

## Faculty of Engineering & Technology

### Highway and airport Engineering

#### Information :

**Course Code :** SCM 524

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Department of Structural Engineering & Construction Management

#### Instructor Information :

Title	Name	Office hours
Associate Professor	Mohamed Elsaid Abdel Motaleb Abdel Razek	2
Teaching Assistant	Ahmed Taher Abdelhamed Mohamed Yousef	

#### Area Of Study :

- Classification of highways
- Geometrical design of the longitudinal direction & cross sections of roads
- Design of hard and flexible pavement
- Outline the techniques of pavement maintenance and repair

#### Description :

Introduction to highway and airport planning, Classification of highways, Design controls and criteria, Design of elements in the longitudinal direction, Design of cross sections, Design of At-Grade intersections, Grade separations and interchanges, Types of pavements, Calculation of stresses in flexible and rigid pavements, Types and characteristics of paving materials and mixtures, Equivalent axel loads, Design of flexible and rigid pavement thickness, Introduction to pavement maintenance and repair.

#### Course outcomes :

##### a. Knowledge and Understanding: :

- 1 - Address the geometrical requirements of highway
- 2 - List the different techniques of pavement maintenance and repair

##### b. Intellectual Skills: :

- 1 - Design the highway geometrically
- 2 - Calculate the equivalent axel loads
- 3 - Design of hard and flexible pavement

##### c. Professional and Practical Skills: :

- 1 - Draw native Longitudinal and cross sections of roads

##### d. General and Transferable Skills: :

- 1 - Work in stressful environment and within constraints

### **Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to highway and airport planning	8	6	2
Classification of highways, Design controls and criteria	8	6	2
Geometrical design of long. & trans. Sections of roads	12	9	3
Design of hard pavement	12	9	3
Design of flexible pavement	12	9	3
Introduction to pavement maintenance and repair.	8	6	2

### **Teaching And Learning Methodologies :**

Lectures

Tutorials

### **Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
1st mid term	25.00		
2nd mid term	25.00		
final	40.00		
Performance	10.00		

### **Course Notes :**

-Lecture Notes on Moodle

### **Recommended books :**

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### **Periodicals :**

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### **Web Sites :**

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