Punyashlok Ahilyadevi Holkar Solapur University, Solapur

पुण्यश्लोक अहिल्यादेवी होळकर
सोलापूर विद्यापीठ
।। विद्यया संपन्नता ।।

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Name of the Faculty: Science & Technology

CHOICE BASED CREDIT SYSTEM

Syllabus: Bachelor of Architecture

Name of the Course: B. Arch. IV (Sem.–VII & VIII)

(Syllabus to be implemented from w.e.f. June 2019)

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

UNDER THE Faculty of Science & Technology

Choice Based Credit System Structure Of Fourth Year B. Arch SEM.VII W.E.F. 2019-2020

Semester VII

	Course Name	Hrs./Week		Credits	Examination Scheme						
		L	P/S		ISE		ESE		ICA		Total
					Max	Min.	Max	Min.	Max.	Min	
Subject code	**Theory papers**										
AR7-02	Professional Practice-I	3	--	3	30	15	70	32	---	---	100
AR7-06	Theory of Structure-VII	3	__	3	30	15	70	32	--	--	100
AR7-07	Estimating Specifications & Costing -II	4	--	4	30	15	70	32	---	--	100
	Total	10	--	10	90	--	210	--	---	--	300
	Studio / practical / oral										
AR7-01	Architectural Design –VII	-	8	4	---	--	100	45	150	75	250
AR7-03	Working drawing -II	-	4	2	---	--	50	23	100	50	150
AR7-04	Project I (Architectural Design Dissertation)	--	2	1	--	--	50	23	50	25	100
AR7-05	Bldg. Construction & Material - VII	-	6	3	---	--	50	23	100	50	150
AR7-08	Environmental Design	--	5	2.5	--	--	100	45	50	25	150
	Total	-	25	12.5	---	--	350	--	450	--	800
	Grand Total	**10**	**25**	**22.5**	**90**		**560**		**450**		**1100**

Abbreviations: L- Lectures, **P/S**-Practicals / Studios, **ISE**- In Semester Exam., **ESE** - End Semester exam, **ICA**- Internal Continuous Assessment
Note : ISE -Internal Tests , **ESE** - University Theory/ Oral examination

Ar. A. N. Katgaonkar

Ar. R. B. Koli

Dean

Ar. S. G. Kulkarni

Ar. M. H. Sonawane

Ar.P.H.Patil

Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Under Faculty of Science & Technology

Choice based Credit System structure of Fourth Year B. Arch Semester - VIII W.E.F. 2019-2020

Semester VIII

	Course Name	Hrs./Week		Credits	Examination Scheme						
		L	P/S		ISE		ESE		ICA		Total
					Max	Min	Max	Min	Max	Min	
Subject code	**Theory papers**										
AR8-02	Professional Practice-II	3	--	3	30	15	70	32	---	---	100
AR8-03	Project Management	4	--	4	30	15	70	32	---	---	100
	Total	07	--	07	60	--	140	--	---	--	200
	Studio / practical / oral										
AR8-01	Project –II	-	8	4	---	--	150	68	150	75	300
AR8-04	Elective – I A.Valuation Of Immovable Properties B.Contemporary Architecture C.Waste water management	-	4	2	---	--	100	45	100	50	200
AR8-05	Elective – II A.Design With Climate B.Architectural Conservation C.Intelligent Building	-	4	2	---	--	100	45	100	50	200
	Total	-	16	08	---	--	350	--	350	--	700
	Grand Total	**07**	**16**	**15.00**	**60**		**490**		**350**		**900**

Abbreviations: **L**- Lectures, **P/S**-Practicals / Studios, **ISE**- In Semester Exam., **ESE** - End Semester exam, **ICA**- Internal Continuous Assessment

Note: **ISE** -Internal Tests , **ESE** - University Theory/ Oral examination

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Punyashlok Ahilyadevi Holkar Solapur University, Solapur

UNDER THE FACULTY OF SCIENCE AND TECHNOLOGY

CHOICE BASED CREDIT SYSTEM STRUCTURE OF B.ARCH. W.E.F.2019-2020

CONVERSION OF MARKS INTO GRADES				
Sr. No.	**Range of Marks**	**Grade**	**Grade Point**	**Description of Performance**
1	80 onwards	O	10	EXCELLENT /OUTSTANDING
2	70-79	A+	9	VERY GOOD
3	60-69	A	8	GOOD
4	55-59	B+	7	FAIR
5	50-54	B	6	ABOVE AVERAGE
6	45-49	C+	5	AVERAGE
7	<45	F	0	FAIL
8		XX	0	DETAINED
9		DR		DROPPED OUT

CONVERSION OF AVERAGE GRADE POINTS INTO GRADES		
Sr. No.	**SGPA/CGPA**	**Grade**
1	9.5-10	O
2	8.5-9.49	A+
3	7.5-8.49	A
4	6.5-7.49	B+
5	5.5-6.49	B
6	4.5-5.49	C+
7	<4.49	F

NOTE - 1. The pass Percentage shall not be less than 45% in each subject.

2. The pass percentage shall not be less than 50% in the aggregate for the academic year.

a candidate who fails to secure minimum 50% marks in the aggregate for the academic year, shall appear for the Improvement exam, only in university theory exam.

B. Arch. SEM. VII

AR 7 – 01: ARCHITECTURAL DESIGN –VII

Teaching Scheme Per week		**Credit**	**Examination Scheme**				
Lecture - L	--	--	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	08	04	ISE	ESE	ICA	ESE	
Total	08	04	--	--	150	100	250

Objective:

This subject intends to connect all the factors involved in architectural design, including function, construction, material, climate, social, cultural and economical factors, interior and landscape planning, services etc. The student should present and explain the process of his design from data collection analysis to the solution.

Outline:

- Design of complex buildings and campuses involving analytical study of building spaces with consideration of sociological, economical, cultural and climatic factors.
- Emphasis on applications of technology, design of structure involving services, interior layouts, landscape design and elements.

Focus of the design must be campus planning , site development & site services etc.

- Minimum two design problems (one major and one time bound) should be done by each student per year. Atleast one of the problems should contain multifarious activity spaces in one structure.

Design Problems:

i) Essential Buildings – housing schemes, transport nodes, shopping malls, urban centers, and rehabilitation center etc.

ii) Buildings for Leisure – star hotels, club houses, resorts, tourist centers, community centers, amusement parks, entertainment parks, multiplexes etc.

iii) Special purpose buildings – science center, film city, IT parks, power stations, aquariums, memorials etc.

iv) Institutional buildings- Schools, Colleges, Universities etc.

Built up area 1000 sqm. - 4000 sqm

Submission:

1. Sketch file
2. case study reports, data collection & detailed analysis
3. design port folio (with all design drawing required/ as per needs)
4. Detailed interior layout of one of the major unit .
5. Design models – block model, final model, 3d views / walkthrough etc.

Reference Books:

1. Francis D.K. Ching – Architecture form space and
2. Francis D.K. Ching –Elements of Architecture
3. Francis D.K. Ching – Dictionary of Architecture
4. Neuferts Data
5. Rendering with pen and ink
6. Walter Gropius – Total Architecture
7. Pramar V.S. – Fundamentals in Architecture

Time bound:

Minor Design Project - 18 Hours (Max. 3 Days)

AR7 – 02: Professional Practice – I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	03	03	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	03	03	30	70	---	---	100

Objectives: To understand Architecture as a profession, its duties, responsibilities and liabilities.

Outline:

Architecture as a professional practice:

Architectural Profession, difference among trade, business and profession. Code of professional conduct Architects Act. Of 1972. Role of COA and IIA. Types of Firm and their advantages and disadvantages client and his responsibilities types and extent of services offered by an architect's scale of fees, stages of payments. Office and its Management: Location, layout and its structure, duties and liabilities, administration and basic accounting procedure, letters.

Tender:

Procedure of invitation of tender, documents necessary, tender documents, types of tender, their advantages and disadvantages tender notices opening, scrutiny, process of selection and award. Earnest money, security deposit retention amount, mobilization fund.

Contract:

Contract, Types of Contract, Contract document, conditions and scope of contract, architects role in contract termination of contract, defects liability period, extension of time penalty, bonus, extra works, variations in rate analysis and architects role in the above.

Submission: files / notes

References:

1) "Professional Practice for Architects & Engineers" by Roshan Namavathi 2) "Legal and Contractual Procedures for Architects" by Bob Greenstreet 3) AJ Legal Handbook
4) "Professional Practice"by KG Krishnamurthy and SV Ravindra.

AR7 – 03: WORKING DRAWING II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	---	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	04	2	ISE	ESE	ICA	ESE	
Total	04	2	---	----	100	50	150

R.C.C. Framed Structure

Objective:

This subject helps the students for preparation of working drawing based on the principle of interpretation and reading of drawings.

Outline:

These drawing should enable the site staff to transform the drawing into actual const with help of sufficient data.

PART - I

1. Working drawing for r.c.c. framed structure of previous design problem with min. g+1 structure , minimum area of 400 sq.m. and above .
2. Site plan , centerline plan, excavation plan, foundation and plinth/ ground beam plans.
3. all floor plans
4. elevation all side
5. Section and detailed sections showing all building elements , section through toilet , lift and staircase compulsory .
6. Architectural detail as required (kitchen , staircase, etc.
7. rain water drainage and of water proofing details, terraces & toilets and balconies, water harvesting(rain, grey water)
8. Layout plan showing electric, Plumbing , sanitation and other services.
9.

PART – II

Measure drawing showing basic plan , sections and details of small structure of detailing (group activity)

Submissions: Sketches and Portfolio

AR7- 04: Project I

(ARCHITETURAL DESIGN DISSERATATION)

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	--	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	02	01	ISE	ESE	ICA	ESE	
Total	02	01	--	---	50	50	100

Objective:-

To demonstrate an ability to comprehend the nature of architectural problem & create a brief which sets the frame work for design.

To demonstrate an advanced level design ability.

Outline:- Architectural design projects can be of any scale & size (in terms of built area -5000sqmts min) as long as the student demonstrate the merit for its consideration.

Technology has advanced so rapidly over the last decade, that human living patterns, their needs & behaviors are changing likewise posing even greater planning challenges for the architect and planners. It is in this context that an architectural design dissertation is an exercise, understanding and analyzing a problem by making a thorough study of the particular problem, to establish its evolution over the years and evaluate short comings in terms of present day & future human needs & finally offer a probable design solution which fulfill all there factors taken into account.

Each candidate wishing to undertake such a problem is required to give a synopsis which should outline the following.

1 . The problem itself with appropriate title

2. Synopsis i.e. Reasons for selecting that particular problem.

3. How the candidate intends to tackle the problem & present it in the form of a thesis, including the design presentation of the scheme.

Please note that the concerned faculty have the option to reject any subject, which they feel does not meet with requirements for a design thesis problem or the candidate's capacity to handle the same successfully.

The work should include intensive investigation OF A PARTICULAR REGION & research on social & economic aspects project needs, climatology ,ENVIRONMENT ETC. design project may be based on NEW development schemes, redevelopment schemes of complexes in town centres, Education, Industrial, Recreation, Commercial ,residential use ETC. involving problems in traffic movement of vehicles and people, giving layouts, landscaping, model and concise written report clearly outlining the

need and concept, for the challenges of the future of built form its need, identity to be justified and evolution of design. The final solution will be a complete design drafted on cartridge of tracing paper, model, perspective etc. as much as to explain the scheme in its totality.

The type written dissertation should be submitted in spiral bounding only.

AR 7-05: Building Construction & Material –VII

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	--	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	06	03	ISE	ESE	ICA	ESE	
Total	6	03	--	---	100	50	150

Objective:-

To study Advanced construction Methods with focus on super structure and services like fire escapes , disaster managements including Earthquake, INDUSTRIAL INTERACTION WITH VARIOUS companys and vendors in the market

Outline:

Demolition of structures: Timber frame, load bearing , steel structure R.C.C. structure
1) Strutting 2) Under pinning,

Earth quake Resistant structures

Fire resistant techniques -Fire escapes, Auto sliding fire resistant, remote control doors etc.

Lifts and escalators - constructional aspects

Roofing:

Constructional aspects of portal frames in R.C.C. steel, base and apex joints

Precast building technology – modular grid ,securing ends, methods of manufacturing

the principles and geometric forms of a) shell roofs b) space structure c) pneumatic structure d) tensile structure e) geodesic domes (introductory)

Low cost technology by various organisations - CBRI & N.B.O. , BMTPC etc,

Material:

1) Decorative ceiling materials :
t.w., aluminium, steel framing materials, covering materials, like acoustical boards, commercial boards , gypsum boards, commercial boards etc.
2) Thermal And sound insulting materials:
Composition, properties and application.
3) Mastic Sealents and adhesives:
various types, their compositions, properties and application.
4) Epoxy materials and their varied uses in construction.
5) Fire proofing and retarding materials

constructional measures adopted for fire resistance and fire retarding structures.

market survey of various materials , cost , specification and application of the materials

References: 1) “construction technology” by chudley
2) “construction of buildings” by barry
3) Engineering material by rangwala
4) Engineering material by gurucharan singh

AR7-06: THEORY OF STRUCTURE VII

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	03	03	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	03	03	30	70	--	---	100

Objective: To help the students in understanding the design of structural elements like foundation , water tanks, frames, etc.

Outline:

Section 1

1) Concept of flat, waffle slabs and hallow blocks slabs.
2) Design of under reamed pile foundation and caps concept of other pile foundation and Raft Foundation.
3) Design of simple rectangular and circular ground water tanks and Reservoirs, concept of overhead water tanks, aesthetic effect of their structural systems and shapes.

Section 2

1) Concept of shells, folded plates, hyperboloids and Paraboloids, space frames, geodesical dome, silos and other containers
2) Concept of Prestressed concrete design & construction. Design of simple Rectangular prestressed concrete beam
3) Concept of gentries and cranes and their effect on structural design.
4) Concept of Design of Rigid frames and portal frames for RCC and Steel Structures.
5) Concept of design for earthquake proof construction, concept of forces involved.

Termwork

1) Design of simple two storeyed RCC building with detailed drawings of typical members (Mark for design of components and part of building only)

OR

2) Design of Simple factory building using structural steel with detailed drawings of typical members.

References: 1) "RCC" by Jain and Jaikrishna
2) "RCC" by Ramamrutham
3) "RCC" by N Krishna Raju and RN Pranesh

AR7- 07: ESTIMATING SPECIFICATIONS AND COSTING - II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	04	04	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	--	--	ISE	ESE	ICA	ESE	
Total	04	04	30	70	---	---	100

Objective:

The subject enables the student to prepare outline specifications and approximate and detailed estimates for simple buildings and gets an idea about financial aspect of construction of buildings

Outline:

1. Introduction, definition, aim, object, scope and importance of subject.
2. Taking out quantities of RCC buildings including steel reinforcement and preparing abstract of above quantities, using current D.S.R., analysis of Rates for above building items.
3. Specifications :
   - i) Introduction, definition, purpose, importance, use of specifications to engineers, architects, contractors
   - ii) I.S. qualities of writing good specifications
   - iii) Types of specifications , General specifications , Detailed specifications
   - iv) Specifications on only building materials
   - v) Specifications writing on complete building items and also Indian standard specification number referred to Red book.
4. Tenders and Contracts:
   - i) Types of contracts
   - ii) Conditions of contract
   - iii) Schedule 'A' & Schedule 'B' of contract.
   - iv) Details of Tender documents, Tender Notice

Submission

1) Prepare estimate, calculating detailed quantities of a building items of building plan using current D.S.R.
2) Prepare a journal of the topics i) estimates ii) Specifications iii) contracts.

References:

a) "Estimating and Costing" by SK Dutta
b) "Estimating" by SC Rangawala

AR7 -08: ENVIRONMENTAL DESIGN

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	--	Theory Exam -		Practical / Oral Exam		**Total**
Practical/Studio P/S	05	2.5	ISE	ESE	ICA	ESE	
Total	05	2.5	--	---	100	50	150

Objective:

The main aim shall be to integrate design with environmental concerns in totality involving design and use concerned with climate and using low cost materials, recycling, waste management and ideas for energy sensitive settlements for sustainable development.

Outline:

1. **Environmental Appraisal**
   Relationship with physical activity and built environment, human activity and building as environment, study of social units / residential /commercial area – topography, climate, services, landscape, road layout, road section and services.
2. **Morphological approach**
   Built and unbuilt, relation with scale, size and influence of bylaws and regulations

3 Volumetric analysis and building bye laws
Formal and informal urban environment –
bye laws concept of densities, ground coverage, floor height, marginal spaces.

4. **Planning of residential areas**
   1. sub-division layouts area up to – 10 acres
   2. Cluster design.
   3. Study of social and cultural context.
   4. Intergration of built with unbuilt spaces.

Submission:

i) Environmental appraisal and Morphological Approach
-group work, sketches and hand drawings

ii) Study of social units / residential /commercial area – topography, climate, services, landscape, road layout, road section and services

iii) volumetric analysis and building bye laws – individual work, sketches, views planning of residential areas – sketch files, case study reports, data collection, critical analysis in file form, portfolio, model – block model and final model

B.ARCH. SEMESTER - VIII

AR8 -01: Project II

(DESIGN THESIS)

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	--	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	08	4	ISE	ESE	ICA	ESE	
Total	08	4	--	---	150	150	300

Objective:-

To demonstrate an ability to comprehend the nature of architectural problem & create a brief which sets the frame work for design.

To demonstrate an advanced level design ability.

Outline:

Independent conceptual solution to the programme finalized by the student in semester vii.

Dissertation Process:-

1. Research & Statistics.
2. Programe Finalization & Requirement
3. Programe Analysis.
4. Site Selection.
5. Site Analysis :- Set of Constant, variable & constraint
6. Design Methodology
7. Conceptual level plans,sections ,elevations, block models, views etc.

Submission Format:

1. **Spiral bound book**

A) A typewritten book must be presented in neatly spiral bound 2 copies out of which one copy will be retained by college & one will be returned back to student. The size of the book should be A4 size on sunlit bond or equivalent paper. The printed blank page of the certificate which will be supplied by the college will be bound along with other typewritten pages in the

beginning of the book. This will be certified and signed by the college authorities as authentication of the work by the guide who has guided the work.

The index page must contain the following sequence & paging the volume must follow this sequence. Attach either reduced size Xerox or photocopies of drawing (if legible) and prints neatly folded to suit the size of the volume.

1) Introduction (the why & what of the project)
2) Synopsis
3) Research
4) Case Studies (3 total, 2 live & 1 book)
5) Site selection
6) Design Programme (Requirement listing)
7) Programme analysis
8) Site analysis
9) Data collection
10) Design methodology
11) Photocopies of conceptual drawings

2. Drawing requirements

The final submission for the semester shall be in 4'x8' panel format or a neat portfolio, sheet size Mini A1 and Max A0, . all plans should be to the scale (readable scale), site plan scale can be decided by the students with the help of guide .

1) About the the topic & research
2) two Live & one Book Case Study presentation & comparative.
3) Data Collection
   i) Climate data
   ii) Technical Data – relevant to your topic.
4) Programme Analysis
5) Site selection and Analysis
6) Design Concept
7) Conceptual Drawings.
8) Block / Concept model.

AR8 – 02: Professional Practice II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	03	03	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	--	---	ISE	ESE	ICA	ESE	
Total	03	03	30	70	---	---	100

Objective: To understand Architecture as a profession, its duties, responsibilities and liabilities.

Outline:

1) Arbitration :

Arbitration, mediation, conciliation, advantage and disadvantage of each, arbitrator, arbitral tribunal, arbitration agreement, arbitral award.

2) Land acquisition:

Principles of land acquisition, procedure and remedies for the acquisition.

3) Easements:

Easements and its characteristics, its types and modes of acquiring, easement rights, and architects role.

4) Architectural Competitions :

Competitions, guidelines of COA, types, procedure for conduct of competitions

5) Building Byelaws :

Byelaws, national building code, floor area ratio, floor space index, zoning regulations, laws relating to repairs, dilapidations, wastes and fixtures, fire fightning, Tenements act, local bodies byelaws, MIDC byelaws, factory Act, labour act.

References:

1) “Professional Practice for Architects & Engineers” by Roshan Namavathi

2) “Legal and Contractual Procedures for Architects” by Bob Greenstreet 3) AJ Legal Handbook

4) “Professional Practice” by KG Krishnamurthy and SV Ravindra.

AR 8 – 03: PROJECT MANAGEMENT

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	04	04	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	--	---	ISE	ESE	ICA	ESE	
Total	04	04	30	70	---	---	100

Objectives:

To help the students in understanding programming and management of a project, labour, tools and equipments.

Outline:

1) Introduction to project Management concepts, background of management, purpose, goal and objectives. Characteristics of projects and different aspects of management.
2) Traditional Management system Gantt's approach, load-charts, progress-chart, bar-chart, merits and limitations.
3) Concept of project programming, stages of programming, work-break down schedule, time estimates, units, introduction to work study, time study, and motion study. Project programming, resources balancing, phasing of activities, programme schedule, project control, reviewing, up-dating and monitoring.
4) Introduction to modern management concepts unidimensional managements techniques, introduction to net-work. Crash programme, network compression, least cost solution, least time solution, optimum time solution, decision making.
5) Construction tools and equipment, Labour management and control, labour laws, labour records,(Introductory only) , Local materials and non local materials, investigation and exploration, quantity , Quality control, lead, procurement, local stage and central government taxes and their effect on costs.
6) Site layout for construction work, site office, its management, duties and responsibilities. Insurance, fire, Accident, Theft; Testing Facilities on site.
7) Use of computer in project management (Introductory)

References:

1) PERT AND CPM - Dr. B. C. Punmia
2) Construction Management and Planning - B. Sengupta, H. Gutia

AR8- 04: ELECTIVE – I

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	---	---	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	04	02	ISE	ESE	ICA	ESE	
Total	04	02	---	---	100	100	200

Objective:

To open the kaleidoscope of specialized areas in architecture.

Outline: The student will opt for any one of the following Subject

The electives offered are

A. Valuation of immovable properties
B. Contemporary architecture
C. waste water management

The detail syllabus for the above subjects are given hereby

AR 8 – 04 A: VALUATION OF IMMOVABLE PROPERTIES

Course Outline:

1)Principals of Valuation: Nature of value, fair market value and open market price, supply and Demand, property as an Investment, percentage Yield of Investments, Interest Rates on Investments in Land and Buildings, valuation of like interests, property as an investment, Development of properties. Comparison with other types of Investment.

2) Rental value and Net Income: Economics and Legal factors affecting Rent, Methods of Determination of Rental value, Effect of Capital Improvements on Rental Value.
Outgoings: Municipal and other Taxes, Repairs, Sinking Funds.
Nature and use of Valuation Tables:

3) Valuation properties: Methods of valuation, Analysis of Rental and sales,Direct comparisons of Capital value, valuation by reference to cost valuation by reference to profits. The residual or development method, Rental method of Valuations Land and Building method, Modern Developments, Methods of costs of Building works, valuation of fully developed, Fully Tenanted, partly & fully Occupied properties, valuation of under-developed properties, Properties Rental out or given on Leave and License basis.

4) Valuation of Land : Situation, size, shape, Reversion to land value, Technical & physical conditions of lands, Methods, of Valuation of land, problem of Continuance of Income Reversion to land value, Encumbrance on land.

5) Depreciation: Depreciation, Method of computing depreciation, Classification and life of buildings.

6)Valuation for mortgage and probate : Valuation for mortgage, probate, advancing finance, bank loans, compulsory acquisition, standard rent court orders, suction reserve acquisition.

7) Valuation of Non-Residential Properties: Commercial properties like theatres, hotels, offices etc.

8) Valuation of Acts: State and Central Government acts. Affecting valuation, Income tax Act regarding Land Ceiling Act, Compensation Act, Town Planning Act, Valuation for acquisition and compensation.

References:

1) Theory of Valuation – Roshan H. Namavati
2) Valuation of IMMOVABLE PROPERTIES – M.H. Dhange

AR8- 04 B: Contemporary Architecture

Course Outline:

Post 1950's architecture: the emergence if a diversity of approaches.
Indian Architecture in the post-independence era: assimilation of modernism. The search for appropriateness –integrating new technology with local responses.
Internationally the search for a sense of place –regionalism.
Various approaches emerging all over the world.

Theory:

Critical thinking and architectural practice.
Post independence Architecture.
The questioning of the premises of modernism- Universality standardization.
Impart of critical thinking from other fields – literature, philosophy, sociology and anthropology.
Structuralist and post structuralist approaches.
Phenomenology, linguistics, and post modern thinking.

References:

1) "Design in Architecture" by Broadbent, Geoffrey
2) "Creating Architectural Theory" by Lang, Jon

AR8- 04 C: WASTE WATER MANAGEMENT

Course outline:

Student should be able to Understand issues related to Waste water Management, Processes Treatment types & Non-conventional treatment systems.

Detailed syllabus:-

1. Waste water characterization: Types of waste water, generation points, characteristics & microbiology

2 Processes: Unit processes – equalization, sedimentation, coagulation, filtration, organic removal, disinfection etc

3 Treatment types: Treatment type including aerobic, anaerobic, centralized, decentralized & facultative – primary, secondary & territory

4 Non-conventional treatment systems: Non-conventional treatment system including Dewats, Lomwats, shallows acquirer, oxidation pond, reed bed, duckweed pond, water hyacinth & living machine DEWATS process: Process of DEWATS systems

AR8- 05: ELECTIVE –II

Teaching Scheme Per week		Credit	Examination Scheme				
Lecture - L	--	--	Theory Exam		Practical / Oral Exam		**Total**
Practical/Studio P/S	04	02	ISE	ESE	ICA	ESE	
Total	04	02	---	---	100	100	200

Objective:

To open the kaleidoscope of specialized areas in architecture.

Course Outline: The student will opt for any one of the following Subject

The electives offered are

A. Design With Climate
B. Architectural Conservation
C. Intelligent Building

The detail syllabus for the above subjects are given hereby

AR 8 – 05 A: DESIGN WITH CLIMATE

Objective:

Climate and its problems confronting architectural design considering the different aspects of climate various methods & techniques for controlling solar radiation.

Outline:

Residential units

- Analysis of any exerting situation/ problem
- Design proposal for one of the climate types and details of important elements.
- Study and Analysis of one climate types with design principles, material used and construction techniques
- Details of this programme will be discussed with the concerned staff.

References:

1) Climate Responsive Architecture – Arvind Krishnan
2) Climate Design By – S. V. Szokolay

AR 8 – 05 B: ARCHITECTURAL CONSERVATION

Objective:

Student should be able to acquire comprehensive understanding about architectural conservation. The role of conservation architects, types and methodology of architectural conservation.

Scope:

Introduction to architectural conservation, preparatory procedure for conservation like 1)Prevention 2)Preservation 3)Consolidation 4)Restoration 5)Rehabilitation 6)Reproduction 7) Reconstruction etc.

Structural aspects of the building, as to study their actions. Causes of decay in buildings- man made or natural.

Considering all above aspects of conservation procedure like inspection, documentation, reports and research, analysis and recordings only.

The students have to identify a building for conservation with the help of faculty and the area shall not be less than 150 sqm. They have to prepare analytical report of conservation for that building.

AR 8 – 05 C: INTELLIGENT BUILDING

Course outline:

Introduced to Building automation and Understand the issues related to the control system in a building

Detailed syllabus:-

Introduction to Building automation generally understanding the issues related to the control system in a building.

1. Understanding basic concept of computerized control systems, network designed to monitor and control various systems for lighting, ventilation, alarms & security,

2. Issues related to illumination and lighting. Systems to allow / control Natural light. Aperture/openings and shading devices control systems based on automated systems.

3. Issues related to ventilation air handling with automated systems of control of apertures and artificial ventilation-air conditioning.

4. Issues related to systems of communication (mechanical systems), electric, electronic and telecommunication systems, security systems etc.