

AL-Albayt University

Faculty of Engineering/Department of Civil Engineering

Syllabus for the **Highways Engineering** Course

Second Semester 2019

Instructor : Eng. Taher Khaled Harahsheh

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Main Objective: Presenting the various principles of route location. Design and layout of the different types of horizontal and vertical alignments.

Studying the super elevation, stopping and passing sight distances, the different types of highway cross-sections, geometric design of intersections and interchanges, earthwork and mass haul diagram.

Textbook: “Traffic and Highway Engineering”, *Nicholas J. Garber and Lester A. Hoel*, Cengage Learning, 4th Edition, 2012

Course Outline:	Topic
1	Introduction
2	Road User and Vehicle Characteristics
3	Roadways and Their Geometric Characteristics a) Horizontal Alignment b) Vertical Alignment
4	Cross-Sections Layout and Design
5	Geometric Design of Intersections and interchanges
6	Earthwork and mass haul diagram

Course outcomes:

At the end of this course, the student should be able to:

1. Locate highways through route surveying
2. Determine the required sight distance
3. Design horizontal and vertical alignments of highways
4. Conceptually design cross-sections, intersections, and interchanges
5. Calculate earthwork and mass haul diagram

Assessment and Grading Policies:

First In-Class Midterm: 20.0 %

Second In-Class Midterm: 20.0 %

Quizzes and homework: 10.0 %

Final Examination: 50.0 %

Attendance: University rules will be strictly applied

Solid Rules:*1. Academic Honesty*

- a) Homework and Quizzes: Students may work together on homework assignments and are encouraged to help each other with them. However, blind copying of assignments is not permitted. Copying of homework will be considered an act of scholastic dishonesty and will receive zero credit for that assignment.

b) Exams: Students have the responsibility of avoiding the appearance of cheating during tests, e.g., clearing desk top of all unauthorized material, putting all unauthorized study materials out of view, and keeping their eyes on their own work.

Violations of academic honesty on exams will result in punishment ranging from a grade of zero to a grade of F in the course.

2. Exams Attendance

It is the student's responsibility to be fully aware of exams dates. Only sound reasons will be accepted for being absent from an exam. For authorized absences, the instructor will give a makeup test. For unauthorized absences, the instructor will decide on a course of action depending on the circumstances