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 editionPrentice 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	
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	M

2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	
3	an ability to communicate effectively with a range of audiences	
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7	n ability to acquire and apply new knowledge as needed, using appropriate learning strategies.	M
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: October 11, 2020**