

SEMESTER – V

SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks											Grand Total	Total Credits
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
						End Sem exam	MST	Quiz Assignment	Total theory block	Credits		End Sem	Term work / Sessional	Continuous Assessment	Total Practical block	Credits		
			L	STUDIO / T	Total Contact Hour	I						II					I+II	
1	A311	Design-V	3	7	10	100	30	20	150	03	18	50	50	50	150	07	300	10

Design of imaginative forms to develop the creativity in terms of built form. Design with application of principles and theory of architectural design and philosophies of contemporary architects. The attempt is towards developing ones own language and philosophy of architecture to guide towards exploring alternative building forms for different activities which help in understanding the relationship of structure and possibilities in building forms. Design problems should include problems of simple and complex nature i.e. temple, gathering places, exhibition pavilion, clubs, cafe, community hall, museums, art gallery, pavilion, sport complexes, nursing homes.

Emphasis shall be given more on three dimensional studies to develop an understanding for man and space relationship and also relevant building bye-laws.

There should be variety of problems in the studio work with changing focus for each problem from theory to construction techniques (local) and site lay outs, covering organisation and detailing of open spaces with the aim to learn to work with practical limitations.

One group exercise of making measure drawings of a building for documentation. Minimum one time problem is to be attempted in class, of 18 hrs duration.

Note: Sessional should be done in the form of drawing sheets and reports for the design projects. Assessment shall be done on the basis of regular reviews.

SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks										Grand Total	Total Credits	
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
												End Sem	Term work / Sessional	Continuous Assessment	Total Practical block			Credits
			End Sem exam	MST	Quiz Assignment	Total theory block	Credits	End Sem	Term work / Sessional	Continuous Assessment	Total Practical block	Credits						
L	STUDIO / T	Total Contact Hour	I						II					I+II				
2	A312	Building Construction-IV	3	4	07	50	20	10	80	03	03	50	50	20	120	04	200	07

1. Design and Constructional details of sliding, sliding folding, revolving doors, swing doors and sliding windows in timber.
2. Design and construction details of fix glazing, side hung doors, in aluminum, fully glass door, rolling shutter and collapsible shutter.
3. Study of metal and aluminium sectioned curtain wall.
4. Study of steel railing, jalis, grills, staircase and ladders. Study of compound wall (advanced type) with security arrangement, study of wicket gate and large entrance gates rolling on wheels.
5. Study of expansion joints, water proofing and roof light. Study of details of various methods of facade treatment and interior finishes.

Note: i) There should be regular site visits to buildings under construction or constructed to explain the above topics. Use of audio-visuals should be stressed.

ii) Minimum 8 sheets shall be prepared out of which two may be in sketch form (scaled).

SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks											Grand Total	Total Credits
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
						End Sem exam	MST	Quiz Assign ment	Total theory block	Credits		End Sem	Term work / Sessional	Continu ous Assessment	Total Practical block	Credits		
			L	STUDIO / T	Total Contact Hour	I						II					I+II	
3	A313	Building Services-I (Sanitation & Plumbing)	3	2	05	50	20	10	80	03	03	-	30	20	50	02	130	05

A) SANITATION

1. Basic principles of sanitation, introduction to modern plumbing system. Study of Indian standards and plumbing bye laws. General introduction to various sanitary fitting & fixtures their placement and functions. Study of internal & external drainage system including study of duct for large verity of buildings including small residences, apartments, block of houses, public buildings etc.
2. Study of various types of sanitary pipes, construction of joints and laying of pipes. Study of traps, inspection chamber, man hole, septic tanks, soak pit and public sewage line. Study of various stages of disposal of domestic effluent from fitting to sewer line. Study of “Sulabha” complex & other “CBRI” toilet details. Study of storm water disposal in various buildings and road side.
3. Importance of sanitary services in the economics of buildings, planning & design disposal of city effluent, various treatment methods of city effluent and recycle of waste water. Study of refuse chutes in multistoried buildings and collection of refuse and recycle of city solid wastes.

B) PLUMBING:

4. Study of sources of water and water treatment for city domestic purpose. Study of quality of potable water.
5. Study of Indian standards and water supply network. Architectural approach to plan the domestic water storage facilities and water distribution system in buildings.

Note: Sessional will be prepared in the form of sanitation schemes, water supply schemes and design of toilets of the given buildings or buildings.

SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks										Grand Total	Total Credits	
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
						End Sem exam	MST	Quiz Assignment	Total theory block	Credits		End Sem	Term work / Sessional	Continuous Assessment	Total Practical block			Credits
			L	STUDIO / T	Total Contact Hour	I						II					I+II	
4	A314	Study Tour, Working Drawing & Measurement Drawings	-	5	05	-	-	-	-	-	-	50	50	10	110	05	110	05

A314 – Study Tour, Working Drawing & Measurement Drawings: One week measurement tour (local or out of station) to measure a building of historical or architectural importance and Study tour is compulsory.

THIRD YEAR – FIFTH SEMESTER
SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks											Grand Total	Total Credits
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
			End Sem exam	MST	Quiz Assign ment	Total theory block	Credits	End Sem	Term work / Sessional	Continu ous Assess ment	Total Practical block	Credits						
L	STUDIO / T	Total Contact Hour	I						II					I+II				
5	A315	Modern Structural Systems	3	1	04	50	20	10	80	03	03	-	30	10	40	01	120	04

- (1) Design of Flat Slab
- (2) Design of continuous and isolated footings
- (3) Design of combined footing :- types of combined footing, design of combined footing (rectangular and trapezoidal only)
- (4) Appropriate methods for an analysis for frames by portal method, cantilever method (horizontal forces only)
- (5) Prestressed concrete:- pre stress and prestressing methods, type and classification of prestressing, losses of prestress

NOTE: i) I.S code 456 is permitted in examination.

ii) Sessional work should include the analysis and design of simple elements along with the drawings.

THIRD YEAR – FIFTH SEMESTER

SEMESTER – V

S. No.	Course Code	Subjects	Period Per Week		Total Teaching Hours	Distribution of Marks											Grand Total	Total Credits
						Theory Block					Theory Exam Duration (Hrs.)	Practical Block						
			End Sem exam	MST	Quiz Assign ment	Total theory block	Credits		End Sem	Term work / Sessional	Continu ous Assess ment	Total Practical block	Credits					
			L	STUDIO / T	Total Contact Hour	I						II					I+II	
6	A316	Building Science-II	3	2	05	50	20	10	80	03	03	-	40	20	60	02	140	05
		(Energy Systems)																

- Types, sources, availability and reserves of conventional and non-conventional energy, Role and importance of Energy in Buildings.
- Assessment of energy consumption in a building and methods of energy conservation:-
 - Through minimizing wastages.
 - Through appropriate use of climatology.
 - Through appropriate design and planning of buildings.
- Introduction to Bio-Climatic architecture, Study of solar radiation on earth's surface, Measurement , angles, estimation and analysis, Orientation of building, with reference to solar radiation. Special design and planning detailing. Active solar architecture. Passive solar architecture.
- Introduction to wind oriented architecture, study and analysis of micro level wind. Design and planning of building considering winds.
- Study of energy efficient building material and construction techniques. Case study of national and international examples. Studio problem.

Note: the sessional work should include reports, drawings, experiments etc. in assignment / seminar form.