UNIVERSITY OF PUNE

DETAIL SYLLABUS

FOR

THIRD YEAR BACHELOR OF ARCHITECTURE

(Third Year B.Arch. & B.Arch. Interior Design) 2008 Course

(to be implemented from 2012-13)

FACULTY OF ENGINEERING

BOARD OF STUDIES IN ARCHITECTURE

THIRD YEAR B.ARCH. & B.ARCH. INTERIOR DESIGN

Sr. No.	Subject Code	Name of Subject	Head	Teaching Scheme			Examination Scheme		
				Lecture Periods	Studio Periods	Total Periods	Term I Marks	Term II Marks	Total Marks
1	313421	Architectural Design III	SV	4	6	10	250	250	500
2	313422	Architectural Design III	Theory				--	100	100
3	313423	Bldg. Tech. & Materials III	SV	2	5	7	150	150	300
4	313424	Bldg. Tech. & Materials III	Theory				--	100	100
5	313425	Theory of Structures III	SS	2	1	3	50	50	100
6	313426	Theory of Structures III	Theory				--	100	100
7	313427	Building Services II	SS	2	2	4	100	100	200
8	313428	Building Services II	Theory				--	100	100
9	313429	Landscape Arch. and Env. Sciences	SS	1	2	3	50	50	100
10	313430	Seminar on Contemporary Architecture	SS	2	--	2	50	50	100
11	313431	Working Drawing	SS	2	3	5	100	100	200
12	313432	Technical Communication	SS	1	1	2	50	50	100
		TOTAL		16	20	36	800	1200	2000

DETAIL SYLLABUS

Subject Code : **313421 ARCHITECTURAL DESIGN III.**(Sessional and Viva) **313421 ARCHITECTURAL DESIGN III.**(Paper)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	4	Term I and Term II Sessional (Internal) Sessional (External) Viva	 100 marks (for each term) 100 marks (for each term) 50 marks (for each term)
Studio Periods per week	6	Total sessional marks for both terms	500 marks
Total Contact Periods per week	10	Paper	100 marks
		Total Marks	600 marks

AIM :

Introduce students to design of buildings with complexities related to services, structure and site planning to accommodate more than one building on a site and help the students to evolve the integrated understanding of the complex relationship between the form, function, context and aesthetics in a building.

OBJECTIVES

1. Introduction to Campus design with reference to design development of campuses developed in the past.
2. Integrating function, structure and services in a building, choice of structural system and resultant effect on visual form / aesthetics of building
3. Development of building design program from client or user's requirements and other social, economic and climate context.
4. Managing a design project – Management of time, compilation, documentation, presentation of information to others and self.
5. Labouring the design process, communicating the design.
6. Introduction to design philosophy.
7. Analysing multiple buildings to be accommodated within a campus and understanding their relationship with each other in context to continuity of form, construction and materials, design theme, climate, etc.
8. Analysing activities around the buildings within a campus and understand the same in context to relation of built form and open spaces, elements of landscape, pedestrian and vehicular movement, their segregation, managing sloping sites, contours, etc.
9. Designing of progressively complex spaces and buildings in terms of area, typology, function etc, with emphasis on either scale or complexity of the project, or both. Complex of low rise and medium rise nature, e.g. – Shopping Mall, Nursing homes / Hospitals with residences, Educational Campus for schools. Auditorium for Cinema / performing arts, Museum, Small industrial complex, Medium scale hotels and resorts, etc.
10. To study a location in a different socio-geographic setting than the Institute, and document the study done during in the tour in the form of a report with emphasis on relevant aspects like climate, social structure, culture, architectural typology, construction technology, urban fabric, economy, etc or any other issues which need to be considered for envisaging a design project in totality.
11. To design in the context of the Location studied, with emphasis on all the aspects that would influence the Design solution.
12. To understand various issues and aspects like sustainability, earthquakes, construction, barrier free environments, etc. and study how these could be integrated in the architectural design process.

SESSIONAL WORK.

Design projects to be given as assignments could be classified into two types.

Type 'A' :- Long duration projects (8-12 weeks)

These could be :

i. Project based on Campus Design with emphasis on site planning & relationship of built and open spaces, circulation and movement pattern, activity pattern, architectural character and image, philosophy etc.

ii. System based project (multistoried / service oriented) with emphasis on structural system, services like HVAC, electrical, etc. fire frightening systems, parking, rules & regulations etc.

Either i or ii could be Issue based Projects- designing in the context studied and addressing various issues of the study context like climate, social structure, culture, architectural typology, construction typology, urban fabric, economy etc.

Type B : Short duration Project (1-3 weeks)

These could be projects dealing with a singular aspect at a time, with emphasis on structures / sociology/ sustainability/ earthquake resistant construction/ specialized services / adaptive reuse of buildings / façade design / interiors / industrial building / barrier free environment or any other appropriate aspect

At least one project of type 'A' and one project of type 'B' to be taken up in a term.

- Stress shall be give on three- dimensional studies through sketch perspectives and models prepared at various stages of design process.
- All Architectural Design Assignments and submissions shall lay emphasis on designing Earthquake Resistant Structures, which will be worked out in consultation with the Teacher of Structures and the Submission work will reflect various technologies adopted.

NOTE:

In order to have parity in nature and complexity of Design Projects it is Suggested that teachers from all the Colleges teaching the subject of Architectural Design shall meet at the beginning of First and Second Term and finalise broad outline of the subject topics, its extent and complexity and also the submission requirements.

RECOMMENDED READING

1. Campus design in India – Kanvinde & Miller
2. Compus Planning _ Richard Dober.
3. Urban Design. The Architecture of towns and cities. –Paul Sprereingen.
4. Exterior design in Architecture ___Ashihara Toshinibu
5. Modern Language of Architecture ___Bruno Zevi.
6. Modern Movements in Architecture ___Charles Jencks
7. Language of Post – modern Architecture - Charles Jencks
8. Complexities and contradictions in Architecture – Robert Venturi
9. Architectural Composition. –Rob Krier.
10. Pattern Language Christopher Alexander.
11. Town Design –Fredrick Gibberd Alexander
12. Various monographs and periodicals

Subject Code : **313423 BUILDING TECHNOLOGY & MATERIALS III.**(Sessional and viva) Subject Code : **313424 BUILDING TECHNOLOGY & MATERIALS III** (Paper.)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods	2	Term I and Term II Sessional (Internal) Sessional (External) Viva	 50 marks (for each term) 50 marks (for each term) 50 marks (for each term)
Studio Periods	5	Total sessional for both terms	300 marks
Total Contact Periods per week	7	Paper	100 marks
		Total Marks	400 marks

OBJECTIVES :

To introduce students to

A. Soil types & its behavior under different loading conditions
B. Foundation on low load bearing soil
C. More about R.C.C. & Steel skeleton structures
D. Sliding & Sliding folding doors & bay windows in wood
E. Aluminium & P.V.C. doors and windows
F. R.C.C. and mass retaining wall
G. Reinforced cavity and decorative brickwork
H. Simple joinery and design for wood furniture
I. Long span structures in R.C.C. & Steel
J. Modular Co-ordination & introduction to prefabricated types construction using pre-cast building components.
K. Paneling, partition and suspended ceiling in various materials.
L. Basement construction & waterproofing
M. Use of stainless steel in building construction.

Note : The portion covered in Third Year out of following topics shall be taught with special reference to Earthquake Resistant Detailing with local practices and regional responses.

COURSE OUTLINE

- Foundations, Soil Stabilization, Retaining Walls, Plinth Filling
- Flooring, Walls, Openings
- Roofs, Parapets, Terraces, Boundary Walls
- Underground and Overhead Tanks
- Staircases and isolation of structures.

TERM I:

PART – I

Foundation:

1.0 Setting out of structures.

2.0 Soil types & its behavior under different loading conditions.
3.0 Foundation on weak strata.
3.1 Raft Foundation.
3.2 Pile Foundation.
4.0 R.C.C. stub columns & stanchion fixing details (Sketches and notes).

PART- II

Super Structure:

1.0 Study of R.C.C. framed multi-storied structure of about ground +four upper floors with specific study of:-
1.1 Balconies and Canopies.
1.2 Stairs.
1.3 Lift shafts, machine rooms, etc. *Assignment I* (Approx.3 Drawings)
2.0 Medium span steel structures using built-up sections, appropriate roof trusses, lattice construction, castellated beams, cladding details, rain water disposal etc.
Assignment II (Approx. 2 Drawings).
3.0 Retaining walls and its terminology, mass retaining wall in bricks, stones etc. and cantilever retaining wall in R.C.C. (Sketches and notes).
4.0 Reinforced brickwork including reinforced brick walls, piers of different thicknesses, reinforced brick lintols and reinforced brick slabs screens and jails
(Sketches and notes).

PART- III

Roofs & Floors:

1.0 Introduction to long span (upto 25 to 30 mts) construction in steel and reinforced concrete (Sketches, notes, models, etc.)
2.0 Modular co-ordination. Pre-cast building components and systems developed by C.B.R.I. and other renowned National and International research organizations.
Assignment III(Approx. 2 Drawings).

PART- IV

Materials:

Sketches,notes, collecting material samples, brochures, visits to sites, place of manufacture, site reports, etc.
1.0 Light weight concrete.
2.0 Guniting
3.0 Readymix concrete.
4.0 Waterproofing- cement based, chemical based, bituminous and other proprietary systems.
5.0 Metal alloys and stainless steel and their application in the building industry.

TERM II

PART –I

Doors and Windows:

1.0 Sliding and Sliding-folding doors in wood *Assignment IV*(approx 2 Drawings)
2.0 Aluminium and PVC doors and windows of proprietary type (Sketches, notes and models)
3.0 Bay windows in wood (Sketches and notes)

PART –II

Furniture & Interior Construction:

1.0 Simple joinery in wood and wood based products for interiors.(Models, sketches and notes).
2.0 Paneling and Space dividers using wood, aluminium and steel skeleton and various finishing materials such as Ply-boards,Fibre-boards, Gypsum-boards, metal sheets Plastic extruded sections, etc.- Single skin and Double skin. *Assignment V(Approx 2drawings)*

3.0 Suspended ceiling in teak wood or metal framing with A.C. sheets, Gypsum boards, Fibre boards,etc. as finishing material. Proprietary system for suspended ceiling.

Assignment VI

4.0 Simple residential furniture in wood and wood derived boards like Divan, Bed, Dinning table, Storage cabinet, Kitchen cabinet, Chair, etc -Any 4 items.

Assignment VII (2 Drawings)

Note: Total no of drawings to be restricted to between 6 to 8 per term.

PART – III

Misc. Construction:

1.0 Single Basement construction with water-proofing details, etc.(Sketches and notes)

2.0 Escalator and elevators – planning concepts, terminology and general construction. (Sketches and notes).

PART – IV

Materials

Sketches, notes, collecting material samples, brochures, visits to sites and places of manufacture, reports, etc

1.0 Glass and Glass products applicable in building industry.

2.0 Polishing of new and old wood and wood derivatives.

3.0 Painting.

4.0 Rendering.

Submission format:

The above mentioned submission format is indicative only.

It is expected that the students develop all round skills in drafting, sketching, model making, 3-d graphics and innovative use of computers to understand the basic principles and use it to applied construction problems.

The subject should be effectively linked with architectural design and more stress will be laid to on site training and hands on experience.

Distribution of marks:

Drawings – 40%,

Site visit reports, presentations etc. with models, 3D graphics etc.– 40%,

Journal – 20%.

References:

Subject Code : **313425 THEORY OF STRUCTURES III** (Sessional) Subject Code : **313426 THEORY OF STRUCTURES III** (Paper.)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods	2	Term I and Term II Sessional (Internal) Sessional (External) Viva	 25 marks (for each term) 25 marks (for each term) nil
Studio Periods	1	Total sessional for both terms	100 marks
Total Contact Periods per week	3	Paper	100 marks
		Total Marks	200 marks

NOTE : While teaching the subject of Theory of Structures Limit State Method shall be adopted instead of Working Stress Method.

COURSE OUTLINE :

1. Soil Mechanics : Introduction to soil Mechanics, trial pits, bearing capacities of common soils, various limits, Foundation problems at site. Bulb of pressure etc.
2. Retaining Walls.
   (i) Active and passive pressures of soil.
   Ranking's theory of Earth pressure. (ii)
   Masonry retaining walls.
   (iii) R.C.C. cantilever retaining wall.
   (iv) Counter fort type retaining wall-concept and general detailing of counter forts.
3. R.C.C. columns with Eccentric loading-introduction only. No calculations.
4. Staircase : Types, loading and design. Details design of simply supported staircases.
5. R.C.C. Foundation : details of isolated footing.
6. Combined footing.
7. Detailed design of rectangular combined footing.
8. Introduction to following :
   (a) Masonry and R.C.C. underground water storage tanks. (b)
   Elevated water towers.
   (c) R.C.C. and steel portal frame.
   (d) Steel columns.
   (e) Steel plate girders and Crane girder.
   (f) Steel castellated girder.
   (Introduction not to include calculation of any of the elements but the selection criteria, placement of main reinforcement, fabrication producer etc.).
9. Introduction to :
   - Trapezoidal footing.
   - Raft footing.
   - Pile foundation.
   - Pile cape.
10. Pre-stressed concrete : Definition, difference between R.C.C. and pre stressed concrete, advantages and disadvantages, type and methods of pre stressing simple problem on calculation of resultant stresses of external forces etc.
11. Ultimate load theory :
    Definition and explanation. Why this theory was developed, difference between working stress block, calculation of balance rectangular simply reinforced section, area of steel required for this Mud to develop working load factor(simple problem on beams only).
12. Limit state analysis : Introduction to concept only and I.S. requirements.
13. Compound Stanchions :
    - Simple problems.
    - Lacing : Finding spacing and size of lacing.
    - Battens : Finding spacing and size of battens.
    - No details design

Design and detailing of a factory building including detailed design and drawings of purlins, trusses and N griders. (Drawing on A2 size sheets).

14. Earthquake Resistance Structural Detailing :
    Seismic Design and detailing of R.C.C. and steel buildings :
    - IS : 1893-2002. IS : 13920-1993, IS : 456-2000, IS : 800-20045.
    - Special reinforcing and connection details in structural drawings.

RECOMMENDED READINGS :

1. Structure in Architecture Salvadori and Heller.
2. Design of steel Structures-Vaziranini and Rathvani.
3. Elements of Structures-Morgan.

Subject Code : **313427 BUILDING SERVICES II** (Sessional) Subject Code : **313428 BUILDING SERVICES II** (Paper)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	2	Term I and Term II Sessional (Internal) Sessional (External) Viva	 100 marks (for each term) 100 marks (for each term) Nil
Studio Periods per week	2	Total sessional marks for both terms	200 marks
Total Contact Periods per week	4	Paper	100 marks
		Total Marks	300 marks

AIM : To introduce students to the concepts of, indoor environmental quality control and providing ambient / comfortable habitable conditions, by integrating the knowledge of active as well as passive methods, in architectural design aimed at environmental sustainability.

TERM 1

COURSE OBJECTIVE

1. To equip students with the knowledge of mechanical ventilation /HVAC and the required technology for application.
2. Integrating these technologies with their architectural design.
3. Evolving understanding in students to choose appropriate systems.

COURSE OUTLINE

AIR CONDITIONING

Introduction to mechanical ventilation, forced ventilation, types of fans used, simple calculations to decide on the no. of fans / sizes

Introduction to fundamental principles of air conditioning. Fluid flow, Heat transfer. Psychometrics of air conditioning processes. Health and comfort criteria, comfort chart. Selection of indoor and outdoor design conditions. Air conditioning systems, selection of systems, ventilation for cooling. Transmission and distribution of conditioned air. Duct size calculations.

TEACHING PLAN

Unit 1

a. Forced ventilation- types of fans used, calculations to decide on the no of fans required
b. Air conditioning – heating and cooling, air conditioning equipment, air distribution, data and space requirements.

SESSIONAL ASSIGNMENT

Assignments shall consists of

a. Calculating the sizes and no. of fans required to be provided or a specific interior and its layout for the same.
b. Preparing an air conditioning layout for part of design project, with duct size calculations.
c. Compiling of required information collected from site visits, market surveys and finding out latest trends and materials for the same.

SESSIONAL ASSESMENT

1. 40% marks will be allotted for compilation of literature, brochures, handbooks, market surveys etc.

2. 60% marks shall be allotted for services layouts, with details.

TERM II:

AIM.

Understanding of design criteria for good hearing conditions in enclosed and open spaces with relation to spatial characteristics and developing the ability to apply the same to architectural design.

Integrating passive and active fire fighting systems in architectural design projects.

COURSE OBJECTIVES:

1. To equip students with the knowledge of acoustics and the required technology, for its application.
2. Integrating these technologies with their architectural design.
3. Evolving understanding in students to choose appropriate systems.

COURSE OUTLINE

Introduction to architectural acoustics. Acoustical problems in architectural design. Criteria for good hearing conditions in enclosed and open spaces. Properties of sound. Human ear and its cognizance to hearing. Reverberation; Sabine's formula for reverberation time. Sound absorbing materials, their properties and applications. Acoustical requirements in an auditorium design. Acoustical designs of rooms for speech, music and recording studio. Sound amplification systems. Environmental noise control, air-borne and structure borne noise, control of mechanical noise and vibrations. Transmission of sound, noise reduction.

Methods of fire-fighting, rules, regulations and equipment.

TEACHING PLAN

Unit 1. Acoustics

a. Brief history of architectural acoustics, acoustical problems as outcome of contextual influences and limitations of materials and technologies.
b. Characteristics of sound.
c. Study of acoustical materials, their classification and application.
d. Acoustical treatment to various enclosed spaces with calculations of the time of reverberation.
e. Noise control.
f. Sound amplification systems.
g. One live case study.

Unit 2. Fire fighting and fire safety.

a. Causes and spread of fire, combustibility of building materials, structural elements and their fire resistance.
b. Passive control- fire protection in buildings, safety codes, rules and regulations.
c. Active control- fire fighting using fixed and portable fire fighting equipment.

SESSIONAL ASSIGNMENT

Assignments shall consists of

a. Calculating the time of reverberation for an enclosed space and designing an acoustical treatment for the same, to achieve good hearing conditions.
b. Compiling of required information collected from site visits, market surveys and finding out latest trends and materials for the same.
c. Case study for fire fighting and fire control for an apartment building, with basement parking.

SESSIONAL ASSESMENT

1. 40% marks will be allotted for compilation of literature, brochures, handbooks, market surveys etc. .
2. 60% marks shall be allotted for acoustical treatment of an interior space.

RECOMMENDED READING

1. Ernest Tricomi-ABC of Air conditioning
2. Heating and Air Conditioning of buildings.
3. Smith, Philips and Sweeney-Environmental Science
4. Doelle Leslie-Environmental Acoustics
5. Knudsen and Harris-Acoustical designing in architecture
6. K.A.Siraskar-Acoustics in building design
7. National Building code.

Subject Code : **313429 LANDSCAPE ARCHITECTURE & ENVIRONMENTAL SCIENCES** (Sessional)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	1	Term I and Term II Sessional (Internal) Sessional (External) Viva	 50 marks (for each term) 50 marks (for each term) Nil
Studio Periods per week	2	Total sessional marks for both terms	100 marks
Total Contact Periods per week	3	Paper	Nil
		Total Marks	100 marks

AIM :

To introduce the students to landscape design and site planning and imbibe importance of integrated design of built & open spaces and evolve understanding of sustainable site development addressing the functional, aesthetic and environmental issues.

TERM 1

COURSE OBJECTIVES

a. To introduce the students to Landscape architecture and its scope.
b. To develop understanding of site analysis and site planning and integrated design of open and built spaces.
c. To understand the elements and principles of landscape design and role of landscape elements in design of outdoor environments on the site.
d. To study the changing relationship of man with nature in various parts of the world through various ages and study history of landscape design.

COURSE OUTLINE

Introduction to Landscape Design – its scope and objectives; elements and principles of landscape design and their application in outdoor space design; Site studies and site planning : Integration of built and open spaces; Introduction to storm water drainage , planting design & grading. History of landscape design.

TEACHING PLAN

Unit 1 Introduction

Introduction of landscape architecture, its scope and understanding the differences between landscape design and building design. Significance of time in landscape design.

Unit 2 Site Studies and Site Planning

Principles of site planning. Site survey and appraisal – the physical and social context of the site and various site characteristics such as microclimate, topography, hydrology, existing features (natural and manmade), etc. Site suitability analysis. Process of developing a brief for open spaces. Design issues in site planning and siting of buildings. Integrated approach to design of building and open spaces. Introduction to grading, landform modifications and surface water drainage.

Unit 3 Elements & Principles of Landscape Design

Elements of landscape Design – Landform, water, plants and built elements (hard areas, paths, terraces) . Understanding the visual (colour, form, texture) characteristics and also the non-visual characteristics (smell, touch, sound) characteristics of these elements and their usage to achieve the functional, aesthetic and environmental goals. Principles of landscape design (harmony, balance, contrast, etc.).

Unit 4 History of Landscape Architecture

Changing relationship of man with nature in various phases in history and its influence on the environment. Reviewing landscape design and garden design in history in various parts of the world & phases in history – Eastern (India, China, Japan), Western (Egypt, Mesopotamia, Greece, Roman, Medieval, Renaissance & Baroque, English school) and Central (Persia, Islamic landscapes). Industrialization, New towns, Need for parks, Park movement in America. Contemporary movements.

SESSIONAL WORK

1. At least one landscape design & site development project (limited to one building on a site) in which students should evolve a rational behind design of open spaces based upon functional aspects, microclimatic analysis including building shadow analysis, visual and spatial character desired and then develop a landscape design. (**60%** of total marks allotted). The design should be presented in form of drawings to explain the landscape development in totality, which shall include comprehensive landscape development plan, site sections, sectional details, planting policy, views etc.
2. Written Assignments (**40%** of total marks)

a. Unit 3 (Landscape elements): Visit to designed landscapes and preparing case study appraisal report of not less than 1000 words supported by graphics. (10% of total marks)
b. Unit 4 (History of landscape architecture) : Detailed essay of at least 1500 words with graphical illustrations based upon the topics in the syllabus on themes such as comparisons, case studies, use of landscape elements in history etc. (10% of total Marks)
c. Test on units 1 to 4: 20% of total marks.

<u>TERM 2</u>

COURSE OBJECTIVES

a. To evolve understanding of plant selection for functional, aesthetical and ecological applications in design based upon the plant characteristics and their habits.
b. To introduce the concepts of sustainable site planning, components of environment and environmental concerns.
c. To develop understanding of the role of landscape design in evolving sustainable site planning and also in passive climatic control at building and site level.
d. Introduction to landscape construction and services.

e. Application of the knowledge of site planning and landscape design to address the environmental issues.

COURSE OUTLINE

Plants and Design; Introduction to landscape construction and services (drainage, irrigation, lighting); Execution of a landscape proposal; Environment – components and issues; Environmental concerns: landscape design & sustainable site planning; landscape design in situations such as roof tops & indoor locations; role of landscape design in response to environmental issues in urban areas.

TEACHING PLAN

Unit 5 Plants and Design

Study of plant material – trees, shrubs, ground covers and climbers, physical characteristics and habit. Role of plants in landscape design. Plant selection criteria – functional, visual, ecological and micro climatic aspects. Building shadow analysis for ascertaining hard-soft areas and choice of plants.

Unit 6 Landscape Construction and Services

Introduction to the landscape services – lighting, surface water drainage systems, irrigation systems. Introduction to construction in landscape – paths, retaining walls, level changes, fences, boundary walls, decks, gates, trellis, pergola etc. Introduction to landform modifications, earthworks and grading. Roof top landscapes and indoor landscapes. Understanding the process of the execution of a landscape proposal.

Unit 7 Environment: Components and Concepts

Introduction to environment and its components (biotic and abiotic), Concepts of energy and resource conservation, bio-diversity, pollution, green house effect, ozone layer depletion, sustainability.

Unit 8 Environmental Concerns, Landscape Design and Sustainable Site Planning.

Application of the knowledge of site planning and landscape design to address the environmental issues, achieve passive climatic control and evolve sustainable site plan. Water harvesting (roof water, recharging ground water), solid waste management (vermiculture pits, composting, degradable and non-degradable wastes). Root zone treatment. Sewage treatment plant. Landscape design in response to environmental problems in urban areas.

SESSIONAL WORK

1. At least one campus planning project (with more than two buildings on the site) from the third year architectural design which the student has undertaken. A comprehensive site and landscape development plan should be submitted along with supporting background work such as site analysis, slope analysis, zoning rationale, building program analysis. Design proposal should include a comprehensive landscape development plan, Site sections, planting policies, details of civil work items such as steps, retaining wall, planters etc., surface water drainage concept. (**70%** of total Marks).
2. Written Assignments (**30%** of total marks)
    a. Unit 5 (Plants and design): Study and documentation of at least four plants to understand their characteristics and use in landscapes. (10% of total marks)
    b. Unit 7 & 8 (Environment): Literature or case study review and discussion of any one environmental issues pertinent to the syllabus. (10% of total marks).
    c. Test on units 5 to 8: 10% of total marks.

RECOMMENDED READINGS:

1. **Appleton, J**. *The Experience of Landscape*, London: John Wiley & Sons. 1995.
2. **Bose, T.K. and Choudhary, K.**Tropical Garden Plants in Colour. Horticulture and Allied Publishers. 1991.

3. **Botkin D. B. & Keller E.A**. *Environmental Science: Earth as a Living Planet*. NY: John Wiley & Co. 1995.
4. **Dee, C**. *Form and Fabric in Landscape Architecture : A visual introduction*, UK : Spon Press. 2001.
5. **Eckbo, G**. *Urban Landscape Design*, NY: McGraw Hill Book Company.1964.
6. **Gopalaswamiengar, K.S**. *Complete Gardening in India*, 4th ed. Bangalore: Gopalswamy Parthasarathy. 1991.
7. **Jellicoe, G. & Jellicoe, S**. *The Landscape of Man*, London: Thames and Hudson. 1991.
8. **Kanvinde A. & H. James Miller.** Campus Design in India: Experience of a Developing Nation. Jostens/American Yearbook Co, 1969.
9. **Kaplan, R., Ryan, R. L. and Kaplan, S**. *With People in Mind – Design and Management of Everyday Nature*, Island Press. 1998.
10. **Laurie, M**. *An Introduction to Landscape Architecture,* NY : American Elsevier Pub.Co Inc. 1975.
11. **Lyall S**. Designing the New Landscape. UK :Thames & Hudson. 1998.
12. **Lynch, K**. *Site Planning*, Cambridge : The MIT Press. 1962
13. **McHarg I**. Design with Nature. NY : John Wiley & Co. 1978.
14. **Motloch, J. L**. *Introduction To Landscape Design*, US: John Wiley and sons. 2001.
15. ***National Building Code of India***. New Delhi : Indian Standards Institution. 2005.
16. **Randhawa M.S**. *Flowering Trees*. New Delhi : National Book Trust. 1998.
17. **Rutledge, A.J**. *Anatomy of a Park*, NY : McGraw Hill Inc. 1971.
18. **Simonds, J.O**. *Landscape Architecture : The Shaping of Man's Natural Environment*, NY : McGraw Hill Book Co. Inc. 1961.
19. **Thompson, I. H** . *Ecology, Community And Delight: Sources Of Values In Landscape Architecture*, London : E & FN Spon.2000.
20. **Williams, S**. *Outdoor recreation and the urban environment*, London : **Routledge.** 1995**.**

Subject Code : **313430 SEMINAR ON CONTEMPORARY ARCHITECTURE** (Sessional)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	2	TermI and Term II Sessional (Internal) Sessional (External) Viva	 25 marks (for each term) 25 marks (for each term) nil
Studio Periods per week	--	Total sessional marks for both terms	100 marks
Total Contact Periods per week	2	Paper	nil
		Total Marks	100 marks

COURSE OBJECTIVES:

Modern architecture is the synthesis of a series of progressive movements since post-industrial period. It is necessary for students to understand these movements, styles, buildings, construction, and contribution of masters in a wider context.

COURSE OUTLINE:

The study includes the progressive developments of the requirements, architectural character and technological advancements of each period / style. The analytical study must include examples and sketches with highlighting the relevant features. The study emphasizes to inculcate the research spirit and awareness of architectural heritage among the students.

TERM I

Socio-political and other influences Philosophies, approaches and purposes Architectural, constructional and other features Contribution of the pioneers
Following movements / schools / styles (3 to 9) to be studied with relevant examples based on the above mentioned points:

1. Industrial Revolution: new materials, methods and requirements
2. Revivalism: Neo-Classic, Neo-Gothic
3. Arts & Crafts Movement
4. Art Nouveau Style
5. Expressionism
6. Bauhaus
7. De Stijl
8. International Style
9. Post Modernism
10. Colonial architecture in India

SESSIONAL WORK

The Sessional work shall comprise of individual work of the student completed under the guidance and supervision of the subject teacher as follows:

1. **Journal:** Hand written journal with notes and manually drawn sketches of relevant examples on the above mentioned syllabus contents: **30 marks**
2. **Project work**: a report or graphical representation or a model of any relevant topic from the above mentioned syllabus contents: **20 marks**

TERM II

1. **Seminar**: on Cotemporary architecture with global context as Styles / Movements / contribution of any international architects / significant buildings
2. **Measured Drawing**: Any significant structure relevant to three years of syllabus contents

SESSIONAL WORK

The Sessional work shall comprise of **individual work** of the student completed under the guidance and supervision of the subject teacher as follows:

1. **Seminar**: a report of the seminar presented of any relevant topic from syllabus contents (appx. 1500 words): **25 marks**
2. **Measured Drawing:** Manually drawn (one A1 or A2 size sheet per student): **25 marks**

RECOMMENDED READINGS:

1. Modern Architecture since 1900 by William Curtis
2. Modern Architecture (Vol. I & II) by Manfredo Tafuri, Francesco Dal Co
3. A History of Western architecture by David Watkin
4. The Story of Western Architecture by Bill Risebero

Subject Code : **313431 WORKING DRAWING** (Sessional)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	2	TermI and Term II Sessional (Internal) Sessional (External) Viva	 50 marks (for each term) 50 marks (for each term) nil
Studio Periods per week	3	Total sessional marks for both terms	200 marks
Total Contact	5	Paper	nil
Periods per week		Total Marks	200 marks

AIM : To enable the students to prepare working drawings of an architectural project and imbibe the significance of working drawings from the point of view of execution of the work on site and as important component of tender documents.

OBJECTIVES :

- The students should be able to prepare drawings in sufficient details such that the contractor is able to construct a building as per the design.
- Graphical presentation of all the components of a building along with dimensioning and annotations.
- Understand and apply IS Codes and internationally accepted norms / conventions / methods of preparing a working drawing along with tabulation of schedules of materials, finishes and hardware.
- Linking up working drawings / specifications / bill of quantities in an architectural project.

TERM I :

- One working drawing of a 2nd yr. architectural design project having load bearing structure with minimum 100 sq. m. carpet area.
- At least two details such as doors/windows/railings/kitchen otah etc.
- Total no of drawings (approx 6 to 8 of A1 size).

TERM II :

- One working drawing of any project of minimum 200 sq.m. from Third Year Architectural Design project having frame construction and minimum G+1 structure.
- Introduction to preparing drawings for approval of local authorities for a residential unit having G+1 structure
- Details of civil work of staircase and a toilet.
- Interior working drawing of a room from the project with at least details of two furniture types : 1 drawing A1 size.
- Total No of drawings (approx.6to 8 of A1 size.)

The drawings may be manually drafted or computer generated as per the choice of students and availability of computers with the college.

REFERENCES:

Architects Working Details

Subject Code : **313432 TECHNICAL COMMUNICATION** (Sessional)			
Teaching Scheme		**Examination Scheme**	
Lecture Periods per week	1	TermI and Term II Sessional (Internal) Sessional (External)	25 marks (for each term) 25 marks (for each term)
		Viva	nil
Studio Periods per week	1	Total sessional marks for both terms	100 marks
Total Contact Periods per week	2	Paper	nil
		Total Marks	100 marks

COURSE OBJECTIVES:

To equip the student to communicate effectively on technical matters, using various mediums of verbal, written, graphic and electronic communication.

COURSE OUTLINE : TERM I

Unit 1: Introduction

1. Introduction to technical communication, the need for learning the subject.
2. Various mediums of communication and their relevance to professional practice.
3. Reading, writing conversation public speaking, etc. as skills to be aquired for effective communication
   .
4. Importance of knowledge,
5. Linguistic skills and structure in communication

Suggested sessional work: short report

Unit2: Written Communication:

1. Language Skills, structuring of ideas,
2. Various types of written Communication i.e. writing, abstract synopsis, reports, dissertation, etc.
3. Effective beginning, logical division of matter under various heads, elaboration, conclusions appendices and annexures (technical writing aspects),
4. Understanding the reader /purpose of the communication,
5. Preparation of drafts, finalisation of content
6. Handwriting skills,
7. Software like MS word, Excel, etc.

Suggested sessional work: Contemporary architecture seminar

Unit: 3 Graphic Communication:

1. Graphic skills,
2. Presentation techniques using mediums like pencil, ink, water colour, etc.
3. Use of software suitable for graphic communication.
4. Types of paper, sizes, suitability of paper & medium for the purpose & their compatibility with each other,
5. Printing & plotting – including scales, font sizes, etc. composition of matter on given paper space, display formats, etc.

Suggested sessional work: case studies / individual report- study tour / data collection

Unit 4: Electronic Communication:

1. Use of suitable softwares.
2. Introduction to presentation techniques & formats using computer,
3. In put- output devices, their compatibility, data storage formats, transmission of data through. the Internet, basics of email, website design, etc.

Suggested sessional work: powerpoint presentation contemporary architecture seminar / case studies / design presentation

TERM II :

Unit 5: Verbal communication:

1. Language skills
2. Structuring &, organization of speech.
3. Understanding the audience, transmitting of ideas, voice modulation, personal style-tone emphasis, gestures, etc.

Suggested sessional work: Verbal presentation- Contemporary Architecture seminar

Unit 6: Group Communication:

1. Working in teams.
2. Structure & organization of an efficient team,
3. Roles played by members, leadership qualities and skills
4. Communication within a group, group presentations, group discussion etc.
5. Time management, schedules, etc.

Suggested sessional work: Study tour- report & presentation / group case study / site analysis

Unit 7: Interviews:

1. Effective communication skills, personal style.
2. Commonly raised questions and effective answers.
3. Knowledge level and effective communication of information.
4. Understanding the interviewer and the purpose of the interview, etc.

Suggested sessional work: flexible- to be decided by the institute

Unit 8: Formats:

1. Formats for letters, memos, resume, job application, project proposals, feasibility reports, progress report, information page, brochure, website.etc

Suggested sessional work: preparation of formats as assignments

Unit 9: Appraisal / Self Judgment:

1 Setting up objectives, methodologies,
2. Achieving targets.
3. Effective Communication of ideas, image knowledge, information.
4. Creating a self identity.

Suggested sessional work: flexible- to be decided by the institute