



The Hashemite University Faculty of Engineering Civil Engineering Program Course Syllabus



Course Title:	Transportation Engineering and Planning 3 (3,0, 0)	Course Number:	110 401367
Designation:	Compulsory	Prerequisite(s):	110403242
Instructor:	Dr. Randa Oqab Mujalli	Instructor's e-mail:-	randao@hu.edu.jo
Office Hour	To be announced/ during summer semesters there are no office hours		

Course Description (catalog): Urban transportation system issues and challenges; Land use; demand forecasting; Transportation modeling, including trip generation, trip distribution, modal split, and traffic assignment. Urban mass transportation systems.

Textbook(s) and/or Other Supplementary Materials:

- Paul H. Wright, Norman J. Ashford and Robert J. Stammer, Transportation Engineering Planning and Design, Fourth Edition, John Wiley and Sons, 1998

- James banks, Introduction to Transportation Engineering, 2nd edition, McGraw Hill, 2004

- C.S. papacosta and P.D. Prevedouros, Transportation Engineering and Planning, 3rd edition Prentice Hall, 2001

- Nicholas garber and lasterHoel, Traffic and Highway Engineering, 4th edition, Cengage Learning, 2010

Major Topics Covered:

Topics	No. of Weeks	Contact hours*
1. Introduction to transportation systems	1/3	1
2. Transportation planning	1	3
3. Demand forecasting using 4 steps modeling	4	12
4. Engineering economy in transportation	3	9
5. Evaluation of transportation alternatives	2	6
6. Urban mass transit systems	3.5	11
7. Airports	1	3
Total	14	45

Specific Outcomes of Instruction (Course Learning Outcomes, CLO):

After completing the course, the student will be able to:

CLO1: Understand the characteristics of the different modes of transportation in order to plan for new transportation facilities using the 4 steps demand modeling and to evaluate the proposed facilities economically. (c)

CLO2: Gain considerable knowledge of the challenges facing the transportation engineering in terms of energy, and environmental adverse impact. (h)

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
General Engineering Student Outcomes		
(a)	an ability to apply knowledge of mathematics, science, and engineering	
(b)	an ability to design and conduct experiments, as well as to analyze and interpret data	
(c)	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	(M)50%
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	
(f)	an understanding of professional and ethical responsibility	
(g)	an ability to communicate effectively	
(h)	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context	(M)50%
(i)	a recognition of the need for, and an ability to engage in life-long learning	
(j)	a knowledge of contemporary issues	
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	
H=High, M= Medium, L=Low		

Grading Plan:

1st Exam	25 Points
2nd Exam	25 Points
Home works and quizzes	10 Points
Final exam	40 Points

- General Notes:**
- The maximum allowed number of absentees from the course is **six** classes.
 - Exceeding these limits will lead to prevention from attending the final exam.
 - No MAKE-UP EXAMS**

Prepared by: Dr. Randa Oqab Mujalli

Date: 31st October, 2017