



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

CE541 Traffic Engineering - JNQF Level: 7

First Semester 2023-2024

Course Catalog

3 Credit Hours. Traffic flow theory; volume, speed, delay, and traffic safety studies; capacity analysis of signalized and un-signalized intersections; capacity analysis of two-lane highways, multilane highways, and basic freeway segments.

Text Book

Title	traffic and highway engineering
Author(s)	Garber and Hoel
Edition	4th Edition
Short Name	textbook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
manual	highway capacity manual	transportation research board	3rd Edition	

Instructor

Name	Prof. Hashem Al-Masaeid
Office Location	C1 L3
Office Hours	Sun : 10:00 - 11:30 Mon : 10:00 - 11:00 Mon : 13:00 - 14:00 Tue : 10:00 - 12:00 Wed : 10:00 - 11:00 Wed : 13:00 - 14:00
Email	hashem@just.edu.jo

Class Schedule & Room

Section 1:

Lecture Time: Mon, Wed : 08:30 - 10:00

Room: C3015

Prerequisites

Line Number	Course Name	Prerequisite Type
234430	CE443 Highways Geometric	Prerequisite / Study

Tentative List of Topics Covered

Weeks	Topic	References
Weeks 1, 2, 3, 4, 5	traffic flow theory and traffic studies	From textbook
Weeks 6, 7, 8, 9, 10, 11	un-signalized and signalized intersections	From manual
Weeks 12, 13, 14, 15, 16	analysis of highways: two-lane highways, multilane highways, and basic freeways	From manual

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
explain traffic flow theory, identify traffic elements, and calibrate traffic models [1SO7] [1L7K1]	10%	
describe how to conduct traffic engineering studies; including volume, speed, delay, and traffic safety studies [1SO6] [1L7S1]	20%	
explain the operation and control of signalized and un-signalized intersections and determine the capacity and level of service [1SO1] [1L7S2, 1L7S3]	30%	
conduct capacity analysis and determine the level of service of two-lane highways, multilane highways, and basic freeway segments [1SO2] [1L7S3]	40%	

Relationship to Program Student Outcomes (Out of 100%)

SO1	SO2	SO3	SO4	SO5	SO6	SO7
30	40				20	10

Relationship to NQF Outcomes (Out of 100%)

L7K1	L7S1	L7S2	L7S3
10	20	15	55