



UNIVERSITI TEKNOLOGI MARA

BTP356: URBAN TRANSPORTATION

Course Name (English)	URBAN TRANSPORTATION APPROVED
Course Code	BTP356
MQF Credit	2
Course Description	This subject focuses on transportation planning and modelling. It will examine the rationale for modelling as well as the different approaches to modelling transport. Transport modelling can be used to provide to an estimation of traffic flows or to investigate strategic planning issues to assess specific policy options, such as congestion charging, or to identify the interaction between land use changes and transport.
Transferable Skills	Demonstrate ability to socialize with people from different walks of life. Demonstrate ability to manage personal performance to meet expectations and demonstrate drive, determination, and accountability.
Teaching Methodologies	Lectures, Seminar/Colloquium, Simulation Activity
CLO	CLO1 Able to be analyze the processes involve in the forecasting of travel demand for transportation CLO2 Able to perform transport modeling and forecasting CLO3 Capable of designing transportation systems and transport plans CLO4 Able to evaluate traffic impact assessments
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction 1.1) The transportation planning process 1.2) Characteristics of transport problems	
2. Modelling Transport 2.1) Modelling and decision making 2.2) Issues in transport modelling 2.3) Structure of the classic transport model 2.4) Continuous transport planning	
3. Trip Generation Modelling 3.1) Factors affecting trip generation 3.2) Growth-factor modelling 3.3) Regression analysis 3.4) Category analysis 3.5) Forecasting variables in trip generation analysis	
4. Trip Distribution Modelling 4.1) Growth-factor methods 4.2) Synthetic or gravity models 4.3) Calibration of gravity models	
5. Modal Split and Direct Demand Models 5.1) Factors influencing the choice mode 5.2) Trip-end modal-split models 5.3) Trip interchange modal-split models 5.4) Multimodal-split models 5.5) Direct demand models	

6. Trip Assignment 6.1) Basic concepts 6.2) Traffic assignment methods 6.3) Public transport assignment
7. Traffic Impact Assessment 7.1) Traffic Impact Studies 7.2) Methods and procedures
8. Intelligent Transport System 8.1) Introduction to ITS 8.2) Components of ITS 8.3) Applications of ITS
9. Transport Plan Evaluations 9.1) Evaluation Principles 9.2) Evaluation Methods (COBA, IRR, NPV)
10. Assignment 10.1) n/a
11. Examination 11.1) n/a

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Group Project	Urban Transport Study	20%	CLO2 , CLO4
	Individual Project	Term Paper	10%	CLO1 , CLO3
	Individual Project	Essay Writing	10%	CLO3

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • Eade, J.1 & Smith, M.P 2008, <i>Transnational ties: Cities, Migration, and Identities</i>, New Brunswick, N.J: Transaction • Liu, & Huang 2007, <i>Shanghai urban planning</i>, United Kingdom: Thomson • Grava, S. 2003, <i>Urban Transportation Systems: Choices for com</i>, Ed., , McGraw Hill, New York [ISBN:] • Banister,D. 2002, <i>Transport Planning</i>, Spon Press, London. • Wates, N. 2000, <i>The community planning handbook: How people can shape thier cities, town and villages in any part of the world</i>, London: Earthscan • Bruton,M.J. 1985, <i>Introduction to Transport Planning</i> , 3 Ed., , Hutchinson,London [ISBN:] • Ben Akiva, M.E. and Lerman, S.R. 1985, <i>Discrete Choice Analysis: Theory and</i>, Ed., , The MIT Press, Cambridge, Mass [ISBN:] • Button, K.J., Pearman, A.D. and Fowkes, A.S. 1982, <i>Car Ownership Modellingand</i>, Ed., , Gower, Aldershot [ISBN:] • Meyer, M.D. and Miller, E.J. 2001, <i>Urban Transportation Planning: a decision-ori</i>, Ed., , McGraw Hill, Boston [ISBN:] • Faulks,R.W 1986, <i>Principles of Transport</i> , 4 Ed., , [ISBN:] • Foot, D. 1981, <i>Operational Urban Models</i>, Ed., , Methuen, London [ISBN:] • John, D.E. (ed.) 1992, <i>Transportation Planning Handbook</i>, Ed., , Prentice-Hall, Englewood Cliffs [ISBN:] • Chadwick, G. 1987, <i>Models of Urban and Regional Systems in Devel</i> Ed., , Pergamon Press, Oxford [ISBN:]

Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources