

PL4037 Transportation Modeling

Module designation	Transportation Modeling
Semester(s) in which the module is taught	7/8 th Semester (first year of undergraduate program)
Person responsible for the module	Dr. I Gusti Ayu Andani, S.T, M.T.
Language	Indonesian
Relation to curriculum	Elective Course
Teaching methods	Combination of lecture, small group discussion, case study, self-directed learning, and problem-based learning
Workload (incl. contact hours, self-study hours)	(Estimated) Total workload: around 9 hours per week x 16 weeks = 144 hours • Face to face teaching: 42 hours (lecture) • Structured activities: 24 hours (lecture) and 24 hours • Independent study: 24 hours (lecture) and 24 hours • Exam: 6 hours
Credit points	3 CU/5 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	1. Ability to explain basic concepts about transportation system behavior in relation to activity systems and traffic systems 2. Ability to explain fundamental concepts, aggregate models, disaggregate models, and transportation system performance including transportation operations, traffic, and transportation routes 3. Ability to develop both quantitative and qualitative models of transportation systems, including their components, transportation demand behavior, and the performance of the transportation system itself
Content	Elaborating basic concepts of the behavior the transport system in terms of system activity and the traffic system. Basic understanding, the aggregate model, disagregat model, the performance of the transportation system: operational transport, traffic, transportation routes. Development of quantitative and qualitative models of the transport system involving components,behaviour of transportasion demand and transportation system performance.
Examination forms	Mid Exam (30%), Final Exam (35%), Assignment (35%)
Study and examination requirements	Preparation of group assignments in the form of real case-based papers that are presented
Reading list	1. Meyer and Miller, Urban Transportation Planning.- 2nd.ed, 2, McGraw Hill, 2003 2. Creswell. John. W, Qualitative Inquiry and Research Design Choosing Among Five Traditions, Sage, 1998 3. Ortuzar, J.D., and L.G. Willumsen., Modelling Transportation, , John Wiley & Son, 1994