



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

CE746 Highway Safety - JNQF Level: 9

Second Semester 2023-2024

Course Catalog

3 Credit Hours. This course focuses on traffic accident problem, contributing factors, and modelling of accidents. Also, this course includes the effects of highway geometric elements, pavement condition, traffic operation, and policies on traffic accidents. Safety audit and accident costing also included in the course.

Teaching Method: On Campus

Text Book

Title	- Jordan Traffic Institute Reports, Ministry of Interior, Amman-Jordan.
Author(s)	Ministry of Interior
Edition	1st Edition
Short Name	Report
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Handbook	Handbook of Road Safety Measures	Rune Elvik	2nd Edition	
Book	- Relationship between Safety and Key Highway Features	National Research Council	1st Edition	

Instructor

Name	Prof. Hashem Al-Masaeid
Office Location	C1 L3
Office Hours	
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Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 11:30 - 13:00 Room: قاعة ندوات /مدني

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Nature of Road Safety Problem	From Report
Week 2	Road accidents in Jordan and Comparison with other Countries	From Report
Week 3	Factors Contributing to Road Accidents	From Handbook
Week 4	Accident Surveys and Analyses	From Handbook
Week 5	Traffic accident Modelling	From Handbook , From Book
Week 6	Identification of high accident locations	From Handbook
Week 7	Evaluation of highway safety Improvements	From Book
Week 8	Potential Saving in Accidents	From Handbook , From Book
Weeks 9, 10	Effect of Road Design and Equipment on Road Safety (cross section, alignment, intersections, signs and signals, bridges, guardrails, markings, lighting and access control).	From Handbook , From Book
Week 11	Effect of Pavement Surface Conditions and Treatments on Road Safety	From Report , From Handbook
Week 12	Effect of Traffic Management and Traffic volume on Road Safety	From Handbook , From Book
Week 13	Effect of Traffic Speed and Speed Control	From Handbook
Week 14	Effect of Urban Planning Variables	From Handbook
Week 15	Drivers in relation to Road Safety	From Handbook

Week 16	Pedestrians Safety	From Handbook
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Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
- Identify the problem of traffic accidents in Jordan [1PI-1a] [1L9K1]	20%	Midterm exam
- Identify factors contributing to road accidents [1PI-1a] [1L9K1]	15%	Midterm exam
- Analyze and model traffic accidents [1PI-6b] [1L9S3]	15%	Midterm exam
- Evaluate the effects of geometric, traffic, operation, and policy issues on traffic accidents. [1PI-2a] [1L9C6]	20%	Team paper
- Identify high-risk drivers and pedestrians groups [1PI-1a] [1L9K2]	10%	Team paper
- Realize the effect of road safety audits [1PI-7a] [1L9K3]	20%	Team paper

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
45	20									15	20

Relationship to NQF Outcomes (Out of 100%)				
L9K1	L9K2	L9K3	L9S3	L9C6
35	10	20	15	20

Evaluation	
Assessment Tool	Weight
Midterm exam	30%
Team paper	20%
Final exam	50%

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