



College of Engineering

Civil Engineering Department

Semester: Spring / 2019

About The Course

Course Title: Transportation Planning

Class: 5

Course No: 901516

Credit Hours: 3

Lecture Room: 407

Obligatory/ Optional: Obligatory

Text Books:

1. **Transportation Engineering;** Introduction to Planning, Design & Operation. Jason C. Yu, Elsevier.
2. **Transport Planning and Traffic Engineering,** CA O'Flaherty(Editor), MGH Bell, PW BonsaU, GR Leake, AD May, CA Nash

The Instructor

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Course Description

The field of transportation planning; role of transportation planning in society economic, social, political and environmental aspects. Operation and vehicular characteristics for all modes of transportation. Transportation modeling, demand forecasting models, models of demand elasticity, mass transit pricing and marketing, urban mass transportation systems. planning and design of port facilities.

Course Objectives

- 1.** Understanding the planning and operation of transportation systems.
- 2.** View major issues related to urban transportation problems.
- 3.** Identify factors affecting urban demand for transportation.
- 4.** Discuss the different types of urban trips and describe the characteristics of these trips.

Learning Outcome

1. Understand transportation planning.
2. Understand how travel demand is generated.
3. Discuss the effect of housing and socioeconomic characteristics on urban transportation planning process.
4. Provide basic knowledge and understanding on planning and design processes of urban mass transit including pricing and marketing options.
5. Discuss economic and cost/benefit issues related to urban transportation process and financing of public transportation.
6. Making students aware of how language works to convey meaning as its basic function

Course Outline and Time schedule

Week	Course Outline
1 st week	Introduction to course outlines, objectives and grading
	Introduction to Transportation Engineering
2 nd week	Transport administration and planning
	Chapter 2 - text 2
3 rd week	Basic Elements of Transportation Planning
	Text 1
4 th week	Transport policy
	Chapter 3 - text 2
5 th week	Urban Transportation Planning
	Text 1
	First Exam
6 th week	Forecasting Travel Demand
	Chapter 3 - text 2
7 th week	Principles of transport analysis and forecasting
	Chapter 3 - text 2
8 th week	Trip Generation and Trip Distribution
	Text 1
9 th week	Mode Choice
	Text 1
10 th week	Transport planning strategies
	Chapter - 6 text 2

11 th week	Economic and environmental appraisal of transport improvement projects
	Chapter - 4 text 2
12 th week	Second Exam
	Environmental issues affecting highway projects
13 th week	Ref. 1 - Chapter 1
	Requirements governing transportation planning
	Ref. 1 - Chapter 1
14 th week	Safety system - concept and benefit
	Ref. 1 - Chapter 6
15 th week	Highway safety - warrants
	Text 1
	Final exam

Presentation methods and techniques

Methods of teaching varied according to the type of text, student and situation. The following techniques are usually used:

- 1- Lecturing with active participations.
- 2- Problem solving.
- 3- Cooperative learning.
- 4- Discussion.
- 5- Learning by activities.
- 6- Connecting students with different sources of information

Assessment Strategy and its tools

The assigned syllabus is assessed and evaluated
Through: feedback and the skills that are acquired by the students

The tools:

- 1- Diagnostic tests to identify the students level and areas of weakness
- 2- Formal (stage) evaluation
 - a) Class Participation
 - b) 1st Exam
 - c) 2nd Exam
 - d) Activity file

Tool & Evaluation

Tests are permanent tools & assessment, in addition to the activity file which contains curricular and the co-curricular activities, research, report papers and the active participation of the student in the lecture.

The following table clarifies the organization of the assessment schedule:

Test	Date	Grade
1 st Exam	According to the department schedule	20%
2 nd Exam	According to the department schedule	20%
Activities & Participation	Students should be notified about their marks	20%
Final Exam	According to the department schedule	40%

Activities and Instructional Assignment

- 1- Practical assignments to achieve the syllabus objectives.
- 2- Weekly Pop quiz and Homeworks
- 3- Semester-End project

Regulations to maintain the Teaching-Learning Process in the Lecture:

- 1- Regular attendance.
- 2- Respect of commencement and ending of the lecture time.
- 3- Positive relationship between student and teacher.
- 4- Commitment to present assignments on time.
- 5- High commitment during the lecture to avoid any kind of disturbance and distortion.
- 6- High sense of trust and sincerity when referring to any piece of information and to mention the source.
- 7- The student who absents himself should submit an accepted excuse.
- 8- University relevant regulations should be applied in case the student's behavior is not accepted.
- 9- Allowed Absence percentages is (15%).

Internet websites

1. **Highway Capacity Manual 2010** : <http://hcm.trb.org/>
2. **Transportation Research Board**: <http://www.trb.org/Main/Home.aspx>
3. **AASHTO** : <https://www.transportation.org/>

References:

1. **Traffic and Highway Engineering**; Nicholas J. Garber Lester A. Hoel, Fourth Edition
2. **Transportation Engineering, Planning, and Design**, R. Paquette, N. Ashford, P. Wright,"
3. **Highway Capacity Manual, (HCM)** transportation research reports, national research council, Washington D.C., 2000.
4. **AASHTO**, A Policy on Geometric Design of Highways and Streets, American Association of State Highways and Transportation Officials, Washington, D. C., 2001.

Syllabus Classification

Objectives	<i>Learning outcomes</i>	<i>Assessment tools</i>
1-	Students are able to identify engineering problems	Assignments, projects, and exams
2-	Students are able to design a component to meet certain constraints	Assignments, projects, and exams
3-	Students are able to use modern engineering tools for engineering practice	Assignments, projects, and exams
4-	Students are able to recognize the impact of engineering solutions in an environmental context	Assignments, projects, and exams
5-	Students are able to formulate a collective solution to a Problem	Assignments, projects, and exams

