COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME								TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO					
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL			
STUDIO +THEORY										INT	EX		INT	EX					INT
ARCH 101	PC	AR	STUDIO	BASIC DESIGN AND VISUAL ARTS			9	9	9					225	225	450	450		

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 PROGRESSI
SS- FOLIO FINAL Sessional (INTERNAL), EV - EXTERNAL VIVA VOICE, RVW - INTERMEDIATE REVIEW

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

1 ST YEAR / I Semester

ARCH 101: BASIC DESIGN & VISUAL ARTS

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

COURSE OBJECTIVES:

- To introduce the students to the fundamentals and principles of basic design to enable them, to comprehend Design as a creative process of choice making and statement of intent. to undertake design by application of basic design principles.
- Understanding the human body in space Activities and their relationship with spaces Scales and proportions
- To impart a good foundation in design through hands-on experience in designing simple two-dimensional and three-dimensional compositions.

COURSE OUTCOMES:

- At the end of the course, students will be able to:
  - Interpret visual literacy and visual expression ; elements and principles of design
  - Develop the basic skills & abilities to design
  - Interpret basic vocabulary of design and architecture ; Identify and map human activity in space
  - Infer, represent and communicate design ;
  - Construct representation and cognitive skills

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

- To impart an understanding of principles of composition, and appreciate design, elements. Exercises complement the lectures and ensure that the students learn to develop
- The Course prepares the ground for the students to gain an understanding of the fundamental issues in the design

FOCUS: Design Language

- Students will learn to explore human behaviour & activity through Space,
- The student will achieve the capacity of Experiencing Space in Time & Motion.
- The student will learn the basic vocabulary of design
- Students will learn the creation &organization of formal elements in work of art
  - Students will develop their basic skills & abilities of design expression.,
  - Students will learn visual literacy and visual expression, elements and principle of design, the skill of rendering using a different medium. acquire the various skill to work with various material
  - Freehand: Memory left-brain creativity, Objects taking things apart/ reassembly

COURSE OVERVIEW

- The design provides the framework for understanding design as a new language by sensitizing students to the conceptual, visual, and perceptual issues involved in the design process.
  The design provides the framework for understanding design as a new language by sensitizing students to the conceptual, visual, and perceptual issues involved in the design process. and ways of representing it

COURSE CONTENTS:

SR.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING

ARCH 101: BASIC DESIGN & VISUAL ARTS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 101	PC	AR	STUDIO	BASIC DESIGN AND VISUAL ARTS			9	9	9					225	225	450	450	

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 PROGRESS; SS- FOLIO FINAL Sessional (INTERNAL), EV - EXTERNAL VIVA VOICE, RVW - INTERMEDIATE REVIEW

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

NO.			HOURS:
VISUAL ARTS			55 hrs.
		Understanding the design field through various exercises Relationship of basic design to architectural design and design field in general Analytic reasoning and criteria for judgment of design and developing a vocabulary of the design subject;	
• 1	Representation skill development	Elements and principles of design: shapes and patterns: Transformations in two dimensions: Concepts of geometry & Color • Sketching, 2D & 3D drawings, painting, graphic • Model making skills • Exploration of various materials for drawing and models	18 hrs.
	Cognitive skill development	Developing cognitive skills: observation, perception, registration, expression, and critical thinking Design field application Improving basic design for architectural design and the design field in general Complex observations, design, and expressive ability. The abstract composition serves as the foundation for the development of ideas. Perception, observation, registration, and expression	
	Lateral Thinking	Critical thinking and cognitive skill application in design Brainstorming Mental Associations - Role of experience and memory in design Matric of ideas	
	Representation and communication of design.	Use of graphic language and representational techniques for communication of design	
2	Elements of design	• The visual components of colour, form, line, shape, space, texture, and value • Compositions using elements of design	20hrs.
	Principles of design	• The design principles - Balance, emphasis, movement, proportion, rhythm, unity, and variety • Compositions using principles of design	
	Abstraction and Simplification	• Complex observations, perception, design, and expression • Progressive evolution • Simplification/abstraction of an object using basic principles and elements of design • Use of foreground- background / contrast / color • Design attributes	
3	Design vocabulary	Analytical reasoning and design decisions • Criteria for judgment of design and developing a vocabulary of design subject	17hrs along with the studio
	Skill development	• 3D Exploration	

ARCH 101: BASIC DESIGN & VISUAL ARTS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 101	PC	AR	STUDIO	BASIC DESIGN AND VISUAL ARTS			9	9	9					225	225	450	450	

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 PROGRESS SS- FOLIO FINAL Sessional (INTERNAL), EV - EXTERNAL VIVA VOICE, RVW - INTERMEDIATE REVIEW

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

		• Complex geometrical form • Expression of Graphics, geometry, solids, assembly & intersections • Exploration of material and advanced presentation techniques • Descriptive and analytical skills	
	Volumetric & Spatial exploration	• Understanding of scale and proportion • Spatial perception • Volumetric exploration • Ordering principles • Spatial vocabulary • Relation of basic design to architectural design	
DESIGN			80hrs
		Introduction to design and Architecture: Elements of Composition. (2D, 3D, 4D) Transformations in dimensions: Concepts of geometry: Form and Space: Mapping of Space(s). (Ideograms) Introductory to Anthropometrics & Ergonomics Exploration of design principle through case studies	
4	Introductory exercises based on 'Learning by doing'	• To develop representation and communication skills through exercises involving drawing, sketching, graphic language, model-making, collage, etc. • Undertake exercises to enhance creative thinking	40hrs
5	Introduction to the studio-based iterative design process	• To develop a small-scale design project for comprehension of design criteria involving the following: • Understanding human activity and behaviour in space by activity mapping, anthropometric studies, etc. • To make, explore, feel and mould space based on design ideas/principles Undertake hands-on work and creative thinking. Explore 'making' through various mediums and techniques of representation. • Introduction to visualization and representation of an architectural environment's spatial qualities like spatial enclosure, depth, height, view, orientation, etc. and tectonic characteristics like surfaces, material, shape, texture, etc.	40hrs

SESSIONAL WORK:

DESIGN

- Minimum 6 tasks based on elements and principles of composition on sheets and/or models. Minimum one simple spatial design exercise such as seating area in public space, bus shelter, kiosks, play area, entrance gate, etc. demonstrating the application of the design principles and communicated effectively through two and three-dimensional hand-done drawings, sketches, and models.

VISUAL ARTS

- Minimum 6 tasks based on the composition of sheets and/or models. Minimum one simple spatial design exercise demonstrating the application of the design principles and

ARCH 101: BASIC DESIGN & VISUAL ARTS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 101	PC	AR	STUDIO	BASIC DESIGN AND VISUAL ARTS			9	9	9					225	225	450	450	

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 PROGRESSI
SS- FOLIO FINAL Sessional (INTERNAL), EV - EXTERNAL VIVA VOICE, RVW - INTERMEDIATE REVIEW

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

communicated effectively through two and three-dimensional hand-done drawings, sketches, and models.

- This is a studio subject and students should be made to prepare drawings as studio exercises along with the theoretical inputs. The studio work should be supplemented with appropriate site visits.
- Sketching Techniques: Sketching as a tool to develop ideas, sketching as a Tool to communicate ideas, Collages & Montages, Model Making I (Paper, Thermocol, Cardboards, Clay, Wood, Etc.)

GUIDELINES

The Tasks or Assignments /Problem is to be set from the entire syllabus
The topic of the project is to be displayed on the Institute Notice Board fifteen days in advance OF the commencement of the classes

NOTE: Evaluation is to be done through viva voice 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.

SUGGESTED READINGS:

Aldo Tanchis and Huw Evans. Bruno Munari, Design as Art. Cambridge: MIT Press, 1987
Anja Hartmann; Unusual Architectural Presentation Drawings; Page One Publishers, 2007.
Arthur L Guptill, Drawing and Sketching in Pencil; Courier Corporation 2012.
Arthur L Guptill, Drawing with Pen and Ink: And a word about the brush; Literary Licensing, LLLC, 2013.
Berger, John. Ways of Seeing. New York, Viking Press, 1972
Bovill, Carl. Fractal Geometry in Architecture and Design. Boston: Birkhäuser, 1996.
Charles Wallschlacgerm & Cynthia Busic-Snyder, Basic Visual Concepts, and Principles for Artists, Architects, and Designers, Mc Graw Hill, New York 1992.
Ching, Francis D. K. Architectural Graphics. New York: Van Nostrand Reinhold, 1975. .
Ching, Francis D. K., and James Eckler. Introduction to Architecture.
Ching, Francis D. K., and Steven P. Juroszek. Design Drawing. New York: Van Nostrand Reinhold, 1998. .
Ching, Francis D. K., Architecture: Form, Space, and Order. Hoboken, N.J: John Wiley & Sons, 2007.
Ching, Francis D. K., Barry Inouye, and Douglas Zuberbuhler. Building Structures Illustrated.
Colquhoun, Alan. Essays in Architectural Criticism: Modern Architecture and Historical Change. Cambridge, MA: MIT, 1981.
Corbusier, Le, and Frederick Etchells. Towards a New Architecture by Le Corbusier. London: Architectural Pr., 1965.
Corbusier, Le, Stanislaus Von. Moos, Arthur Rüegg, and Robert Venturi. Le Corbusier before Le Corbusier: Applied Arts, Architecture, Interiors, Painting, and Photography,
Curtis, Nathaniel Cortlandt. Architectural Composition. Cleveland, O.: J.H. Jansen, 1923.
Dodds, George, Robert Tavernor, and Joseph Rykwert. Body and Building: Essays on the Changing Relation of Body and Architecture. Cambridge, MA: MIT, 2002.
Field, M. City Architecture; Designs for Dwelling Houses, Stores, Hotels, Etc. In 20 Plates. Descriptions and an Essay on the Principles of Design. New York: D. Appleton, 1854.
Frampton, Kenneth, Arthur Spector, and Lynne Reed. Rosman. Technology, Place & Architecture: The Jerusalem Seminar in Architecture: 1996, 1994, Architecture, History &
Frank Lohan; Pen and Ink Techniques; Contemporary books, 1978.
Gombrich, E H. The Story of Art. New York: Phaidon Publishers; distributed by Oxford University Press, 1966
H. Gardner, Art through ages.
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.
International Library of Technology; Elements of Pen and Ink Rendering, Rendering with Pen and Brush, BiblioBazaar, 2010.
Itten, Johannes. Design and Form: The basic course at the Bauhaus, Thames and Hudson Ltd., London 1997.
Johnson, Paul-Alan. The Theory of Architecture: Concepts, Themes & Practices. New York: Van Nostrand Reinhold, 1994.
Krier, Rob. Architectural Composition, Academy Editions, London, 1988.

ARCH 101: BASIC DESIGN & VISUAL ARTS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 101	PC	AR	STUDIO	BASIC DESIGN AND VISUAL ARTS			9	9	9					225	225	450	450	

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 PROGRESSI SS- FOLIO FINAL Sessional (INTERNAL), EV - EXTERNAL VIVA VOICE, RVW - INTERMEDIATE REVIEW

Syllabus: 15 weeks (9 hours/week) Total Teaching hours: 135 Hrs.

Lidwell, William; Kritina Holden; Jill Butler (2010). Universal Principles of Design (2nd ed.) Beverly, Massachusetts: Rockport Publishers.
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, Architectural Rendering Techniques: A Color Reference; John Wiley and Sons, 1985.
Owen Cappleman & Michael Jack Jordon, Foundations in Architecture: An Annotated Anthology of Beginning Design Project, Van Nostrand Reinhold New York, 1993.
Pallasmaa, Juhani. The Thinking Hand: Existential and Embodied Wisdom in Architecture. Chichester, U.K.: Wiley, 2010.
Park, Steven, and Le Corbusier. Le Corbusier Redrawn: The Houses.
Paul Laseau, Graphic Thinking for Architects and Designers, John Wiley & Sons, New York, 2001.
Paul Zelanski & Mary Pat Fisher, Design Principles & Problems, 2nd Ed, Thomson & Wadsworth, USA,1996
Pipes, Alan. Drawing on 3-Dimensional Design. Thames and Hudson Ltd., London 1990.
Rasmussen, Steen Eiler. Experiencing Architecture. Cambridge: M.I.T., Massachusetts Institute of Technology, 1962.
Rich, Peter Maurice., and Yvonne Dean. Principles of Element Design. Oxford: Architectural, 1999.
Robert W. Gill, Rendering with Pen and Ink
Shibikawa, Ikuyoshi and Takahashi, Yumi. Designers Guide to Colour.
Smithies, K.W. Principles of Design in Architecture. Chapman and Hall, 1983.
Sullivan, Louis H., and Maurice English. The Testament of Stone; Themes of Idealism and Indignation from the Writings of Louis **Sullivan. Evanston,** IL: Northwestern UP, 1963.
Tibor K Karsai, The Airbrush in Architectural Illustration; Van Nostrand Reinhold, 1989.
Trewin Copplestone, Arts in Society, Prentice Hall Inc, Englewood Cliffs, N. J. 1983.
White, Alex (2011). The Elements of Graphic Design. New York, NY: Allworth Press.
Whyte, William Hollingsworth. The Social Life of Small Urban Spaces. Washington, D.C.: Conservation Foundation, 1980.
William Wilson Atkin; Architectural Presentation Techniques; Van Nostrand Reinhold Co., 1976. ISBN 0442203616, 9780442203610
Wittkower, Rudolf. Architectural Principles in the Age of Humanism. New York: W.W. Norton, 1971.
Wucius, Wong. Principles of Two Dimensional Design. Van Nostrand Reinhold 1972.
Yee, Rendow. Architectural Drawing: A Visual Compendium of Types and Methods. Hoboken, NJ: J. Wiley, 2003.

ARCH 103: BUILDING MATERIAL & CONSTRUCTION – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME								
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO			TOTAL MARKS	EXAM DURATION (HRS)
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 103	BS& AE	TE	THEORY CUM STUDIO	BUILDING MATERIAL & CONSTRUCTION - I	2		2	4	4	40	40	80	160	20	20	40	200	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

Syllabus: 15 weeks (4 hours/week) Total Teaching hours: 60 Hrs.

ARCH 103: BUILDING MATERIAL & CONSTRUCTION – I

Syllabus: 15 weeks (4 hours/week) Total Teaching hours: 60 Hrs.

COURSE OBJECTIVES:

To understand the elementary construction methods, explaining basic principles and considerations in the construction of buildings

COURSE OUTCOME

At the end of the course, students will be able to –

- Explain properties of building construction materials and their use in building construction.
- Give an outline of building construction systems and use of related building elements therein.
- Name building elements and basic building construction processes.

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

To understand the techniques of construction of a simple load-bearing structure with simple materials like brick, stone, etc. Knowledge required for specifying appropriate materials for various spaces in buildings

FOCUS: Building Materials and Load Bearing Const. Systems

- Students will get an understanding of materials of construction, basic principles of construction, and elements of buildings through theory, relevant drawing & experience.
- Students will get an understanding of materials and building systems in a broad overview.
- Students will learn vocabulary related to building elements and construction.

COURSE OVERVIEW:

This course is a combination of lecture & studio classes aimed at developing the students understanding of material properties and construction techniques with hands-on construction yard assignments to introduce to the methods and techniques of construction of basic elements of a simple building and provide information on the properties, use, installation and costs of basic building materials.

- Basic materials of construction: natural and man-made
- Basic building elements and systems of building through case studies.
- Understanding of constructional behaviour of different elements of a construction system, about the properties of materials.
- Keywords, Terms & its definitions.
- The concern with the appropriateness of materials to the context
- Load bearing system

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUBTOPIC	TEACHING HOURS:
		Introduction to basic elements of buildings and their importance: Structural concepts. Load bearing & non-load bearing walls; Construction details; Earthquake resistance; Types - walls, piers, footings, retaining structures; • Introduction to different types of Masonry Brick Masonry: Brick: Brick bonds: walls, Garden wall bonding: • Stonemasonry: Stone: Rubble work:	

ARCH 103: BUILDING MATERIAL & CONSTRUCTION – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME								
										THEORY				STUDIO			TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 103	BS& AE	TE	THEORY CUM STUDIO	BUILDING MATERIAL & CONSTRUCTION - I	2		2	4	4	40	40	80	160	20	20	40	200	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

Syllabus: 15 weeks (4 hours/week) Total Teaching hours: 60 Hrs.

		• Composite masonry: Cladding: • Openings: Lintels: Arches: • Ground and upper floors: Flooring Finishes: Flat roofs:	
1	Introduction to Building Construction Materials	Introduction to building construction materials and their classification based on their properties: ceramic, metals, composites, polymers, and organic materials. • Relationship of material properties to techniques and processes of working with materials.	12 hrs.
2	Introduction to elements of Super Structure and Sub - Structure	• Introduction to basic building elements and their role in a building: foundation, plinth, walls, opening, roof, floor, etc. • Introduction to building construction system and its elements e.g.: - Load Bearing, Framed and Composite structures. • Explanation through case studies, measure drawing, etc.	16 hrs.
3	Introduction to masonry structures	• Understanding principles of Brick and Stone Masonry: • Composition of brick earth and their properties, manufacturing process of bricks, classification of bricks, test for bricks, a special type of bricks, substitutes for bricks, etc. • Bonds, principles, and applications in buildings. • Brick walls in the different bond ends, corners and junctions. • Types of Masonry walls: load-bearing, partition, cavity, jali, Composite masonry, etc. • Introduction to Mud and Stone construction and techniques of building with mud and stone. • Demonstration of understanding by making models, drawings, hands-on work, etc.	32 hrs.

NOTE:

- The classwork and home assignments should include appropriate site visits by the students.
- The student will maintain field observations/record books.
- At least two exercises are to be done in the construction yard.
- Each Unit should include a market survey and construction site to visit compulsorily with studio working on sheets minimum of 12 to 15 Nos A-1 Sheets

SUGGESTED READINGS:

A. Agarwal –Mud: The potentials of earth-based material for third world housing – IIED, London 1981.
Agrawal, B. K. Introduction to Engineering Materials. New Delhi: Tata McGraw Hill Education Ltd., 2013
Barry, R. The Construction of Buildings Vol. 2, 5th Ed. East-West Press. New Delhi, 1999.
Bhavikatti, S. S. Building Construction. Noida: Vikas Publishing House Pvt. Ltd., 2013
Bhavikatti, S. S. Materials of Construction Vol - 2. New Delhi: I. K. International Publishing House Pvt. Ltd., 2014
Biggs, John M. Introduction to Structural Dynamics. New Delhi: McGraw Hill Education India Pvt Ltd, 2014
Bindra, S P., And Arora, S P. Building Construction: Planning Techniques and Methods of Construction, 19th ed. Dhanpat Rai Pub. New Delhi, 2000.

ARCH 103: BUILDING MATERIAL & CONSTRUCTION – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO +THEORY										INT	EX		INT	EX				INT
ARCH 103	BS& AE	TE	THEORY CUM STUDIO	BUILDING MATERIAL & CONSTRUCTION - I	2		2	4	4	40	40	80	160	20	20	40	200	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

Syllabus: 15 weeks (4 hours/week) Total Teaching hours: 60 Hrs.

Charleson, Andrew. The structure of architecture: Sourcebook for architects and structural engineers. London: Taylor & Francis, 2015
Ching, Francis D. K. Building Structures Illustrated. New York: John Wiley & Sons, Inc., 2014
Ching, Francis D. K. Visual Dictionary of Architecture. Delhi: Wiley India (P) Ltd., 2012
Chudley, R. Building Construction Handbook. Oxford: Butterworth-Heinemann Ltd., 2010
Chudley, R. construction Technology.
Cohen, Jean-Louis. Liquid Stone: New Architecture in Concrete. Boston: Birkhauser, 2006
Deplazes, Andrea. Constructing Architecture Materials Processes Structures: A Handbook. Switzerland: Birkhauser- Publisher of Architecture, 2013
Dr B.C. Punmia – Building construction
Francis D.K. Ching – Building Construction Illustrated. VNR, 1975.
Gambhir, M. L. Building Materials: Products, Properties, and Systems. New Delhi: Tata McGraw Hill Education Private Limited,
Hailey and Hancock, D.W. Brick Work and Associated Studies Vol. 2. MacMillan, London, 1979.
Hibbeler, Russell C. Structural Analysis. India: Pearson Education Asia Pte. Ltd., 2013
HUDCO – All you wanted to know about soil stabilized mud blocks, New Delhi, 1989.
Inouye, Barry S. Statics and Strength of Materials For Architecture And Building Construction. Chennai: Pearson India Education Services Pvt Ltd., 2015;**Khurmi, R. S.** The strength of Materials: Mechanics of Solids. New Delhi: S. Chand & Company Ltd., 2013 ;**Kotadiya A. S**. Building Construction.: Mahajan Publishing, 2014
Kula, Daniel. Materiology: The Creative's Guide to Materials and Technologies. USA: Frame Publishers; 2009
Kumar, Sushil. Building Construction. New Delhi: Standard Publishers Distributors, 2012;**Laursen, Harold I.,** Structural Analysis. New Delhi: McGraw Hill Education India Pvt Ltd, 2014 ;**Levy, Matthys.,** Why Buildings Fall: How Structures Fail. New York: W. W. Norton and Co., 2002
Lyons. Materials for Architects & builders. New York: Taylor & Francis, 2014
McKay, J. K. Building Construction Vol - 2-4: Metric. Delhi: Pearson Education Pte. Ltd., 2013
Mckay, W. B. Building Construction Vol - 1: Metric. New Delhi: Pearson Education Asia Pvt. Ltd.; India, 2013
Millias, Malcolm. Building structures from concept to design. London: Spon Press, 2005
Moxley, R. Mitchell's Elementary Building Construction, Technical Press Ltd.
Muttoni, Aurelio. Art of Structures: Introduction to the Functioning of Structures in Architecture. UK: Taylor & Francis, 2011
Pandit, G. S. Structural Analysis: A Matrix Approach. New Delhi: Tata McGraw-Hill Publishing Company Ltd., 2008
Parikh, Janak. Understanding the Concept of Structural Analysis and Design. Anand: Charotar Publishing House, 2000
Patel, Nimish. Stone Buildings of Gujarat. Ahmedabad: CEPT University, 2010
Punmia, B. C. Building Construction. New Delhi: Laxmi Publications Pvt. Ltd., 2008
Rangwala, S. C. Engineering Materials: Material Science. Anand: Charotar Publishing House, 2014
Rangwala, S.C. Building Construction, 22nd ed. Charotar Pub. House, Anand,2004.
Salvadori, Mario. Why Buildings Stand Up: The Strength of Architecture. New York: W. W. Norton and Co., 1980,
Sandaker, Bjorn N. Structural Basis of Architecture. UK: Taylor & Francis, 2011;
Schodek, Daniel L. Structures. New Delhi: PHI Learning Private Limited, 2014;
Shah, M. G. Building Drawing: With an Integrated Approach to Built Environment. New Delhi: McGraw-Hill Publishing Company Ltd., 2013
Sherratt, Fred. Materials science in construction: an introduction. London: Taylor & Francis, 2015;
Singh, Gurcharan. Building Material and Constructions. Delhi: Standard Book House, 2012; use of Bamboo and a Reed in Construction – UNO Publications; **Watson, Donald.** Time-Saver Standards for Building Materials and Systems: Design Criteria and Selection Data. New Delhi: Tata McGraw Hill Education Private Limited, 2009

ARCH 104: ARCHITECTURAL GRAPHICS & DRAWING – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO										INT	EX		INT	EX				INT
ARCH 104	PC	SK	STUDIO	ARCHITECTURAL GRAPHICS & DRAWING -I			3	3	3					75	75	150	150	

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

Syllabus: 15 weeks (3 hours/week) Total Teaching hours: 45 Hrs.

ARCH 104: ARCHITECTURAL GRAPHICS & DRAWING – I

Syllabus: 15 weeks (3 hours/week) Total Teaching hours: 45 Hrs.

COURSE OBJECTIVES:

- To introduce architectural drawing techniques and to facilitate effective visual communication. The students will develop knowledge of orthographic projections, measured drawing, and skills in FreeHand sketching

COURSE OUTCOME: At the end of the course, students will be able to –

• Make use of Orthographic Projection Drawing as a representation tool & medium of effective visual communication.
• Appraise skills of visualization
• Maximize the potential of two-dimensional drawing as a tool of design development and representation.
• Students will learn to Scale drawing, conventional architectural representations in drawings and graphics.
• Students will develop the understanding & skills of technical drawing as a tool for visual communication.
• Students will learn the basic drafting and visualization skill

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED: Make use of Architectural Drawing as a representation tool & medium of effective visual communication.

FOCUS: Students will learn the basic drafting and visualization skill (manual)

COURSE OVERVIEW:

- The course introduces the fundamental techniques of architectural drawing and develops the appropriate skills for visualization and representation.

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
1		**Introduction; Drawing:** • Basic and analytical geometry – Geometric Constructions • Geometrical Drawing: • Description of Plane Curves • Solid Geometry: Sections of solid • Architectural Symbols: • Orthographic Projections, Auxiliary Projection • Development of surfaces • Axonometric views, Isometric views, and other views. • Measuring and Drawing to Scale: • FreeHand Drawings: line strokes, light and	

ARCH 104: ARCHITECTURAL GRAPHICS & DRAWING – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 Term MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO										INT	EX		INT	EX				INT
ARCH 104	PC	SK	STUDIO	ARCHITECTURAL GRAPHICS & DRAWING -I			3	3	3					75	75	150	150	

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

Syllabus: 15 weeks (3 hours/week) Total Teaching hours: 45 Hrs.

		shade techniques of simple, natural, and 3D geometric forms. Study of proportions and scale; structure and axes of objects; Outdoor sketching of simple building forms.	
1	Geometrical Construction	• Basic and analytical geometry – Geometric Constructions • Geometrical Drawing: • Architectural Symbols: • Measuring and Drawing to Scale: • Constructing and dividing lines and angles • Constructing and dividing circles and arcs • Constructing Regular Polygons • Description of Plane Curves • Architectural Symbols:	8 hrs.
2	Orthographic Projection, Auxiliary Projection, and Isometric views	• Orthographic projection and auxiliary projection • Axonometric views, isometric views, and other views. • Projections of Points, Lines, and Planes • Projections of solids (Prisms & Pyramids) • Tilted Objects • Sections of Solids • Interpenetrations of Solids (Basic). • Description of Plane Curves • Solid Geometry: Sections of solid	21 hrs.
3	Development of Surfaces	• Introduction of D.O.S • Regular Polygons and Platonic Solids • D.O.S of hip roof & Gable roofs • D.O.S of sectioned objects	8 hrs.
4	Allied Techniques (Part 1 of 2)	• Visualization Software (Sketch-UP, Rhino, or equivalents) • Model Making • Various freehand sketching exercises to strengthen visualization and representation. • FreeHand Drawings: line strokes, light and shade techniques of simple, natural, and 3D geometric forms. Study of proportions and scale; structure and axes of objects; Outdoor sketching of simple building forms.	8 hrs.

GUIDELINES

Assignments /Tasks are to be set from the entire syllabus; The topic of the project is to be displayed on Institute Notice Board fifteen days - a week time in advance OF commencement of the classes

ARCH 104: ARCHITECTURAL GRAPHICS & DRAWING – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOT AL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
STUDIO										INT	EX		INT	EX				INT
ARCH 104	PC	SK	STUDIO	ARCHITECTURAL GRAPHICS & DRAWING -I			3	3	3					75	75	150	150	

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

Syllabus: 15 weeks (3 hours/week) Total Teaching hours: 45 Hrs.

NOTE:

This is a studio subject and students should be made to prepare drawings as studio exercises along with the theoretical inputs. The studio work should be around 12 to 15 A1 sheets for appropriate site visits.

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

SUGGESTED READINGS:

Alan Jefferis, David A. Madsen, David P. Madsen. Architectural Drafting & design. Delmar Cengage Learning approach the built environment, 7th Ed. Tata McGraw Hill Pub., Delhi, 2000.
Bhatt, N.D. and Panchal V.M. Engineering Drawing: Plane and Solid Geometry, 42nd ed. Charotar Pub., Anand, 2000.
Bies, D. John. Architectural Drafting: Structure and Environment. Bobbs – Merrill Educational Pub., Indianapolis.
Ching, Francis D. K. Architectural Graphics. New York: Van Nostrand Reinhold, 1975.
Ching, Francis D. K., and James Eckler. Introduction to Architecture.
Ching, Francis D. K., and Steven P. Juroszek. Design Drawing. New York: Van Nostrand Reinhold, 1998. .
Ching, Francis D. K., Architecture: Form, Space, and Order. Hoboken, N.J: John Wiley & Sons, 2007.
Council Jensen. Engineering Drawing & Design. McGraw-Hill
Dana J. Hepler, Paul Ross Wallach, Donald Hepler., Drafting & Design Architecture & Construction. Delmar Cengage Learning
Dhananjay jolhey. Engineering Drawing. Tata Mcgraw Hill
Douglas Cooper., Drawing and Perceiving. WILEY
George Barnett Johnston., Drafting Culture. The MIT Press
Gill, P.S. T.B. of Geometrical Drawing, 3rd Ed. Dewan Sushil Kumar Kataria, Ludhiana, 1986.
Helmut Pottmann. Architectural geometry. Bentley Institute Press
I.H. Morris, Geometrical Drawing for Art Students, Orient Longman Chennai.
M.S.Kumar, Engineering Drawing, DD publications, Chennai 600 048
Moris, I.H. Geometrical Drawing for Art Students.
ND Bhatt. Engineering Drawing. Charotar Publishing House
Nelson, A. John. H.B. of Architectural and Civil Drafting, Van Nostrand Reinhold, New York, 1983.
Nichols, T.B. and Keep, Norman. The geometry of Construction, 3rd ed. Cleaver – Hume Press Ltd., London, 1959.
Rayeuans, Drawing, and Painting Architecture Pub. Van Nostrand Reinhold Company, New York
Robert W. Gil. Rendering with pen and ink. Thames & Hudson
Shah, M.G., Kale, C.M. and Patki, S.Y. Building Drawing: with an integrated approach to the built environment, 7th Ed. Tata McGraw Hill Pub., Delhi, 2000.
Thomas Obermeyer., Architectural Drafting Residencial & Commercial. Glencoe/McGraw-Hill
Thoms, E. French. Graphic Science and Design, New York: Mc Graw Hill.

ARCH 105: HISTORY OF ARCHITECTURE & CULTURE- I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 105	PC	AR	THEORY	HISTORY OF ARCHITECTURE & CULTURE- I	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

ARCH 105: HISTORY OF ARCHITECTURE & CULTURE- I

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

COURSE OBJECTIVES:

To explain to the students the evolution of architecture about time with special emphasis on social, religious, and environmental factors. To make the students understand the developments in construction technology in different periods.

COURSE OUTCOME:

At the end of the course, students will be able to –

- Outline the prehistory and timeline of human evolution
- Discover various cultural expressions
- Compare Indian history and its cultural values
- Develop an understanding of the relationship between people and place

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Acquire knowledge to identify the common characteristics among the monuments of a particular style and good practices of architecture in the past

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

FOCUS: Humanities

The student will learn an appreciation of various cultural expressions through instruction and experience

The students will develop an appreciation of the rigorous thought processes in the field of science

COURSE OVERVIEW:

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

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
		Detailed study & analysis of architectural design fundamentals through significant e.g., in the light of the following for the periods mentioned in the modules. Genesis of seed ideas & concepts; Timeline; Socio-political background, key people involved; Climatic & geographic influence; General settlement pattern; Cities & its civic places; Construction technology & material; Design principles; Typology; Evolution; Spatial organization; Form & Detailing. The e.g., to represent the following historical styles are suggestive & students are encouraged to explore additional e.g., for a comprehensive understanding of the respective styles • Understanding art as an expression of culture.	

ARCH 105: HISTORY OF ARCHITECTURE & CULTURE- I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 105	PC	AR	THEORY	HISTORY OF ARCHITECTURE & CULTURE- I	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

		• Exposition of aspects of literature, performing arts - theatre, dance, music and plastic arts; painting, sculpture, film, in terms of basic characteristics and development of each field and first-hand experience of some work • Philosophical explorations into man's place in the world, ethics, aesthetics, and epistemology as systems of the relationship between man, society, artefacts, and thought • The discipline of history and the continuous observation and criticism of society • Critical thinking – its basis and intent • Teaching & learning through reading, discussions, debate & critical judgment	
1	Historical timeline of human evolution	• The history of the earth • Human evolution – stages and timeline • Paleolithic and Neolithic society • Journey towards modern man and civility	6 hrs.
2	Culture and society	• What are culture and society • Elements of culture • Symbols and culture	8 hrs.
3	Indian culture	• History of India • Unity and diversity • Cultural values and identity	6 hrs.
4	People and places	• Culture and shelter (Indian context) • Culture, people and place – the role of culture in place-making	10 hrs.

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 sketches.

SUGGESTED READINGS:

Arnold, Dana. Art History: A Very Short Introduction. New York: Oxford UP, 2004.;**Bronowski, Jacob.** The Ascent of Man. Boston: Little, Brown, 1974.;**Copplistone, Trewin, and Others.** World Architecture: An Illustrated History, 11th Ed. Hamlyn, London, 1979.
Fletcher, Sir Banister. A History of Architecture, 19th Ed. CBS Pub., Delhi, 1992.
Giddens, Anthony., Introduction to Sociology. New York: W.W. Norton, 1996.
Heidegger, Martin, and Ralph Manheim. An Introduction to Metaphysics. New Haven: Yale UP, 1959.
Johnson, Harry Morton. Sociology: A Systematic Introduction. New York: Harcourt, Brace, 1960.
Lannoy, Richard. The Speaking Tree: A Study of Indian Culture and Society. London: Oxford UP, 1971.;**Majumdar, Ramesh Chandra.** The History and Culture of the Indian People. Mumbai: Bharatiya Vidya Bhavan, 1996. .
Oliver, Paul. Encyclopedia of Vernacular Architecture of the World. Cambridge: Cambridge UP, 1997.
Patrick Nuttgens, The Story Of Architecture;**Pearce, F. G.** An Outline History of Civilization. Bombay: Oxford U.P., 1965.; **Rudofsky, Bernard.** Architecture without Architects, an Introduction to nonpedigreed Architecture. New York: Museum of Modern Art; Distributed by Doubleday, Garden City, N.Y., 1964.;**Schulz, Christian Norberg.** Meaning in Western Architecture, 2nd Ed. Rizzoli Intl. Pub., New York, 1981.;**Siegfried Gideon,** Space, Time And Architecture;**Soergel, Philip M.** Arts & Humanities Through the Eras. Detroit: Thomson Gale, 2005.;**Stallabrass, Julian, and Julian Stallabrass.** Contemporary Art: A Very Short Introduction. Oxford: Oxford UP, 2006.;**Toynbee, Arnold.** Mankind and Mother Earth: A Narrative History of the World. New York: Oxford UP, 1976.;**Yarwood, Doreen.** A Chronology of Western Architecture. B.T. Batsford Ltd., London, 1987.

ARCH 107: THEORY OF STRUCTURES -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
										THEORY				STUDIO				
					L	T	S	CREDIT	TOTAL CLASS HRS	2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 107	BS& AE	TE	THEORY	THEORY OF STRUCTURES-I	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

ARCH 107: THEORY OF STRUCTURES -I

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

COURSE OBJECTIVES:

- To enable students to understand the concepts of structures in architecture, use of different structural materials used for various buildings

COURSE OUTCOME:

At the end of the course, students will be able to –

- Explain conceptual understanding of structural behavior
- Relate basic structural systems.
- Apply technical vocabulary related to structural design

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

- the students shall be confident about the structural action of the various elements.

Further, he will have sufficient knowledge about the various long-span structures.

- Students will get a conceptual understanding of structural behaviour to learn basic structural systems.

FOCUS :- The student will understand the technical vocabulary related to structure.

COURSE OVERVIEW:

To inculcate in

- the student an awareness of basic structural principles used in various building systems
- Students will understand the structural behaviour of materials, basic structural systems
- Students will understand the loading mechanism of structural systems
- Basic principles of mechanics and behaviour of elements of structures.

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
		Introduction: Structural Concepts: Force, the equilibrium of forces; a system of forces, resultant, equilibrant Parallelogram law, LOADS OF STRUCTURE: STRUCTURAL MATERIALS • Different methods of categorization of the structural system • Mechanical properties of structural material • Structural systems based on the mechanism of transfer of load • Analysis of trusses, Problem of Span, Stress, Strain • Tension And Compression Members • Concepts of various structural systems – Cables – Trusses – Arches – Cable Roofs – Space Frames – Flat Slabs. • Types of Beams, Cantilever: Types of loads • Curved Structures and Long-Span Buildings Theory of Vaults and Domes – Construction of Masonry Vaults and Domes – Concepts of Reinforced Concrete Shells, Domes and Vaults – Folded Plate Roofs – tensile structures.	

ARCH 107: THEORY OF STRUCTURES -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 107	BS& AE	TE	THEORY	THEORY OF STRUCTURES-I	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

		• Definition of the centroid, a line of symmetry, the centroid for some standard shapes, calculation of centroid for shapes like L, T, C, I Sections, etc., a moment of inertia, Derivation of M.I formula for Rectangle, Circle, Triangle, calculation of M.I for L, T, C, I Sections, etc., • Types of joints, lap joint & butt joint, failure of riveted joints, the strength of the joint, efficiency of joint, Unwin's formula, chain riveting & Diamond Riveting	
1	Process of the building structure	• Structure and Structural form • Structure and its importance in Architecture	6hrs
2	The broad categorization of structural system	• Structural form - solid, Surface, skeleton, Membrane, hybrid • Structural form - in Nature • Structural form - man-made	6hrs
3	States of stresses	• Tensile, compressive, shear, torsion, bending	6hrs
4	Basic requirements of a structure	• Structural material: strength, stiffness, shape • Equilibrium: Vertical, Horizontal, Rational • settlement and earthquake behaviour	6hrs
5	Types of loads & supports	• Structural Elements: Strut, tie, beam, slab/plate, panel • Structural Element behaviour: Tensile, compressive, shear, torsion, bending	6hrs

NOTE:

This course is to be taught as an introduction with special reference to the structure in nature viz. Trees, the Human body, and other examples in which unusual rock formations are created by the forces of nature like wind and water.

- The teaching in this subject must bring out:
  - The predominant pictorial nature of the Architects language, The physical-mechanical essence of the subject matter.
  - The orientation of all Architectural efforts and their relation to form and space.

Emphasis should be laid on the understating of building evolution and form. The continuous evaluation shall be made of students' work based on various models, assignments, and sketches. More emphasis while teaching shall be laid on' learning by doing' by students involving the making of 3-D models (to give the student different spatial experience and make them understand the basics/principles involved).

SUGGESTED READINGS:

Ambrose, James E. Building Structures. New York: Wiley, 1988.
Anderson, Stanford, and Eladio Dieste. Eladio Dieste: Innovation in Structural Art. New York: Princeton Architectural, 2004.James Ambrose, Building Structure, Canada Wiley, 2012
Biggs, John M., Introduction to Structural Dynamics, New Delhi, McGraw Hill Education India Pvt Ltd, 2014
Burns, John A. Recording Historic Structures. Washington, D.C.: American Institute of Architects,1989.
Charleson, Andrew., Structure as architecture: Sourcebook for architects and structural engineers, London, Taylor & Francis, 2015
Ching, Francis D. K., Building Structures Illustrated, New York, John Wiley & Sons, Inc., 2014
Corkill, P. A., H. L. Puderbaugh, and H. K. Sawyers. Structure and Architectural Design. Iowa City: Sernoll, 1974.
Cowan, Henry J. Architectural Structures: An Introduction to Structural Mechanics. New York: Elsevier, 1976.

ARCH 107: THEORY OF STRUCTURES -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 107	BS& AE	TE	THEORY	THEORY OF STRUCTURES-I	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

Deplazes, and Söffker. Constructing Architecture: Materials, Processes, Structures. Basel: Birkhäuser Verlag, 2013. .
Forsyth, Michael. Structures & Construction in Historic Building Conservation. Oxford, UK: Blackwell, 2007.
Gordon, J. E. The New Science of Strong Materials, Or, Why You Don't Fall through the Floor. Princeton, NJ: Princeton UP, 1984.
Hunt, Tony. Tony Hunt's Structures Notebook. Oxford: Architectural, 2003.
James Ambrose, Building Structure, Canada Wiley, 2012
Kara, Hanif. Design Engineering: AKT Adams Kara Taylor. Barcelona: Actar, 2008.
Kumar, Ashok, Theory of Structures, New Delhi, Laxmi Publications Pvt. Ltd., 2004
Levy, Matthys, Why Buildings Fall: How Structures Fail, New York, W. W. Norton and Co.,2002
Mainstone, R. J. Structure in Architecture: History, Design, and Innovation. Aldershot, Hampshire: Ashgate, 1999.
Millias, Malcolm, Building structures from concept to design, London, Spon Press, 2005
Miret, Eduardo Torroja, J. J. Polivka, and Milos Polivka. Philosophy of Structures: English Version by J.**J. Polivka and Milos Polivka.** Berkeley, CA: U of California, 1962.
Muttoni, A. The Art of Structures: Introduction to the Functioning of Structures in Architecture.Abingdon, Oxford, UK: EPFL/Routledge, 2011.
Onouye, Barry S., Statics And Strength Of Materials For Architecture And Building Construction, Chennai, Pearson India Education Services Pvt Ltd., 2015
Parikh, Janak, Understanding Concept of Structural Analysis and Design, Anand, Charotar Publishing House, 2000
Ramamrutham, S., Theory of Structures, Delhi, Dhanpat Rai & Sons, 2013
Rosenthal, Hans Werner., and Hans Werner. Rosenthal. Structural Decisions: The Basic Principles of Structural Theory, Their Application to the Design of Buildings and Their Influence on Structural Form. London: Chapman & Hall, 1962.
Salvadori, Mario, and Robert A. Heller. Structure in Architecture: The Building of Buildings. Englewood Cliffs, NJ: Prentice-Hall, 1975.
Salvadori, Mario, Saralinda Hooker, and Christopher Ragus. Why Buildings Stand Up: The Strength of Architecture. New York: Norton, 1980.
Salvadori, Mario. Structure in Architecture. Englewood Cliffs, NJ: Prentice-Hall, 1963.
Sandaker, Bjørn Normann, and Arne Petter. Eggen. The Structural Basis of Architecture. New York: Whitney Library of Design, 1992.
Schodek, Daniel L. Structures. Englewood Cliffs, NJ: Prentice-Hall, 1980.
Seward, Derek, Understanding structures: analysis materials design, London, Palgrave, 2014

ARCH 108: WORKSHOP -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
										THEORY				STUDIO				
SEMINAR /LAB					L	T	S	CREDIT	TOTAL CLASS HRS	2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
										INT	EX		INT	EX				INT
ARCH 108	PC	SK	STUDIO	WORKSHOP- I			2	2	2					50	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

ARCH 108: WORKSHOP -I

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

COURSE OBJECTIVES:

To introduce various fabrication skills and techniques necessary to produce scale- models, encourage the preparation of models as an essential phase in design development and evaluation. Developing overall skills in understanding various tools, processes, and material.

COURSE OUTCOME:

At the end of the course, students will be able to -• The student will learn different methods and techniques to represent an idea & thoughts

- The student will have various representation techniques at her disposal
- The student will be able to represent a design idea 3 dimensionally
- Use of presentation software

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Dexterity; Knowledge of materials and their properties; craft skills; visualization skills;

FOCUS: Manual Skills

- The student will learn different methods and techniques to represent an idea & thoughts
- The student will have various representation techniques at her disposal
- The student will be able to represent a design idea 3 dimensionally
- Use of presentation software

COURSE OVERVIEW:

The course provides the foundation and capability to represent the concepts three-dimensionally.
Sketching Techniques

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
1	**Sketching:**	• Sketching as a tool to develop ideas, to communicate ideas	4hrs
2	**Craft:**	Collages & Montages, Form Work	4 hrs.
3	**Model Making**	• Model Making (Paper, Pharmacol, Cardboards, Clay, Wood, Etc.) • Understanding various basic tools used for carpentry joinery and fabrication. • Understanding various building materials and their tools used for cutting, joining, and extension. Handling materials like wood, marble, steel, MS, plywood, POP, Aluminum, etc. • Understanding nailing, screwing, riveting and their various conditions and types of applications.	10 hrs.

ARCH 108: WORKSHOP -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOT AL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 108	PC	SK	STUDIO	WORKSHOP- I			2	2	2					50	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

		• Expression of forms- By handling various materials.	
4	**Basic Use of Computers:**	Presentation Software's (MS Office, Prezi & Others)	4 hrs.
5	**Photography**:	inbuilt models, using lighting and natural background	4 hrs.
	Vocabulary development /reinforcement	• Introduction to Architectural Keywords • Meanings to Architectural Keywords Making Sense of Architectural Keywords through the Masters' Works	4 hrs.

SESSIONAL WORK:
ASSIGNMENTS:

- All the above modules will be evaluated in the form of verbal or written presentation of artwork, drawing work, model making, photography, etc. At least three major assignments involving the individual students to fabricate
- Scale model of a piece of furniture, Presentation of models, mock-up of an Everyday Object, Three-dimensional Forms, etc.
- Documentation of the important phases of fabrication is a must which shall become the basis for internal evaluation.

GUIDELINES

- Continuous Evaluation shall be made of students' work based on various models, sketches assignments, and market surveys.
- One Major And rest minor tasks are to be set from the entire syllabus
- The topic of the project is to be displayed on the Institute Notice Board fifteen days in advance OF the commencement of the classes
- Evaluation is to be done through viva voice. Portfolios, after the university exam, shall be retained at the Institute level for the viva- voice.

SUGGESTED READINGS:

Bernald, S and Copplene, Myers. History of Art.
Catherine Norman, Ryland Peters & Small, Paper Scissor Glue
Ching, Francis D. K., and James Eckler. Introduction to Architecture.
Ching, Francis D. K., and Steven P. Juroszek. Design Drawing. New York: Van Nostrand Reinhold, 1998. .
Ching, Francis D. K., Architecture: Form, Space, and Order. Hoboken, N.J: John Wiley & Sons, 2007.
Craven, C. Roy. Indian Art a Concise History.
Deepak John Mathew., Principles of design through photography. Wisdom Tree Publishers
Donna Kato & Natson Guptill, The art of Polymer Clay
Douglas Cooper., Drawing and Perceiving. John Wiley & Sons.
Edward D. Levinson., Architectural Rendering Fundamentals. McGraw-Hill
Eugene Felder & Emmett Elvin, The complete book of drawing techniques, by
Helmut Pottmann., Architectural geometry. Bentley Institute Press Illustrated story of art. DK Publications.
Krier, Rob. The element of Architecture. Academy Editions, London, 1992.
Lorraine Farrelly. Representational Techniques. Fairchild Books AVA
Magnet, Jacque. The Aesthetic Experiences: An anthropologist looks at Visual Art.
Martin Dawber. Contemporary Illustration. Batsford, 2009
Michael E. Doyle. Colour Drawing. Wiley
Phil Metzger. The Art of Perspective: The Ultimate Guide for Artists in Every Medium. North Light Books, 2007
Preble, Duame. Art Forms.
Ray Smith. Artists Handbook. DK Publications.

ARCH 108: WORKSHOP -I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 108	PC	SK	STUDIO	WORKSHOP- I			2	2	2					50	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

Richard Poulin., Graphic design +architecture. Rockport Publishers
Robert W. Gil., Rendering with pen and ink., Thames & Hudson
Snyder, C. James, and Catanese, J. Anthony. Introduction to Architecture.
Tapert, Annette. Swid Powell: Objects by Architects. Rizzoli, New York, 1990.
Thyagarajan. Basic practical photography
Tim Mc Creight & Nicole Bsullak Color on Metal
Wilson William Atkin. Architectural Presentation Techniques. Van Nostrand Reinhold

ARCH 109: BUILDING SYSTEMS AND SERVICES -I SURVEYING & LEVELLING

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
										THEORY				STUDIO				
					L	T	S	CREDIT	TOTAL CLASS HRS	2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOT AL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 109	BS& AE	TE	THEORY	BUILDING SYSTEMS AND SERVICES-I (SURVEY & LEVELLING)	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

ARCH 109: BUILDING SYSTEMS AND SERVICES -I SURVEYING & LEVELLING

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

COURSE OBJECTIVES:

To explain the techniques and instruments used in a survey of land tracts

COURSE OUTCOME:

At the end of the course, students will be able to –

- Interpret the concept, instruments, and methods of surveying and levelling
- Make use of concepts and methods of surveying and levelling
- Appraise the relevance of surveying and levelling with Architectural field

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

Surveying skills and related theory.

At the end of the course, students will be able to –

- Interpret the concept, instruments, and methods of surveying and levelling
- Make use of concepts and methods of surveying and levelling
- Appraise the relevance of surveying and levelling with Architectural field

COURSE OVERVIEW:

To explain the different techniques and instruments used in a survey of land tracts

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUBTOPIC	TEACHIN G HOURS:
1	Introduction of surveying	• Introduction • Chain Surveying: errors and corrections, the composition of Areas. • Compass Surveying: • Plane Table Survey: • Levelling • Theodolite • Surveying and Architecture • Introduction to surveying: Definition, object, uses, classification of the survey, • Formulae are used in the measurement of land with geometrical and abstract configurations to work out Areas, volumes, and other quantities. • Principles of surveying, scales, and types of scale, Accuracy & Errors	2 hrs.
2	Linear Measurements	• Measurement of distance with chain, tape, EDM, GPS, etc., measurement on sloping ground, obstacles, Errors in measurements • Selection of survey station. • Chain line, Offset, oblique offset, tie line, check lines, ranging.	4 hrs.

ARCH 109: BUILDING SYSTEMS AND SERVICES -I SURVEYING & LEVELLING

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
ARCH 109	BS& AE	TE	THEORY	BUILDING SYSTEMS AND SERVICES-I (SURVEY & LEVELLING)	2			2	2	20	30	50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

	Measurements of Angles	• Field book plotting. • Various parts of Compass, Types, • Errors affecting angular measurements • Types of the traverse, Orientation of traverse surveys • Theodolite Traversing: Types of Theodolites, Definitions, temporary adjustment of theodolite	4 hrs.
3	Levelling	• Definitions, Types of levels, methods of levelling • Various parts of a dumpy level. • Levelling staff, technical terms used in levelling. • Contouring: Definition, Characteristics of contour, plotting using radial line & square grids	6hrs
	Plane table surveying	• Introduction. • Equipment required. • Working with plain table. • Errors in the plane table. • Advantages and disadvantages.	4hrs
4	Curve Setting	• Introduction. • Types of Curves • Elements of Curves • Methods of Curve Setting	4hrs
	Construction surveying	• Introduction. • Equipment for setting out. • Horizontal and vertical control. • Setting out a building and structure (complete layout).	2hrs
5	Advanced Surveying	• EDM • Total Station • GPS • Other Advanced Methods	4hrs

NOTE:

Site Studies – Plot, site, land and regions, size and shape of the site, Analysis of accessibility, Topography, Climate, landforms, Surface Drainage, Soil, Water, Vegetation, Ecology, and Visual aspects.

SUGGESTED READINGS:

Arora, K.R. Surveying Vol. I, 6th Ed. Standard Book House, Delhi, 2000.
Chandra A.M.(2006). Plane Surveying (2nd ed.). New Delhi, India: New Age International Publishers
Ghosh J.K.. (2010). Elementary Engineering Surveying. New Delhi, India: Stadium Press (India) Pvt.Ltd.
Gopi Satheesh., Sathi Kumar R., Madhu, N. (2018). Advanced Surveying (2nd ed.). Noida, India. Pearson
Lynch, Kevin. Site Planning. MIT Press, Massachusetts, 1962.
Punamia B.C. (2016). Surveying Volume 1 (17th ed.). Bengaluru, India: Laxmi Publications(P) Ltd. ;**Punmia, B.C.** Surveying Vol. 1, 13th Ed. Laxmi Publications Pvt. Ltd., New Delhi, 1996.**Rangwala (2018).** Surveying and levelling. Anand, India: Charotar

HUCS 101: COMMUNICATION SKILLS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
HUCS 101	SEC	SK	THEORY	COMMUNICATION SKILLS	1		1	2	2	20	30	50	100	50		50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

HUCS 101: COMMUNICATION SKILLS

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

COURSE OBJECTIVES:

Develop the second language learners' ability to enhance and demonstrate skills
Acquire English language skills to further their studies at advanced levels
Become more confident and active participants in all aspects of their undergraduate programs

COURSE OUTCOME:

At the end of the course, students will be able to -
• Demonstrate understandings of English Language
• Interpret the basic structure, grammar, vocabulary, speech construction
• Develop Understanding of Keywords in Architecture
• Build art of presentation in basic writing and public speaking with focus on meaning, interpretation, accent, rhythm, etc. of the keywords in Architecture.
• Adapt skills of listening, reading, understanding, speaking, writing & translation in EnglishThe students should be able to: Have confidence in their ability to read, comprehend, organise and retain written information; Write grammatically correct sentences for various forms of written communication to express themselves

EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:

The students should be able to: Have confidence in their ability to read, comprehend, organise and retain written information; Write grammatically correct sentences for various forms of written communication to express themselves

COURSE OVERVIEW:

To provide an adequate mastery of technical and communicative English Language training primarily, reading and writing skills, secondarily listening and speaking skills.

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
1	UNIT I	"Communication: nature, meaning, definition, verbal and non-verbal communication, barriers to communication	6 hrs.
2	UNIT II	Basic language skills: grammar and usage, parts of speech, tenses, subject, and verb agreement, preposition, articles	6 hrs.
3	UNIT III	Basic language skills: types of sentences, direct - indirect, active and passive voice, phrases and clauses	6 hrs.
4	UNIT IV	Business correspondence: business letter, parts and layouts of business resume and job application, email writing, e-mail etiquettes.	6 hrs.
5	UNIT V	report writing: the importance of the report, types of report, the structure of a report	6 hrs.
	PRACTICAL:	self-introduction, reading skills, and listening skills, oral presentation, linguistics and phonetics, JAM (just a minute), group discussion, role plays	

HUCS 101: COMMUNICATION SKILLS

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
										THEORY				STUDIO				
					L	T	S	CREDIT	TOTAL CLASS HRS	2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
THEORY										INT	EX		INT	EX				INT
HUCS 101	SEC	SK	THEORY	COMMUNICATION SKILLS	1		1	2	2	20	30	50	100	50		50	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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hrs.

NOTE: A Student Has to Produce a Presentation by The End of The Term and proper presentations as it is part of the architecture for juries and presentations

SUGGESTED READINGS:

A.J.Thomson and A.V.Martinet (1991) A Practical English Grammar (4th ed) New York: Oxford IBH Pub
Adair John (2003) Effective communication. London: pan Macmillan Ltd
Ashraf Rizvi(2005) Effective Technical Communication, New Delhi: Tata Mc Graw Hill
Kratz, Abby Robinson (1995) Effective Listening skills, Toronto on Irwin Professional Publishing
Pease Allan (1998) Body language, Delhi: Sudha Publications
Prasad, H.M(2001) How to prepare for group discussion and Interview. New Delhi Tata Mc Graw Hil

ARCH 119: ELECTIVE – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME								TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO					
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL			
SEMINAR /LAB										INT	EX		INT	EX					INT
ARCH 119	SEC	SU	STUDIO	ELECTIVE- I (POOL I)			2	2	2					100		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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

ARCH 119: ELECTIVE – I

ARCH 119	SEC	SU		ELECTIVE- I (POOL I)
ARCH 119(1)			ELECTIVE- I (POOL I)	POTTERY
ARCH 119(2)				COLLAGES AND MONTAGES
ARCH 119(3)				CARICATURE
ARCH 119(4)				SKETCHING & RENDERING

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

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

COURSE OUTCOME:
At the end of the course, students will be able to
-overall nurturing of the student with issues in practice and field outside
better grooming than just books and theories.
EXPECTED SKILLS / KNOWLEDGE TRANSFERRED:
better grooming than just books and theories.

COURSE OVERVIEW:
The following is a representative list of Institute projects: Seminars, Tutorials/ additional classes for any course, Guest Lectures, Workshops, Provides knowledge to support student being sensitive design;

COURSE CONTENTS:

SR. NO.	SYLLABUS: TOPIC	SUB TOPIC	TEACHING HOURS:
1		The creative electives provide an opportunity to express talents that are different from architecture but related to imagination, visualization & creation. They offer hands-on experience of unique ingenuity & workmanship. The essence of a 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
The topic of the project is to be displayed on the Institute Notice Board fifteen days in advance OF the commencement of the classes

NOTE: Evaluation is to be done through viva voce, Portfolios after the university exam shall be retained at the Institute level for the viva–voice

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 119	SEC	SU	STUDIO	ELECTIVE- I (POOL I)			2	2	2					100		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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

	Students will understand different types and forms of pots; Also the sense of the different scales of pots will be developed. Understand the discipline of the workspace and instruments of it; Different materials of pot making will be explored; the Different technology of the pottery will be explored; Understanding of firing in the kiln for baking of the pots

COURSE OUTCOMES:

At the end of the course, students will be able to -

- Relate to different types and forms of clay, clay work, and pots.
- Illustrate the use of a potter's wheel.
- Apply the basic knowledge of working with clay and tools in designing a product.
- Create a product with finishing with hands-on working on the potter's wheel.

Syllabus: 15 weeks (3 hours/week) **Total Teaching hours: 45 Hrs**

Sr.No.	Syllabus:Topic	Sub Topic	Teaching hours
1	Introduction to mud and mirror work	• Basic rules& principles Mud and Mirror Work (also known as Lippan Kaam) is a traditional mural craft of Kutch. Clay and dried donkey dung powder is mixed together in almost equal proportions to make a thin slurry. This slurry is applied as the base of the artwork.	9 hours
2	Making Geometrical Design , and Tracing on MDR Making Dough.	Mike en Place or "everything in its place". ... • Mixing. ... • Bulk (Primary) Fermentation. ... • Punching Down. ... • Benching. ... • Shaping and Panning the Loaves. ... • Proofing the Loaf (Secondary Fermentation) ... Step 10: Stage 10: Baking	6 Hours
3	Tools and Raw Materials	• The tools and raw materials used • Wooden board/ Hardboard • Clay, Glue, Chalk Powder, Sawdust, • Scale, Pencil, Frame, Color, Mirror,Wast e Cloth	6 hours
4	Learning Different Architectural patterns in mud- work	• Design pattern Architectural Patterns • Design frame work, • Design Plywood /hardboard • Design is drawn on the wooden piece using pencil	9 hours

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 119	SEC	SU	STUDIO	ELECTIVE- I (POOL I)			2	2	2					100		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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

5	Kneading clay and making dough and making pinching exercise	• Squeezing and kneading • Poking and pinching • Rolling , Pressing ,Cutting • Stamping ,Constructing • Imagining • Plasticine or modelling clay	9 hours
6	Hands on potter wheel making post/vases.	• Lubrication Is Vital while Throwing The Proper Method for Centering Clay on the Potter's Wheel. • Speed and Movement While Throwing. • Compress the Pot's Rim after Every Throw • The Mechanics of Throwing a Pot's Walls • Sponge Up Excess Liquid after Each Throw • Third Throw of the Pot's Walls	6 hours

ARCH 119: ELECTIVE – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 119	SEC	SU	STUDIO	ELECTIVE- I (POOL I)			2	2	2					100		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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

	Students will learn a brief history of collages and montages; Students will learn to explore using techniques of collages and montages. Brief History of collages & montages; Different types of collages; Different types of montages; Collages and Montages as a tool to represent ideas

Course Outcomes:

At the end of the course, students will be able to –

- Tell different types and techniques of collages and/or mantages
- Illustrate the importance of collages and/or montages as a tool to represent and communicate ideas
- Compose a collage/montage

Syllabus: 15 weeks (3 hours/week) **Total Teaching hours: 45Hr**

Unit No.	Syllabus: Topic	Sub Topic	Teaching hours:
1	Brief History of collages & montages	Brief Timeline, manual & digital ways, modern approaches etc	3 hours
2	Different types of collages	2D Collages 3D Collages	21 hours
3	Different types of Montages		21 hours

L= Lecture, W= Workshop, S= Studio, C= Credit

Suggested Readings:

1. Simpson, L., & Alexander, E. (2018). Lorna Simpson collages. San Francisco: Chronicle Books.
2. Moore, A. (2018). Collage Ideas Book. Octopus Publishing Group.
3. Taylor, T., & Plowman, R. (2010). Masters: Collage: Major works by leading artists. New York: Lark Books.

ARCH 119: ELECTIVE – I

COURSE	COURSE	COURSE AREA	COURSE TYPOLOGY	NAME OF THE COURSE	TEACHING SCHEME					EVALUATION SCHEME							TOTAL MARKS	EXAM DURATION (HRS)
					L	T	S	CREDIT	TOTAL CLASS HRS	THEORY				STUDIO				
										2 TERM MST 20%	SS 20% OR 30%	ESUE 40%OR 50%	TOTAL	IA 10% OR 50%	EV 10% OR 50%	TOTAL		
SEMINAR /LAB										INT	EX		INT	EX				INT
ARCH 119	SEC	SU	STUDIO	ELECTIVE- I (POOL I)			2	2	2					100		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

Syllabus: 15 weeks (2 hours/week) Total Teaching hours: 30 Hr

Sketching and rendering	Freehand line sketching and drawing of natural and manmade. Study of shades and shadows, Sketching of Historic or new built-up structures of Architectural importance using different mediums. Understanding of human proportion about compositions; freehand sketching of volumes, spaces & human figures. Indoor objects - still Life – Furniture, Equipment - Understanding Depth, light, Shade, Shadow Etc., Outdoor sketching: Natural Forms/ Built Forms, Understanding variety in Forms.Sketching Human Form: Anatomy and Expressions - Graphical Representations. Colour: Freehand rendering of Landscapes & builtscapes including human figures; Exercises; Application of Color in Architectural rendering; Relation between colour & texture. Rendering techniques: Introduction to surfaces and media, observation, recording and basic representation techniques in different media through drawing pencil, pen, brush, charcoal, crayons etc. general approach to rendering, Entourage, Treatment of sky, clouds, landscape elements, human figures, foreground and surroundings, shadow projections in renderings. Graphic skills and Presentation Techniques: Page layout and Composition grids; Illustration techniques; Portfolio design and formats; Digital techniques in graphics
Caricature	Students will learn about the history of caricature. Students will understand the techniques of making caricatures. Students will develop analytical skills and different techniques. Brief History of caricatures, Uses and applications of caricatures in the design field, Caricatures of objects, animals, Caricature of person