FUTURE UNIVERSITY IN EGYPT جامعة المستقبل

Faculty of Engineering & Technology

Metallic Bridges

Information :

Course Code :	SCM 515	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Department of Structural Engineering & Construction Management

Instructor Information :

Title	Name	Office hours
Professor	Ahmed Hassan Yousef Aly	4
Professor	Ahmed Hassan Yousef Aly	4
Assistant Lecturer	MOHAMMED TAHER ABDELHAMID MOHAMMED YOUSSEF	
Assistant Lecturer	Reham Milad Kamel Samaan	4

Area Of Study :

Upon successful completion of this course, the student should be able to:
- Understand the basic concepts and main principles
- Calculate the values of the essential terms
- Design and draw neat details
- Apply Codes provisions

Regarding types of bridges bridge layout bridge deck stringers cross-girders main girder bracing

Description :

Structural systems for bridges, Floors types, Design loads, Design of plate girders: buckling considerations, fatigue effect, cross-section design, construction details, Design of composite beams, Design of box girders

Course outcomes :

a.Knowledge and Understanding: :	
1 -	List the main items of types of bridges
b.Intellectual Skills: :	
1 -	Assess issues of types of bridges
2 -	Assess issues of bridge layout
3 -	Design the elements of bridge deck
4 -	Design the elements of stringers
5 -	Design the elements of cross-girders
6 -	Design the elements of main girder
7 -	Design the elements of bracing
c.Professional and Practical Skills: :	
1 -	Prepare technical reports for types of bridges
2 -	Draw neat details of bridge layout

3 -	Apply Code provisions regarding bridge deck
4 -	Apply Code provisions regarding stringers
5 -	Apply Code provisions regarding cross-girders
6 -	Draw neat details of main girder
7 -	Apply Code provisions regarding bracing
d.General and Transferable Skills: :	
1 -	Work under stress

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Types of bridges	4	3	1
Bridge layout	8	6	2
Bridge deck	8	6	2
Design of stringers	8	6	2
Design of cross-girders	8	6	2
Design of main girder	12	9	3
Bracing	8	6	2

Teaching And Learning Methodologies :

Lecture
Class Work
Project

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments/Studio work	5.00		
Final exam	40.00		
Performance	10.00		
Project	10.00		
Quizzes	5.00		
Two Mid Term Exams	30.00		

Course Notes :

Student Lecture Notes

Recommended books :

Egyptian Code Of Practice For Steel Construction And Bridges