3RD YEAR / V Semester

ARCH 501: ARCHITECTURAL DESIGN STUDIO – IV

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 501	AR	STUDIO	ARCHITECTURAL DESIGN STUDIO IV			12	12	8							240	160	400	400	

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

This course is intended to provide skills for designing a single use, small span and single-storey buildings.

OBJECTIVES OF THE COURSE:

To develop abilities in design in the context of user requirements.

EXPECTED SKILLS / KNOWLEDGE the TRANSFERRED:

To enhance the understanding of the complexities of architectural design for residential needs and develop creative design solutions for good living environments. Use of standards, handling of space, and application of knowledge gained from other subjects in design.

FOCUS: Institutional & Building Systems, Services.

• The student will learn and develop design vocabulary which would define the institutional character through its organizing principles,

• The student will understand construction techniques and materials.

• The student will achieve the capacity of Site analysis, Landscape systems, Abstract Models, Part detail constructional models, design development methods that clarify part-whole relationships.

COURSE CONTENTS:

• Institutional scale

• The institutional theme, image, concept

• Organization and disposition of spaces

• The character of the institutional building

• The density of user groups and circulation patterns

• The studio also emphasizes on the resolution of appropriate systems, such as spatial, structural and building along with programmed and un-programmed spaces

- **Theme & focus of design:** Study, analysis & utilization of Non-Conventional Systems (alternative building technologies). Understanding, exploration & development of design programme, concepts & detailed design with a focus on Stabilized Mud Blocks, Bamboo, Ferro-cement, etc. in urban &/or rural context.
- **Basic Components:** Behavioral Science; Functionality; Building Materials; Theory of Design; Form Development; Tectonic decisions: Structures, Building Materials, Services; Site Planning; Building Control Regulations; Inclusive Design; Design Communication.
- **Gateways & Thresholds:** Importance, Exploring & Understanding the essence; detailing process; User analysis; Elements; functionality, aesthetics; Materials. This Minor Exercise will be represented through conceptual development (sketches, physical & digital models).
- **Design Analysis:** Exploration & analysis of iconic Eco-sensitive Architecture; Understanding design philosophy & process; Learning from design quality, Literature/book reviews; Architectural critiques.
- **Design Exercise:** Building Design. The complexity of design: Site planning involving multiple buildings; Detailing of anyone building with alternative technology. Typology: Co-operative Societies, Vocational Training Centers, Rural Residential Schools, Bus Stations, Veterinary Centers, Temporary Shelters, Labour Camps, Ayurveda Centers, Naturopathy Centers, SOS Villages, Horticultural Centers, Ashram etc. Site extent: Flat site up to 8000 m2.

GUIDELINES

One Major And Minor tasks/ exercises are to be set from the entire syllabus

The topic of the project is to be displayed on Institute Notice Board fifteen days in advance OF commencement of the classes

NOTE :

- Necessary theoretical inputs to be given highlighting the norms and design issues. The topics not covered as design problems will have to be covered by the Studio faculty members through lecture/slideshow sessions and site visits.

- At least one major exercises and one minor design with two-time problems should be given.
- The final submission shall necessarily include a model for at least one of the two main problems.
- In end exam which is a viva-voce, the students have to present the entire semester work for assessment.
- Evaluation is to be done through viva voce by an external examiner appointed by the university at Institute. Portfolios, after the university exam, shall be retained at the Institute level for the viva- voice.

REFERENCE BOOKS:

Bousmaha Baiche & Nicholas Walliman, Neufert Architect's data, Blackwell Science Ltd.
Building Code – ISI
Chiara Joseph de and Others. Time Savers Standards of Building Types. McGraw – Hill, 1990.
Ching, Francis D.K. Architecture: Form, Space, and Order, 2nd Ed. Van Nostrand Reinhold, New York, 1996.
Criss B.Mills, Designing with models: A Studio guide to making & using architectural models, Thomson & Wadsworth, USA,2000.
DeChiara and Callender, Time-saver standards for building types, Mc Graw Hill company
Hanks, A. David. Decorative Designs of Frank Lloyd Wright, Dover Publications, Inc. New York, 1999.
Hepler, E. Donald, Wallach, I. Paul. Architecture Drafting and Design, 3rd Ed. McGraw-Hill Book Company, New York, 1977.
Itten, Johannes. Design and Form: The basic course at the Bauhaus, Thames and Hudson Ltd., London 1997.
Kirk, Paul Hayden and Sternberg, D. Eugene. Doctors Offices and Clinics, 2nd Ed. Reinhold Pub., USA, 1960.
Krier, Rob. Architectural Composition, Academy Editions, London, 1988.
Maier Manfired Basic Principles of Design, Vol.1, 2, 3 & 4, Van Nostrand Reinhold, NY. (1977)
Meiss, Pierre Von. Elements of Architecture: From form to place, E and FN Spon, London, 1992.
Mike w.Lin, Drawing & Designing with confidence – A step by step guide, John Wiley &sons, USA,1998.
Neufert, Ernst. Ernst Neufert Architects Data, Granada Pub. Ltd., London,2000.
Peloquin, Albert. Barrier-Free Residential Design. McGraw-Hill, Inc., New York,1994.
Pevsner, Nikolaus. A History of Building Types. Thames and Hudson, London,1976.
Ramsey / Sleeper, National Architectural graphic standards, The American Institute of Architects
Sam F Miller, Design process– Van Nostrand Reinhold
Shah, S. Charanjit. Architects Hand Book Ready Reckoner. Galogotia Pub., New Delhi, 1996.
Smithies, K.W. Principles of Design in Architecture. Chapman and Hall, 1983.
Untermann, Richard and Small, Robert. Site Planning for Cluster Housing.
Wucius, Wong. Principles of Two Dimensional Design. Van Nostrand Reinhold 1972.
Time saver standards for building types, DeChiara and Callender, Mc Graw Hill company
National Building Code - ISI
Patricia Tutt and David Adler, New Metric Handbook — The Architectural Press
Chiara Joseph de and Others. Time Savers Standards of Building Types.McGraw – Hill, 1990.
Hand Book of Planning and Design Data.
Kirk, Paul Hayden and Sternberg, D. Eugene. Doctors Offices and Clinics, 2nd ed. Reinhold Pub., USA, 1960.
Konya, Allan. Libraries: A Briefing and Design Guide. The Architectural Press, London, 1986.
Neufert, Ernst. Ernst Neufert Architects Data. Granada Pub. Ltd., London, 2000.
Pevsner, Nikolaus. A History of Building Types. Thames and Hudson, London,1976.
Rosenfield, Isadore. Hospital Architecture and Beyond. Van Nostrand Reinhold, New York, 1969.
Stone, G. Louis. Institutional Buildings Architecture of Controlled Environment.
Tergsone, W.R. Practical Laboratory Planning.
Wild, Friedemann, Libraries for Schools and Universities. Van Nostrand Reinhold, New York, 1972.

ARCH 502: SITE PLANNING

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 502	AR	THEORY	SITE PLANNING	1		2	2	2							60	40	100	100	

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

This course introduces students to site planning and relates it to design and planning of built environments.

OBJECTIVES OF THE COURSE:

To expose the students to the various techniques of site analysis and planning,

To teach the importance of the site and its content in architectural creations, to orient the students towards several influencing factors which govern the sitting of building or group of buildings in a given site

to introduce various techniques of site analysis through exercises and case studies, the methodology of preparing a site analysis diagram, which serves as a prelude to any architectural creation through exercises

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

- The contextual importance of on-site analysis can be understood based on the various site factor with respect to the study area.
- The first-hand understanding of site drawings for Landscape Architecture and Urban design is studied.
- Various scientific and analytic site analysis techniques are understood.
- A methodological approach for the preparation of master plans for small scale and large scale projects can be understood.

COURSE CONTENTS:

Philosophical and design issues related to site development – sitting of buildings, spatial and contextual relationships of built and outdoor space and circulation, site and its relationship to surroundings. Importance of climate and social factors in the development of the site.

The process of design development. Identifying functional requirements of the site. Development of site by mutual exploitation of forms and use of grading principles.

- Introduction to Site Planning:
- site drawings
- Introduction To Site Analysis
- site context
- Design Of Landforms In A Site:
- Site Planning Principles And Techniques:
- Site survey and appraisal
- Contemporary concepts and concerns:

GUIDELINES

One Major And Minor tasks/ exercises are to be set from the entire syllabus

The topic of the project is to be displayed on Institute Notice Board fifteen days in advance OF commencement of the classes

NOTE :

- Necessary theoretical inputs to be given highlighting the norms and design issues. The topics not covered as design problems will have to be covered by the Studio faculty members through lecture/slideshow sessions and site visits.
- At least one major exercises and one minor design with two-time problems should be given.
- The final submission shall necessarily include a model for at least one of the two main problems.
- In end exam which is a viva-voce, the students have to present the entire semester work for assessment.
- Evaluation is to be done through viva voce by an external examiner appointed by the university at Institute. Portfolios, after the university exam, shall be retained at the Institute level for the viva- voice.

Assignments

Simple exercises in using plants and landscape elements, Studio exercise emphasizing the relationship between built form and outdoor areas, and site planning issues. Landscape design of a neighbourhood open space (area of 2000 to 3000 sq. metres)

Reference books:

B.C.Punmia,Ashok.k.Jain, Arun.K.Jain, Surveying Vol I, Firewall Media, 2005
Blake, Alan. Landscape Construction and Detailing. B.T. Batsford Ltd., London, 1996.
Brian Hacket, Planting Design
Bring, M, "Japanese Gardens: "design & Meaning
Colvin, Brenda. Land and Landscape.
Diane Y. Carstens, "Site Planning & Design for the Elderly", Van Nostrand Reinhold, New York, 1993
Edward.TQ, Site Analysis, Architectural Media,1983
Geoffrey And Susan Jellicoe, The Landscape of Man, Thames And Hudson, 1987
Grant W Reid, From Concept to Form in Landscape Design, Van Nostrand Reinhold Company, 1993
Hacheat, Brian. Planting Design.
Harris, C.W. and Dines, T. Nicholas. T.S.S for Landscape Architecture. McGraw Hill, New York, 1995.
James B. Root, "Fundamentals of Landscaping & Site Planning", AVI Pub. Co., Westport, 1985
John I.Mutloch. Introduction to Landscape Design, 2nd Ed.John Wiley &Sons, Inc, New York,2001
John Ormsbee Simonds, "Landscape Architecture: A manual of site planning & design", McGraw Hill,1961.
Joseph De Chiarra and Lee Coppleman, "Planning Design Criteria", Van Nostrand Reinhold Co., New York, 1968
Laurie, Michael. An Introduction to Landscape, 2nd Ed. Prentice Hall, New Jersey, 1986.
Lynch, Kevin. Site Planning. MIT Press, Massachusetts, 1962.
R. Gene Brooks, "Site Planning - Environment, Process and Development", Prentice Hall, 1988
Richard Untermann and Robert Small, "Site planning for cluster housing", Van Nostrand Reinhold Company, 1977
Santapau. H. Common Trees. National Book Trust, New Delhi, 1981.
Simonds, J.O., "Earthscape: A Manual of Environmental planning", McGraw Hill Book Co., New York,1978.
T.K. Bose and Chowdhury, Tropical Garden Plants in Colour, Horticulture And Allied Publishers, Calcutta,1991
Thomas H. Russ, "Site Planning and Design Handbook" Pearson Education, 2002
Time Savers Standards for Site Planning, McGraw Hill, Inc, 1995
Trivedi, P. Pratibha. Beautiful Shrubs. Indian Council of Agricultural Research, New Delhi, 1990.
TSS for Landscape Architecture, McGraw Hill, Inc, 1995
William M. Marsh, "Environmental Analysis for Land Use and Site Planning", McGraw-Hill, 1978

ARCH 503: BUILDING MATERIAL AND CONSTRUCTION –V

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 503	TE	THEORY CUM STUDIO	BUILDING MATERIALS & CONSTRUCTION – V	1		2	3	2	15	15	15	45	60	120	0	30	30	150	3

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

The coursework deals with principles, methods and construction practices of structural steelwork. The outcome of this course is the ability to SPECIFY building materials as per the demands of Design Program.

OBJECTIVES OF THE COURSE:

To introduce and expose students to various aspects involving the use of steel for construction activity of buildings and structures.

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

To understand the techniques of constructing Steel And Pre Fab, staircase and partitions using different materials

FOCUS: STEEL

- The student will understand long span building construction system
- Students will develop the understanding of different types of Finishes
- The student will learn the relationship between construction technique and architecture vocabulary.

COURSE CONTENTS:

- Long span structures - flat slab, beam and ribbed slab, waffle slab, vault, dome, shell structure, steel trusses, girder, portal frame, folded plate structure, PEB

STEEL

Introduction:

Steel Work Connections:

Metal Building components: windows, doors, stairs, collapsible gates, rolling shutters, railings, BIS Codes.

Steel Members: Columns and stanchions, stanchions or column bases, beam and girders, column and beam connections plate girders, lattice or Warren girder.

Frame & Roof systems: Steel stanchions, girders, trusses: Characteristics, types, components, selection, applications, structural sizing, fabrication & erection. Castellated Beam, Portal frames, Steel connections. Analysis & Design of simple trusses.

Steel Roof Trusses: Steel trusses, types for various spans, tubular steel roofs, monitor roof, north light roof truss, details of steel –roof trusses.

Curtain wall: Characteristics, types, components, selection, applications, structural sizing, connections. Lantern light, dome light, structural steel practice and drawings as per IS Code. Portal frame, Geodesic principles, cable net and tensile structures.

Advanced Systems: Space frames; Pre-engineered buildings, fire protection. Overview: tall structures,

- Different types of Interior, Exterior, Vertical & Horizontal Finishes i.e.Plaster, Paint, Texture, Paving, Cladding etc.

GUIDELINES FOR QUESTION PAPER SETTING

All Theory cum studio-based courses

- Part- A (5 NOS X 6 MARKS = 30 MARKS) Answer all questions
- Part- B (2 NOS X15 MARKS = 30MARKS)
- (Either or type)

(Since they are a mix of drawing and theory content, all
Part-A questions relate theory
Part–B questions are drawing based.
It is not possible for a candidate to answer more than 4 drawing questions in a three-hour duration)to theory and all

- Students will be required to attempt 5+2 questions from the Eight questions, are to be set from entire syllabus. where 2 questions may be short answer , 2 questions may be short answer type with 2- 3 subheads and 2, short with 4 subheads answer type and 2 essay type questions which is compulsory.
- Students should attempt total 7 Questions including the compulsory question.
- Question paper is to be set covering the entire syllabus.

Note: This is a studio subject and students should be made to prepare construction drawings as studio exercises along with the theoretical inputs. The studio works large span structures. should be supplemented with appropriate site visits.

REFERENCE BOOKS:

MORGAN, Elements of Structures
SALVADORI, Structures in Architecture
A.Agarwal –Mud: The potentials of earth-based material for third world housing – IIED, London 1981.
Barry, R. The Construction of Buildings Vol. 2, 5th Ed. East-West Press. NewDelhi, 1999.
Bindra, S P.and Arora, S P. Building Construction: Planning Techniques and methods of Construction, 19th ed. Dhanpat Rai Pub. New Delhi, 2000.
Dr.B.C.Punmia – Building construction
Francies D.K.Ching – Building Construction Illustrated. VNR, 1975.
Hailey and Hancock, D.W. Brick Work and Associated Studies Vol. 2. MacMillan, London, 1979.
HUDCO – All you wanted to know about soil stabilized mud blocks, New Delhi, 1989.
McKay J.K. Building Construction Metric Vol. 4, 4th Ed. Orient Longman Pvt. Ltd., Mumbai, 2002.
Mitchell. Advanced Structures.
Moxley, R. Mitchell's Elementary Building Construction, Technical Press Ltd.
R.Chudley – Building Construction Handbook – BLPD, London 1990.
R.Chudley, Construction Technology.
Rangwala, S.C. Building Construction, 22nd ed. Charotar Pub. House, Anand,2004.
Rangwala, S.C. Engineering Materials: Material Science, 31st Ed. Charotar Pub. House, Anand, 2004.
Sushil Kumar. T.B. of Building Construction, 19th ed. Standard Pub, Delhi, 2003.
Use of Bamboo and a Reed in Construction – UNO Publications
W.B. Mackay – Building construction Vol 1,2 and 3 – Longmans, UK 1981.

ARCH 504 WORKING DRAWING II

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 504	SK	THEORY	WORKING DRAWING II			3	3	2							60	40	100	100	

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

The course deals with various methods of quantity surveying, rate analysis of building and valuation and specifications for different materials used.

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Techniques of estimating and costing and writing specification related to building construction.

COURSE CONTENTS:

- Overview: Working Drawing, Estimation & Specifications; Liaison drawings; Standards, guidelines for execution of works, Units of measurements; Writing specifications; Methods of estimation; Rate analysis of relevant items. Preparation of working drawings: Suitable scales of drawings, methods of giving dimensions: on plans, sections, elevations and other standards.

GUIDELINES

One Major And Minor tasks/ exercises are to be set from the entire syllabus

The topic of the project is to be displayed on Institute Notice Board fifteen days in advance OF commencement of the classes

NOTE :

Students shall prepare at least two working drawing sets, one for a small residence and one for a large building than the other All units to include drawings & details; estimation & specifications. of one-storied building

Evaluation is to be done through viva voce by an external examiner appointed by the university at Institute. Portfolios, after the university exam, shall be retained at the Institute level for the viva-voice.

Reference books:

Datta, B.N. Estimating and Costing in Civil Engineering: Theory and Practice, 23rd ed. UBS Pub. Distributors Ltd., New Delhi, 1993.
The bride, G.S. Estimating and Costing, 2nd ed. Dhanpat Rai and Sons, Delhi, 1982.
Rangwala, S.C. Valuation of real Properties, 6th ed. Charotar Pub. 6 House, Anand, 2003.
Standard Specification and rates, Government of Andhra Pradesh, government press, Hyderabad
Indian Standards Institution. National Building Code of India 1983. Indian Standards Institution, New Delhi, 1984.
Leers, Jack. Engineering Construction Specification.
Macey, W. Frank. The specification in Detail, 5th ed. Technical Press Ltd, London,1955.
Lewis, R. Jack. Building Construction Specifications. Prentice-Hall, Inc., NewJersey, 1975.
Govt. of Maharashtra. Standard Specifications, Government Press, Nagpur, 1972.
M. Chakraborti, Estimation, Costing, Specification and Valuation in Civil engineering.
Dutta, Estimating and Costing, S. Dutta and Co., Lucknow 1983
PWD Specifications of Tamil Nadu State Government
CPWD Specifications of Government of Ind

ARCH 505: HISTORY OF ARCHITECTURE - V

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 505	SK	THEORY	HISTORY OF ARCHITECTURE V	2			2	2	10	10	10	50	40	100				100	3

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

History of Architecture to be studied as the development of building forms in response to social, religious, aesthetic and environmental factors. The study should focus on the three-dimensional forms, plan forms, façade organization, a structural solution, construction methods and ornamentation. The study should focus on the general trends and not on specific e.g. of buildings.

OBJECTIVES OF THE COURSE:

To expose the students to a wide spectrum of architectural styles ranging from pre-historic to modern times.

To explain to the students the evolution of architecture in relation to time with special emphasis on social, religious and environmental factors.

To make the students understand the developments in the construction technology in different periods.

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

1) Acquire knowledge to identify the common characteristics among the monuments of a particular style.

2) Acquire graphic skills to present a building, analyze its elements and explain the composition.

3) Acquire knowledge of good practices of architecture in the past.

FOCUS: Colonial & Early industrial Theories, Modern, Post Modern & Contemporary Architecture

• The student will learn the post-Enlightenment worldview, the machine age and industrialization, mass culture

• Students will learn the evolution of a new language from the new conditions

• Students will learn about the new concepts of space and form – parallels in the Arts and Sciences

• The student will learn about the beginning and the causes of the Modern and subsequent movements

• The student will learn about the context through which ideas developed as a linear consequence of events

• The student will become aware of the theories developed in the latter part of the 20th century

COURSE CONTENTS:

• European colonial expansion and colonial development in India

• Imposition, modification and assimilation. New modes of organization, new materials and techniques, new building types.

• The industrial revolution: new materials, techniques new modes of production. The industrial city and reform movements.

• The transformation of the building process and impacts on architecture. Abstraction, standardization, mass production.

• To study Evolution of form and growth of architectural vocabulary from Neo-Classical to Contemporary architecture.

• Artistic Movements like Bauhaus, De Stijl, Art Nouveau, CIAM etc. Modernism in Europe & the U.S. (Louis Sullivan, Frank Lloyd Wright, Mies Van Der Rohe, Le Corbusier etc.). Works of architects like Alvar Aalto, Eero Saarinen, Louis Kahn, Robert Venturi

• Post-Modernism - Philip Johnson, Charles Moore, Michael Graves, Richard Meier, James Stirling and others. De-constructivism and Post- Structuralism

GUIDELINES FOR QUESTION PAPER SETTING

All Theory Courses

- Part- A (5 NOS X 2 MARKS = 10 MARKS) Answer all questions
- Part- B (2 NOS X15 MARKS = 30 MARKS)
- (Either or type)

- Students will be required to attempt five questions from the Eight questions, are to be set from entire syllabus. where 2 questions may be short answer type which is compulsory with 2- 3 subheads and 2, short with 4 subheads answer type and 4 essay type questions.
- Students should attempt total Seven Questions including the compulsory question.
- Question paper is to be set covering the entire syllabus.

NOTE:-Emphasis should be laid on understating of building evolution and form. The continuous evaluation shall be made of students work based on various models, assignments and sketching

Reference books:

1. Fletcher, Banister. Sir Banister Fletcher's A History of Architecture. London: Butterworths, 1987. Print.
2. Kostof, Spiro. A History of Architecture: Settings and Rituals. New York: Oxford UP, 1985. Print.
3. Tadgell, Christopher. A History of Architecture. London: Ellipsis, 2000. Print.
4. Ching, Francis D. K., Mark Jarzombek, and Vikramaditya Prakash. A Global History of Architecture.Hoboken, NJ: J. Wiley & Sons, 2007. Print.
5. History of World Architecture. London: Faber, 1979. Print
6. Norberg-Schulz, Christian, and Pier Luigi Nervi. History of World Architecture. New York: Abrams, 1971. Print.
7. Bagenal, Philip. The Illustrated Atlas of the World's Great Buildings: A History of World Architecture. S.1.: Leisure, 1980. Print.
8. Fazio, Michael W., Marian Moffett, Lawrence Wodehouse, and Marian Moffett. A World History of Architecture. Boston: McGraw-Hill, 2008. Print.
9. Peter Scriver (Editor), Vikramaditya Prakash (Editor) Colonial Modernities: Building, Dwelling and Architecture in British India and Ceylon (Architext). Routledge; New Ed edition (April 21, 2007)
10. Nilsson, Sten (1968). European Architecture in India 1750 – 1850. London: Faber and Faber
11. Thapar, Bindia (2004). Introduction to Indian Architecture. Singapore: Periplus Editions.
12. Building Construction: The history of building construction » The second industrial age", Encyclopedia Britannica. Accessed June 2009.
13. Mignot, Claude. The architecture of the 19th Century. Köln: Evergreen (Benedikt Taschen), 1994. Print.
14. Pevsner, Nikolaus. A History of Building Types. Princeton, NJ: Princeton UP, 1976. Print.
15. Hofmann, Werner, and Udo Kultermann. Modern Architecture in Color. New York: Viking, 1970. Print.
16. Michell, George; The Penguin guide to the monuments of India, 2 vols, 1989
17. Porter, Andrew (1998). The Nineteenth Century, The Oxford History of the British Empire Volume III.Oxford University Press.
18. Marshall, PJ (1996). The Cambridge Illustrated History of the British Empire. Cambridge University Press
19. Olson, James (1996). Historical Dictionary of the British Empire. Greenwood Publishing Group.
20. McGowan, F.; Radosevic, S.; and Tunzelmann, N. von. Emerging Industrial Architecture in Europe. Hoboken: Taylor and Francis, 2004.

ARCH 506: SUSTAINABLE DESIGN

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 506	AR	THEORY	SUSTAINABLE DESIGN	2			2	2	10	10	10	50	40	100				100	3

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

A growing worldwide concern for the conservation of energy & environment has led to the emphasis on sustainable habitats as a key solution to growing urban concerns. Sustainable architecture aims to create environment – friendly and energy efficient building by actively harnessing renewable nature sources of energy (solar energy etc) and utilizing materials that least pollute the environment.

OBJECTIVES OF THE COURSE:

The objectives include creating awareness of the need for green buildings and imparting knowledge of designing green buildings, advocating of the application of the passive and active use of renewable energy system and the promotion of efficient use of water, materials and waste through the sustainable concept of Reduce, Recycle and Reuse.

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Sustainable designs and related theory.

COURSE CONTENTS:

- Introduction: Concepts of Reduce, Reuse & Recycle; Environmental Legislations ; Climate change Protocols & Conventions ;
- Passive Systems:
- Energy Systems:
- Water Management
- Waste Management:

GUIDELINES FOR QUESTION PAPER SETTING

All Theory Courses

- Part- A (5 NOS X 2 MARKS = 10 MARKS) Answer all questions
- Part- B (2 NOS X15 MARKS = 30 MARKS)
- (Either or type)

• Students will be required to attempt five questions from the Eight questions, are to be set from entire syllabus. where 2 questions may be short answer type which is compulsory with 2- 3 subheads and 2, short with 4 subheads answer type and 4 essay type questions.

• Students should attempt total Seven Questions including the compulsory question.

• Question paper is to be set covering the entire syllabus.

NOTE:-Emphasis should be laid on understating of Principle The continuous evaluation shall be made of students work based on various models, assignments and sketching

REFERENCES:

Arvind Krishnan & Others – Climate Responsive Architecture, Tata Mcgraw –Hill New Delhi 2001.
Lawson.B, Building Materials, Energy And The Environment; Towards Ecologically Sustainable Development Raia, Act, 1996
Ralph M.Lebens – Passive Solar Architecture in Europe – 2, Architecture Press, London 1983.
Sandra Mendler, William Odell, The Guide Book Of Sustainable Design, John Wiley & Sons, 2000.
Sustainable design manual, Vols 1& 2, The energy and Resource Institute, New Delhi.

ARCH 507: STRUCTURAL DESIGN I

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 507	TE	THEORY	STRUCTURAL DESIGN I	2			2	2	10	10	10	50	40	100				100	3

L - THEORY; S- STUDIO , T -TUTORIAL; C - CREDIT;HRS: HOURS ; MST - MIDTERM TEST , A.MST - AVERAGE OF MIDTERM , ESUE - END SEMESTER UNIVERSITY EXAMINATION; IA - INTERNAL ASSESSMENT PROGRESSIVE;,SS- FOLIO FINAL Sessional (INTERNAL) , EV - EXTERNAL VIVA VOICE,RVW - INTERMEDIATE REVIEW

COURSE OVERVIEW:

This course focuses on the structural design of different elements of building in RCC.

OBJECTIVES OF THE COURSE:

To develop the structural design skills in RCC elements

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Ability to analyze the standard members in structures IN R.C.C.

COURSE CONTENTS:

- Introduction to RCC design, Design Philosophies:
- Situations where doubly reinforced beams
- T-beams: Slabs: Columns Design of the staircase
- Design of lintels and cantilever beams and slabs using limit state method only
- Design of RCC Isolated footings for columns (Square and Rectangle) - working
- stress method only.
- Introduction, to prestressed concrete, Pretension & Post-tensioning methods, Problems of beams.

GUIDELINES FOR QUESTION PAPER SETTING

All Theory Courses

- Part- A (5 NOS X 2 MARKS = 10 MARKS) Answer all questions
- Part- B (2 NOS X15 MARKS = 30 MARKS)
- (Either or type)

• Students will be required to attempt five questions from the Eight questions, are to be set from entire syllabus. where 2 questions may be short answer type which is compulsory with 2- 3 subheads and 2, short with 4 subheads answer type and 4 essay type questions.

• Students should attempt total Seven Questions including the compulsory question.

• Question paper is to be set covering the entire syllabus.

NOTE:-Emphasis should be laid on understating of building structures. The continuous evaluation shall be made of students work based on various models, assignments and sketching

Reference books:

A.K.Jain. Reinforced Concrete: Limit State Design, 5th Ed. New Chand and Bros., Roorkee, 1999.
Ramamrutham. S. and Narayan, R. Design of RCC Structures, 12th Ed. Dhanpat Rai Pub. Co. Pvt. Ltd., Delhi, 1998.

ARCH 509: BUILDING SYSTEMS AND SERVICES -III

ELECTRICAL AND MECHANICAL

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 509	TE	THEORY	BUILDING SYSTEMS AND SERVICES-III (ELECTRICAL AND MECHANICAL)	1			1	2	10	10	10	50	40	100				100	3

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COURSE OVERVIEW:

Study of Building Services and Utilities generally installed in buildings and their role in enhancing the utilitarian value of the buildings. The study to focus on understanding basic working, principles, terms and definitions, as well as practical aspects and solutions utilized in architecture

OBJECTIVES OF THE COURSE:

To gain knowledge regarding the layout of utilities and services in the building envelope, the functioning of service and their applications in building

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Acquire knowledge of good practices in services for better layout planning.

- The student will understand principles of artificial light & electrification
- The student will learn the methods of Heating & cooling devices for natural and artificially ventilated building design
- Students will learn the principles of firefighting

COURSE CONTENTS:

- Artificial light, Electrification & Communication Network: Basic electrical supply & distribution to the building, alternate supply & Power connections. Various components & elements of layouts as per use, lifesaving auto-cut circuits & other fixtures. Communication systems like fax, telecom, EPABX, alarm, audio-video monitoring, etc. & their layouts. Criteria for designing of various communicating service layouts
- H.V.A.C. [Heating, Ventilating, Air-conditioning and cooling]: Mechanical thermal controls, its type, effects of it on heating, ventilating, air-conditioning or cooling an enclosed space. Air-conditioning or cooling systems, various types of practice, chilled water cooling system air handling package unit & their installation, demand and consumption as peruse & volume of space. Supply plants and service layouts, supply and return air's ducting and Channeling systems, calculations for consumption and basic sizes of Components
- Firefighting & Protection: Study of firefighting regulations, fire alarming & extinguishing system, fire hydrants-their types, location, spacing, distance & specifications. Fire resistance of different building materials, designing of fires resistant door, gangway, and stair & lift block for escape. Case studies of service and escape layouts of building for fire protection system & requirement.

GUIDELINES FOR QUESTION PAPER SETTING

All Theory Courses

- Part- A (5 NOS X 2 MARKS = 10 MARKS) Answer all questions
- Part- B (2 NOS X15 MARKS = 30 MARKS)
- (Either or type)

• Students will be required to attempt five questions from the Eight questions, are to be set from entire syllabus. where 2 questions may be short answer type which is compulsory with 2- 3 subheads and 2, short with 4 subheads answer type and 4 essay type questions.

• Students should attempt total Seven Questions including the compulsory question.

• Question paper is to be set covering the entire syllabus.

NOTE:-Emphasis should be laid on understating of building evolution and form. The continuous evaluation shall be made of students work based on various models, assignments and sketching

Reference books:

1. Prakash, N. Sesha.Manual of Fire Safety.New Delhi: CBS Publishers and Distributors,2011
2. Parker, Steve.Electricity.Lon don: Dorling Kindersley,2013
3. Sugarman, Samuel C.Testing and balancing HVAC air and water systems.Lilburn:Taylor & Francis,2014 Classics,Jan 2007
4. Grondzik, Walter T.Mechanical and electrical equipment for buildings.Canada: John and Wiley Sons, Inc.,2015
5. Roberts, Victor & Krepchin, Ira Eds. lighting: technology atlas Book. Colorado: Platts research and consulting., 2005
6. Howell, Ronald H. & others. Principles of heating ventilating and air conditioning: a textbook with design data based on the 2009 ASHRAE handbook - fundamentals. Atlanta: American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 2009

Electrical wiring and Contracting (Vol.1 to Vol.4), London The New Era Publishing Company.
Dr Frith Abnwos and others, Electrical Engineering hand Book
William. J. Guinness, Mechanical and Electrical Equipment for Buildings, New York: Willey
Bovay. H.E., Handbook of Mechanical and Electrical Systems for Buildings New York: Mc Graw Hill
E.R.Ambrose, Heat pumps and Electric Heating, John and Wiley and Sons Inc, New York, 1968.
Handbook for Building Engineers in Metric systems, NBC, New Delhi, 1968.
Philips Lighting in Architectural Design, McGraw Hill, New York, 1964.
R.G.Hopkinson and J.D.Kay, the Lighting of Buildings, Faber, and Faber, London, 1969.
Dr.V. Narasimhan – An introduction to Building Physics- Kabeer printing works, Chennai -5

ARCH 519: ELECTIVE - V

COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION									TOTAL MARKS	EXAM DURATION (HRS)
									THEORY						STUDIO				
				L	T	S	CREDIT	TOTAL CLASS HRS	MST 1 10%	MST 2 10%	A. MST 10%	SS 50% OR 30%	ESUE 40%	TOTAL	IA 10% OR 60%	EV 10% OR 40%	TOTAL		
ARCH 519	SU	STUDIO	ELECTIVE - V (POOL I)			1	1	2							50		50	50	

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COURSE OVERVIEW:

The following is a representative list of what may constitute Institute projects:
Seminars, Tutorials/ additional classes for any course, Guest Lectures, putting up Exhibitions, Workshops, participating in Architectural Competitions or conducting Site Visits or Study Tours. Provides knowledge to support student being sensitive design;
a paper presentation and a summer case study

OBJECTIVES OF THE COURSE:

overall nurturing of the student with issues in practice and field outside

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

better grooming than just books and theories.

COURSE CONTENTS:

The creative electives provide an opportunity to express talents which are different from architecture but related to imagination, visualization & creation. They offer hands-on experience of unique ingenuity & workmanship. The essence of creative domain can be achieved by exploring different materials, techniques, processes; developing creative products; finishing & presenting the product for the concepts evolved. The outcome will be through portfolio & presentations.

As Per Pool Electives Choices Stage I odd semester pool

GUIDELINES

One Major And Minor tasks/ exercises are to be set from the entire syllabus
The topic of the project is to be displayed on Institute Notice Board fifteen days in advance OF commencement of the classes

NOTE :

Evaluation is to be done through viva voce by an external examiner appointed by the university at Institute. Portfolios, after the university exam, shall be retained at the Institute level for the viva - voice

Chairperson
Board of Studies
Shri Vaishnav Vidyapeeth Vishwavidyalaya
Indore

Deputy Registrar
Shri Vaishnav Vidyapeeth Vishwavidyalaya
Indore