Zarqa University

Faculty of Engineering
Department: Civil Engineering
Course title: Public Transportation Engineering

Prerequisite:
Instructor:
Lecture's time: As schedule
Semester:
Office Hours: As schedule

Course description:

A major goal of this course is to establish a bridge between the world of practitioners and the world of research and academia for the purpose of narrowing the gap between these two worlds. I hope that such a bridge will also lead to opportunities for collaboration and interaction in order to improve public transit service and, no less important, its image.

Each chapter during the course opens with section containing information and remarks for practitioners, called 'Practitioner's Corner'. In fact, one can never tell which way the train went by looking at the track: for a practical decision, one needs more information. The purpose of these Corners is to impart guidance about sections of the chapter that are appropriate and sections that are perhaps too difficult for practitioners, thus allowing the less academically inclined to flow with the book and capture its substance.

Aims of the course:

1. To provide students with an understanding of the basic definitions in public transportation
2. Learning the operational planning decomposition process as an Introduction to Transit Service Planning.
3. To provide students with information about Data Requirements and data Collection techniques.
4. Learning the basic principle of Frequency and Headway Determination
5. Learning the basic principle of the Timetable Development
6. Learning the cars (Automobiles and taxies) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area.
7. Learning the busses (traditional busses, trolleybuses and BRT) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area.
8. Learning the rail (monorail, LRT and HRT) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area.
9. Develop presentation skills and team work through individual and group projects

Intended Learning Outcomes (ILOs):

1. Ability in understanding fundamentals of public transportation engineering
2. Learning the operational planning decomposition process as an Introduction to Transit Service Planning
3. Learning the principle of Data Requirements and data Collection techniques.
4. studying and Learning the basic principle of Frequency and Headway Determination
5. Learning the basic principle of the Timetable Development
6. Learning the cars (Automobiles and taxies) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area
7. Learning the busses (traditional busses, trolleybuses and BRT) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area.
8. Learning the rail (monorail, LRT and HRT) transportation mode and be able to distinguish between them and be able to select the right mode to accommodate the demand for selecting area.
9. Develop presentation skills and team work through individual and group projects

Course structures:

Week	C. Hrs	ILOs	Topics	Teaching Procedure	Assessment methods
1	3	1	fundamentals of public transportation engineering	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	2	operational planning decomposition process	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	3	Data Requirements and data Collection techniques	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	4	Frequency and Headway Determination	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	5	Timetable Development Exam I (up to end of week 6)	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	6	Introduction into transportation mode	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	6	the cars (Automobiles and taxies) transportation mode	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion

2	6	7	the busses (traditional busses, trolleybuses and BRT) transportation	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	8	the rail (monorail, LRT and HRT) transportation mode	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework and Discussion
1	3	9	Projects presentation	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework, Discussion and project
1	3		Review, Final Exam	Lecturing with active participations PPt. presentations, Discussion	Quizzes and Homework, Discussion and project

References:

Main Text Book: **Public Transit Planning and Operation,** Theory, modeling and practice.

Assessment Methods:

Methods	Grade	Date
Quizzes and Homework and Project	10	As schedule
First Exam	20	As schedule
Second Exam	20	As schedule
Project	-	-
Final Exam	50	As schedule