

Faculty of Engineering & Technology

Metallic Bridges

Information :

Course Code : SCM 526

Level : Undergraduate

Course Hours : 3.00- Hours

Department : Department of Structural Engineering & Construction Management

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 truss bridges layout truss bridges members truss bridges connections cable stayed bridges layout cable stayed bridges members cable stayed bridges connections

Description :

Design of truss bridges: cross-sections used, design of members and connections, construction details, Design of cablestayed

bridges: types of cross-sections, structural analysis methods, design of cross-section.

Course outcomes :

a. Knowledge and Understanding: :

- | | |
|-----|---|
| 1 - | Explain the principals of truss bridges layout |
| 2 - | Explain the principals of cable stayed bridges layout |

b. Intellectual Skills: :

- | | |
|-----|---|
| 1 - | Analyze the system of truss bridges layout |
| 2 - | Design the elements of truss bridges members |
| 3 - | Design the elements of truss bridges connections |
| 4 - | Analyze the system of cable stayed bridges layout |
| 5 - | Design the elements of cable stayed bridges members |
| 6 - | Design the elements of cable stayed bridges connections |

c. Professional and Practical Skills: :

- | | |
|-----|--|
| 1 - | Draw neat details of truss bridges layout |
| 2 - | Apply Code provisions regarding truss bridges members |
| 3 - | Draw neat details of truss bridges connections |
| 4 - | Prepare technical reports for cable stayed bridges layout |
| 5 - | Apply Code provisions regarding cable stayed bridges members |
| 6 - | Draw neat details of cable stayed bridges connections |

d.General and Transferable Skills: :

1 - Work under stress

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Truss bridges layout	8	6	2
Truss bridges members	12	9	3
Truss bridges connections	8	6	2
Cable stayed bridges layout	8	6	2
Cable stayed bridges members	12	9	3
Cable stayed bridges connections	8	6	2
Revision	4	3	1

Teaching And Learning Methodologies :

Interactive Lec.
Discussion
Problem Solving
Project
Report / Present.

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
First Mid Term Exam	15.00		
Quizzes / Assig.	15.00		
Report / Present.	15.00		
Second Mid Term Exam	15.00		

Course Notes :

Handout notes on MOODLE

Recommended books :

" Steel Structure Design " Allowable Stress Design ", Abdel-Reheem Khalil Dessouki, 2009