



Jordan University of Science and Technology
Faculty of Engineering
Civil Engineering Department

CE744 Advanced Transportation Planning - JNQF Level: 9

Second Semester 2023-2024

Course Catalog

3 Credit Hours. This course will be providing the students with basic understanding of transportation modeling; demand forecasting models; models of demand elasticity; mass transit pricing and marketing; urban mass transportation systems.

Teaching Method: On Campus

Text Book

Title	Traffic and Highway Engineering
Author(s)	Nicholas J. Garber and Lester A. Hoel
Edition	4th Edition
Short Name	Ref. No. 1
Other Information	2010

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref. No. 2	Transportation Engineering: Introduction to Planning, Design, and Operations	Jason C. Yu	1st Edition	1983
Ref. No. 3	Transportation Planning Handbook	John D. Edwards	1st Edition	1992
Ref. No. 4	Urban Transportation Planning: A Decision-oriented Approach	Michael D. Meyer and Eric J. Miller	1st Edition	1984
Ref. No. 5	Traffic Engineering	William R. McShane and Roger P. Roess	4th Edition	1990

Instructor

Name	Dr. Aslam Alomari
Office Location	C2L1
Office Hours	Sun : 11:30 - 12:30 Sun : 12:30 - 13:30 Mon : 12:30 - 14:30 Tue : 12:30 - 13:30 Thu : 12:30 - 13:30
Email	aaalomari3@just.edu.jo

Class Schedule & Room	
Section 1: Lecture Time: Tue : 14:30 - 17:30 Room: قاعة ندوات /مدني	

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction	From Ref. No. 1 , From Ref. No. 2
Week 2	Urban Transportation Planning (Trends, Process & Management)	From Ref. No. 1 , From Ref. No. 3
Week 3	Statewide Transportation Planning (Methodologies & Process)	From Ref. No. 1 , From Ref. No. 4
Weeks 4, 5	Transportation Demand Forecasts (Demand Models: aggregate & disaggregate): Trip Generation Models	From Ref. No. 1 , From Ref. No. 2 , From Ref. No. 3 , From Ref. No. 4
Weeks 6, 7, 8	Transportation Demand Forecasts (Demand Models: aggregate & disaggregate): Trip Distribution Models	From Ref. No. 1 , From Ref. No. 2 , From Ref. No. 3 , From Ref. No. 4
Week 9	Midterm Exam	

Weeks 10, 11	Transportation Demand Forecasts (Demand Models: aggregate & disaggregate): Mode Choice Models	From Ref. No. 1 , From Ref. No. 2 , From Ref. No. 3 , From Ref. No. 4
Weeks 12, 13	Transportation Demand Forecasts (Demand Models: aggregate & disaggregate): Route Choice Models	From Ref. No. 1 , From Ref. No. 2 , From Ref. No. 3 , From Ref. No. 4
Weeks 14, 15	Students? Presentations	
Week 16	Final exam	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
To define the proper system approach to transportation problems solving [1L9K1]	10%	
Be able to define urban transportation planning [1L9K1]	10%	
Be able to solve problems related to trip generation models [1L9S2]	20%	
Be able to solve problems related to trip distribution models [1L9S2]	20%	
Be able to solve problems related to mode choice models [1L9S2]	20%	
Be able to solve problems related to route choice models [1L9S2]	20%	

Relationship to Program Student Outcomes (Out of 100%)											
PI-1a	PI-2a	PI-2b	PI-2c	PI-2d	PI-3a	PI-4a	PI-4b	PI-5a	PI-6a	PI-6b	PI-7a

Relationship to NQF Outcomes (Out of 100%)	
L9K1	L9S2
20	80

Evaluation

Assessment Tool	Weight
In-Class Midterm	30%
Projects, Presentations, Assignments, and other Class Work	20%
Final Examination	50%

Policy	
University Rules	University rules will be strictly applied

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