GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

Programme	Bachelor of Architecture	Branch/Spec.	INSTITUTE OF ARCHITECTURE
Semester		Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	IVA01ADS	Subject Name	Architecture Design Studio- IV

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	-	-	8	-	8	Theory	-	-	-
Hours	-	-	6	-	6	Practical	480	320	800

Pre-requisites:

Exploring Architectural Design process and solution for Community / Group / Community House form / Housing.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Studying the specific requirements of user groups. Activities with shared elements, notions of public, private, semi private activities. Inter-relations of individual within a group. Influences of occupational, financial, socio-cultural factors on the built form and resultant spatial organization.	
2	Relevant case studies and their analysis. Developing conceptual solutions. Developing appropriate construction /structural systems. Building bye laws implementation.	

Practical content

Case studies of similar examples (Live and Literature).Literature reviews, Analysis and conclusions with understanding .Site visits and interaction with various stake holders.Proposing an architectural solution of a group of residence and requisite amenities.

Text Books

1	

Reference Books

1	House Form and Culture - Rapoport, Amos
2	Analysis of the Precedents, Simon Unwin
3	Site, Space and Structure, Todd, Kim
4	Elements of Architecture from form to place, Miers , Pierr Von
5	Richard Untermann And Robert Small, Site planning for Cluster Housing
6	A Pattern Language, Christopher Alexander

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

Programme	Bachelor of Architecture		Branch/Spec.	INSTITUTE OF ARCHITECTURE	
Semester	IV		Version	1.0.0.0	
Effective from Academic Year	2015-16		Effective for the batch Admitted in	June 2015	
Subject code	IVA02ADV.BD	Subject Name	Advanced Basic Design -I		

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	-	-	4	-	4	Theory	-	-	-
Hours	-	-	6	-	6	Practical	240	160	400

Pre-requisites:

Diagrammatic understanding of Nature their Uses, Evolution, structure/ systems.

Learning Outcome:

Tectonics, Space Making and Place Making.

Theory syllabus

Unit	Content	Hrs
1	Exercises in tectonics, space making and place making based upon the theory of design. On hands exercise to understand the theory.	
2		

Practical content

Exercises based upon above topics.
Drawing and models.

Text Books

1	NA

Reference Books

1	Existence, Space and Architecture - Christian Noberg Schultz
2	Elements of Architecture from form to place - Miers , Pierr Von

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

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Semester	IV		Version	1.0.0.0	
Effective from Academic Year	2015-16		Effective for the batch Admitted in	June 2015	
Subject code	IVA03TRD	Subject Name	Technical Representation Drawings-IV		

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	-	-	3	-	3	Theory	-	-	-
Hours	-	-	6	-	6	Practical	180	120	300

Pre-requisites:

Developing skills for 3-dimensional visualization of objects/buildings & it's representation on 2-D media.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Perspective projections – use of one point and two point perspective for 3-D representation. Use of Sciagraphy – methods to represent shade/shadow and depth of an object with reference to sun movements. Introduction 3-D representation software like 3-D Studio Max	
2		

Practical content

Exercises relevant to 3D presentations.

Text Books

1	NA

Reference Books

1	Perspective for the architecture, Georg Schaarwachter
2	Sciography & Perspective, Malik
3	Applied Perspective, Holmes John M
4	Software User's Guide

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

Programme	Bachelor of Architecture		Branch/Spec.	INSTITUTE OF ARCHITECTURE	
Semester	IV		Version	1.0.0.0	
Effective from Academic Year	2015-16		Effective for the batch Admitted in	June 2015	
Subject code	IVA04BCD	Subject Name	Building Construction & Details- IV		

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	-	-	3	-	3	Theory	-	-	-
Hours	-	-	4	-	4	Practical	180	120	300

Pre-requisites:

Understanding different systems and components. Bathrooms and Toilets.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Bathrooms and Toilets. Bathroom Design, Construction Technique and standard sizes. Materials Used, joinery details. Bathroom fixtures and services. Toilet fixtures and services, dry and wet area construction. Tiles, dado, plaster, and other construction techniques.	
2	Openings: Different types of doors, windows, ventilations and skylights in different materials. and their operational and fixing details.	

Practical content

Study through practical site visits, presentations, case studies & workshop based on the application of theory to construction field.

Text Books

1	NA

Reference Books

1	Construction of Buildings – Volume – II- R. Barry
2	Construction of Buildings – Volume – I- W.B.Mckay
3	Construction Technology – Volume – I & II- Chaudley.
4	Building Construction Illustrated- Fransis D.K.Ching.

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

Programme	Bachelor of Architecture	Branch/Spec.	INSTITUTE OF ARCHITECTURE
Semester	IV	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	IVA05HOA	Subject Name	History of Architecture - IV

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	-	-	-	2	Theory	120	80	200
Hours	2	-	-	-	2	Practical	-	-	-

Pre-requisites:

Evolution of the built environment or human habitat as a complex and multilayered synthesis of culture, climate and construction.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Introduction of Byzantine Architecture(400 – 1450 AD) Introduction of Romanesque Architecture (1000 – 1200 AD) Introduction of Gothic Architecture (1150– 1550 AD)	
2	Introduction of Renaissance Architecture (1450 – 1650 AD) Introduction of Baroque Architecture (1600 – 1800 AD) Introduction of Rococco Architecture (1600 – 1800 AD)	

Practical content

Drawings, Lectures, Presentations, Movies, Discussions and Debates based upon the above syllabus

Text Books

1	

Reference Books

1	A History of Architecture - Sir Banister Fletcher
2	Genius Loci: Towards a Phenomenology of Architecture - Christian Noberg Schultz
3	Towards a new architecture -Le Corbusier
4	Complexity and Contradiction in Architecture -Robert Venturi
5	Modern Architecture and Design: An alternative history - Bill Risebero
6	Architecture: 19th and 20th Centuries -William J.R. Curti
7	Architecture after Modernism -Thames and Hudson

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

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Semester	IV	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	IVA06STR	Subject Name	Structure-IV

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	-	-	-	2	Theory	120	80	200
Hours	2	-	-	-	2	Practical	-	-	

Pre-requisites:

Analysis & Design of R.C.C. elements & Load bearing Structures.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Introduction to IS code : Introduction to various load & load combinations, Use of IS code for loads, Introduction to 456-2000 for design of RCC element Methods of design: Introduction to limit state, working stress & ultimate state methods of design, Determination of Moment of resistance of homogeneous beams of rectangular , under reinforced, over reinforced & balanced sections by limit state method. Analysis & design of Singly reinforced sections using Limit state method: Analysis & design of singly reinforced sections of beams, Design criteria for deflection, shear, development length & anchor length.	
2	Design of Slabs : Design of slabs spanning in one & two direction. Introduction – Behavior& detailing of Cantilever slab, continuous slab , Continuous beam & waist slab Behavior of Load Bearing Structure: Introduction to load bearing structure, understanding of various parameters like material, size, slenderness ratio, effective height & length, opening etc. & its impact on the strength & stability of load bearing structure. Use of monogram's to find the thickness of load bearing wall. Calculation of thickness of wall of simple case. Behavior of wall, column , Arches & Buttresses. Behavior of load bearing structure under the earthquake. Designing & detailing of brick masonry structure for earthquake.	

Practical content

Design of various elements with drawing based on course content.
site visits Study of structural grid- case study/ Design for locating position of beam, column. Understanding of supporting various elements- slabs , beams & columns as per architectural drawing.
Case study of load bearing structure.

Text Books	
1	
Reference Books	
1	Reinforce concrete design – Junarkar
2	Design of reinforced concrete structures - S. Ramamrutham & S. Narayan

GANPAT UNIVERSITY

FACULTY OF ARCHITECTURE DEISGN & PLANNING

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Semester	IV	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	IVA07ESS	Subject Name	Environment Science Services-II

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	-	-	-	2	Theory	120	80	200
Hours	2	-	-	-	2	Practical	-	-	-

Pre-requisites:

Introduction to all basic Building Electrification, Lighting, Telecommunication, Vertical Transportation and Acoustics.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Electrification, Lighting and Telecommunication Light and its sources, the visual field, day lighting and its types, day lighting criteria, Artificial lighting, kind of lighting, illumination, calculations for lighting levels. Types of electricity, terminology, lighting accessories, protective devices. Electric power supply system from generation to customer, single phase, three phase, and electrical distribution in a building from main distribution board to switch board. Lighting design of a residence.	
2	Vertical transportation Lifts, grouping of lifts, return-travel time, design of lift well, carrying capacity, installation requirements. Design of specialized lifts for heavy loads. Concept of moving walks and escalators and their design concerns.	
3	Acoustics Properties of sound, process of hearing, behavior of sound, acoustics for various spaces/ functional areas, noise control, outdoor and indoor sound input/output systems, noise control of building materials, prediction methods and calculations, noise reduction, properties of materials for sound insulation, testing, room acoustics, reverberation time in functional areas.	

Practical content

Site visits & Case studies. Market surveys of Electrification, Vertical transportation & Acoustic materials & systems.

Text Books

1	NA

Reference Books

1	Heating cooling, lighting - Norbert Lechner
2	Mechanical & Electrical Equipment for Building - William J. McGuiness & others
3	Operation & Maintenance of Electrical Equipment - B.V.S.Rao
4	The Vertical Transportation Handbook - George R. Strakosch
5	Acoustics and Noise Control - R J Peter

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Semester	IV	Version	1.0.0.0
Effective from Academic Year	2015-16	Effective for the batch Admitted in	June 2015
Subject code	IVB08 WS/ELE	Subject Name	Workshop/Elective-IV

Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	-	-	2	-	2	Theory	-	-	-
Hours	-	-	6	-	6	Practical	120	80	200

Pre-requisites:

To train the students in basic skills of carpentry.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Carpentry – Introduction to the use of different types of tools used in carpentry. Joints – Different types of joints, joinery details (which are commonly used in timber construction and interiors). Application of veneers/laminates on different types of timber surfaces i.e., Teak and commercial woods via ply, block boards, particle boards. Engraving and carving, Polishing and painting, Clay Work, -Marking of geometrical forms on the ground.	
2	Making of three dimensional forms such as cubes, pyramids, cones etc., Using different types of materials such as paper, card board, mount board, balsa wood, wax, plaster of Paris etc.	

Practical content

Exercises based upon above topics. models, installations and artworks

Text Books

1	NA

Reference Books

1	NA

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Semester	IV			Version	1.0.0.0		
Effective from Academic Year	2015-16			Effective for the batch Admitted in	June 2015		
Subject code	IVB09SP	Subject Name		Summer Programme-II*			
Teaching scheme				Examination scheme (Marks)			
(Per week)	Lecture(DT)	Practical(Lab.)	Total		CE	SEE	Total
	L / TU	P / TW					
Credit	NA			Theory	NA		
Hours	1 Week Case Study			Practical	ATTENDANT/ NOT ATTENDANT		

Pre-requisites:

Observation of form and order in built environment.

Learning Outcome:

Theory syllabus

Unit	Content	Hrs
1	Sketching, Photography, Measure Drawing, Documentation.	

Practical content

This summer workshop aims at creating understanding of inherent form and order in the built environment by observing it and analyzing by sketching and measure drawing. Hand sketch also gives an opportunity to students for examining the systems, scale and architectural language of the built.

Text Books

1	NA

Reference Books

1	NA
2	NA