



#### **b.Intellectual Skills: :**

1 -	Differentiating between diverse types of large span structures considering optimum covered span and resulting form.
2 -	Differentiating between diverse types of high rise structures considering resulting form and plan, also the maximum rise.
3 -	Selecting proper structural system according to the building needs and function.
4 -	Deduce the structure system that is used in a given complete project.

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

1 -	Designing appropriate structure system for various constructional cases that include large span or high rise structures.
2 -	Using freehand sketches and engineering drafting to draw building construction details
3 -	Designing appropriate details for various constructional cases that include large span or high rise structures.
4 -	Build architectural physical models for different construction ways for large spans and high rise constructions.

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

1 -	Manage tasks and resources
2 -	Search for information
3 -	Refer to relevant literatures.

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

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
Introduction	6	2	4
Linear structures (vector-active): steel trusses	6	2	4
Linear structures (Section-active): steel frames	6	2	4
Wooden trusses and frames	6	2	4
space structures(Surface-active): steel space trusses	6	2	4
space structures(Surface-active): Geodesic Domes	6	2	4
space structures(Form-active): Cable structures	6	2	4
space structures(Form-active): Tent structures	6	2	4
Shell structures(Form-active): Folded Roofs	6	2	4
Shell structures(Form-active): shell structures , double curvature	6	2	4
Hybrid Structures	6	2	4
High rise buildings systems (research submission & discussion)	6	0	6
High rise buildings systems (research submission & discussion) + sum up lecture	6	2	4
Revision	6	4	2

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

Interactive lecture
Research (self-study)
Class Work

### **Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
Assignments/Studio work	30.00		
Final exam	40.00		
Midterm exam	10.00		
Participation	10.00		
Self-study	10.00		

### **Recommended books :**

- a) Ching, Francis D. K.; Building Construction Illustration, 4th Ed- 2008
- b) McKay's, W. B. et ell; Building Construction, v. I- 2012
- c) Ramsey, Sleeper; Architectural graphic standards - 201

### **Periodicals :**

-

### **Web Sites :**

-