengineeringlibrary.com/browse/public-infrastructure-asset-management-second-edition#c9780071820110ch03 8. Mays, 2001, Stormwater Collection Systems Design Handbook 9. https://www.accessengineeringlibrary.com/browse/stormwater-collection-systems-design-handbook 10. Tchobanoglous, and Frank. 2002. Handbook of solid waste management, 2nd Edition 11. https://www.accessengineeringlibrary.com/browse/handbook-of-solid-waste-management-second-edition 12. Mays, 2002, Urban Water Supply Handbook 13. https://www.accessengineeringlibrary.com/browse/urban-water-supply-handbook#p2000a20599701_3001 14. Davis, M. L. 2019. Water and Wastewater Engineering: Design Principles and Practice, Second Edition. United States: McGraw Hill LLC. 15. https://www.accessengineeringlibrary.com/browse/water-and-wastewater-engineering-design-principles-and-practice#fullDetails 16. Ortúzar, J. d. D., Willumsen, L. G. 2024. Modelling Transport. United Kingdom: Wiley.
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