SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

SCHOOL OF ARCHITECTURE

SCHEME & SYLLABUS

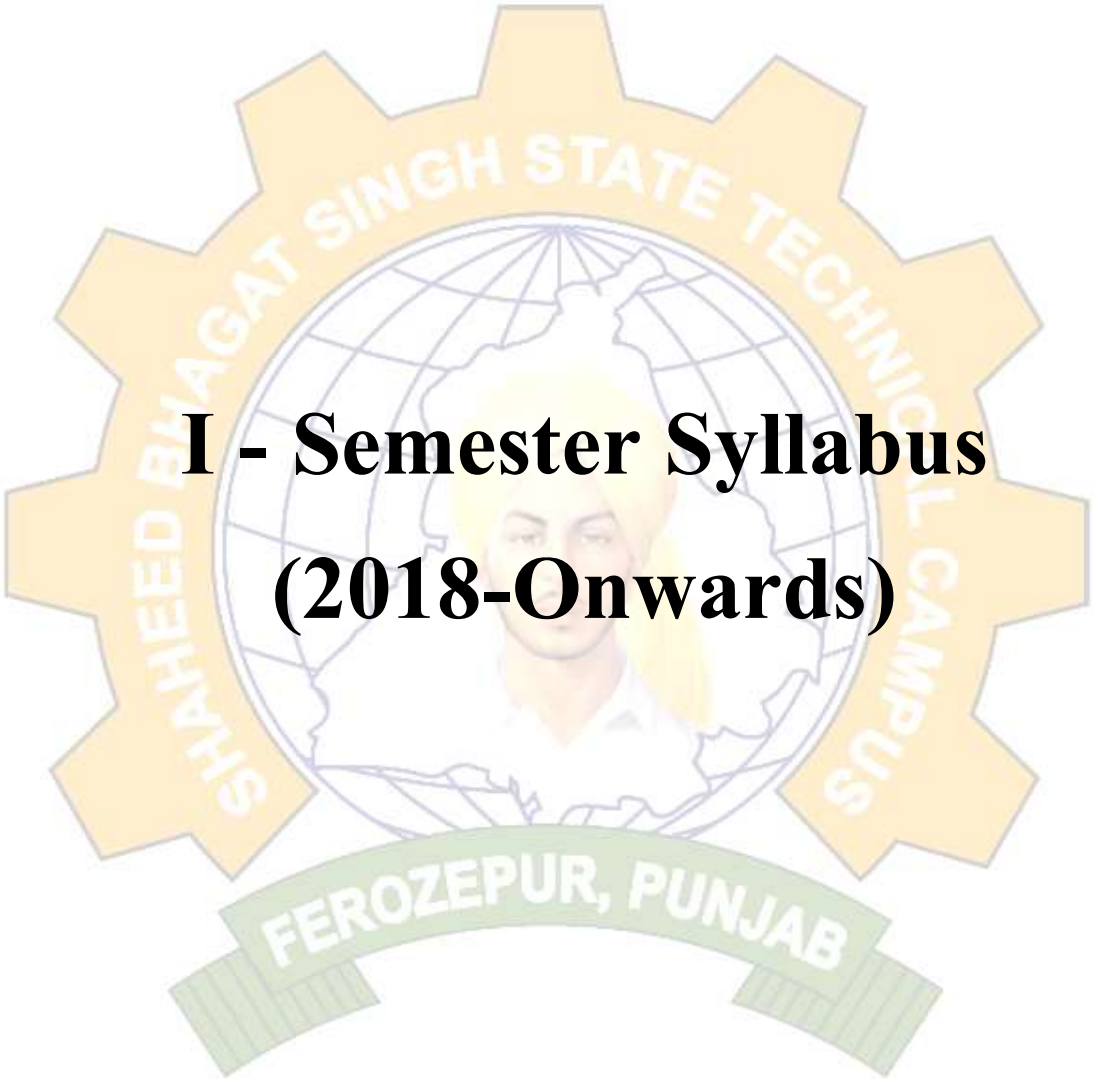
FOR

B.ARCHITECTURE

(SEMESTER: 1st &2nd for 2018 onwards)

(ii) Subject to change in the syllabus at any time.
Please visit the College website time to time.

Semester – I										
Course Code	**Course Title**	**L**	**T**	**S**	**P**	**Marks Distribution**		**Total Marks**	**Credits**	**Duration of Exam**
						Internal	External			
AR-101A	Architectural Design -I	1	0	5	0	120	80	200	6	6hrs.*
AR-102A	Building Construction -I	1	0	3	0	60	40	100	4	4 hrs
AR-103A	Architectural Drawing-I	1	0	3	0	60	40	100	4	4 hrs
AR-104A	Architectural Graphics-I	1	0	3	0	60	40	100	4	4 hrs
AR-105A	Theory of Design-I	2	1	0	0	40	60	100	3	3 hrs
AR-106A	Building Sciences –I (Materials)	2	1	0	0	40	60	100	3	3 hrs
AR-107A	Workshop-I	0	0	0	2	50	-	50	1	No Exam (Internal viva- voce)
BTHU-101B	English	2	0	0	0	40	60	100	2	3 hrs
BTHU-102B	English(Lab)	0	0	0	2	30	20	50	1	As per B.tech Scheme
Total		**10**	**2**	**14**	**4**	**500**	**400**	**900**	**28**	



I - Semester Syllabus

(2018-Onwards)

B.ARCHITECTURE-IST SEMESTER
ARCHITECTURAL DESIGN - I
(AR – 101A)

University Exam Marks – 80 **Credits: 06**
Sessional Marks - 120
Duration of Exam - 06 hrs.
No. of periods – 06 per week

INTENT
To introduce Architectural Design to students through Basic Design. The main aim of the course is to get the students interested in and to familiarize them with the art of design and architecture. To enhance and promote visualization, expressional skills and sensitivity to surrounding environment. Making student learn the art of collecting data and to carry out analysis for the process of evolving design and individuality of approach.

CONTENTS
Two & Three dimensional Design Exercises involving real and imaginary objects, drawing compositions and models made of matchsticks, cardboard, wires, wood pieces etc. to form an appropriate base for subsequent Architectural design and theory.

PART A
1. Introduction to Basic Design
2. Objectives of Design
3. 2D compositions with basic geometric shapes, colour, texture and pattern. With the help of geometric shapes indifferent colours / texture to create pattern as below:
   a) Mural with geometrical shape.
   b) Floor tile design & paving patterns.
   c) Sky line of city/village.
   d) Stage backdrop design or Logo design.

PART B
1. 3D Design, compositions with using 2D elements with various colours/texture any medium.
2. Compositions with 3-D Objects. **(Black & white and colours).** Simple forms like cube, cuboids, cylinder, cone, prism etc.

GUIDELINES
1. **Two questions** are to be set from **each part** and students will be required to attempt **one question** compulsory from each part.
2. Question paper is to be set covering the entire syllabus.

REFERENCE:.
1. Francis D.K.Ching, Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York, 1979.
2. Structure in Nature- Strategy for Design – Peter Pearce
3. Patterns in Nature- Peter Streens

B.ARCHITECTURE - I SEMESTER
BUILDING CONSTRUCTION - I
(AR-102A)

University Exam Marks - 40 **Credits: 04**
Sessional Marks - 60
Duration of Exam. - 04 Hrs
No. of contact hrs. - 04 per week

INTENT
The overall intent is to study various construction methods.

CONTENTS

PART A
Brick Masonry
1. Terminology used in Brick masonry,
2. Tools used in Brick masonry.
3. Types of Bricks.
4. Bonds in Brick work. L-junctions, T-Junctions, cross junction in brick masonry (4-1/2", 9", 13-1/2" thick brick walls) both English & Flemish bond, Rat trap bond.
5. Footing of bricks (4-1/2", 9")

PART B
5. Arches-Flat, Segmental and Semicircular Arch in Brick masonry.
6. Lintels, sills, coping and threshold details.
7. Design of simple Brick jalli.
8. Dressing, laying and bonding in Stone Masonry
   - Random Rubble
   - Coursed Rubble
   - Ashlar
9. Finishing of brick and stone surfaces

GUIDELINES
- **FIVE questions** are to be set in all and students will be required to attempt any **three question**.
- Question paper is to be set covering the entire syllabus.

REFERENCE:

Building construction W.B. Mckay vol. 1 to 4
Construction of buildings. R.Barry vol. 1 to 4
Construction technology Chudley vol. 1 to 4
Building Construction illustrated Ching Francis D.K.
Elementary building Construction Michell
Engineering materials Rangwala
National Building Code

B.ARCHITECTURE - I SEMESTER
ARCHITECTURAL DRAWING - I
(AR-103A)

University Exam Marks - 40 **Credits: 04**
Sessional Marks - 60
Duration of Exam - 4hrs.
No. of contact hrs. - 04 per week

INTENT
To familiarize the students with basic knowledge of good drafting and lettering techniques and architectural drawing i.e. orthographic projections of simple geometrical forms.

CONTENTS

PART A
- Drafting Technique&, Principles of Drafting,
- Dimensioning and types of Lines
- Lettering (free hand & block lettering)
- Scales & its Use in the Architectural Drawing.

PART B
- Orthographic Projections of the Point, Lines, Planes and Solid in various positions in the First Quadrant.
- Section of Solids e.g. Cube, Cuboids, Cone, Cylinder, Pyramid, Prism etc.
- Platonic solids

PART C
- Development of Surfaces: Simple Geometrical Solids e.g. Cube, Cuboid, Cone, Cylinder, Pyramid, Prism etc.
- Interpenetration of Solids.

GUIDELINES
- A total of **four questions** are to be set, one from each part, out of which students will be required to attempt **three questions**.
- Question paper is to be set covering the entire syllabus.

REFERENCE:
1. Engineering Drawing – N.D. Bhatt
2. Engineering Graphics – K.R. Mohan
3. Engineering Drawing – R.K. Dhawan

B.ARCHITECTURE - I SEMESTER
ARCHITECTURAL GRAPHICS- I
(AR- 104A)

University Exam Marks - 40 **Credits: 04**
Sessional Marks - 60
Duration of Exam - 04 hrs.
No. of contact hrs - 04 per week

INTENT
To learn the utility and art of using the potential of Pencil as a powerful tool of Graphic Communication.
To understand the fundamentals, use, role and importance of Colours in Graphics.

CONTENTS

PART A
Pencil as an effective presentation tool.
- Free hand line work with different strokes/grades in pencil.
- Effect of light and shade on simple geometrical solids.
- Textures of different building materials in pencil through shading.
- Freehand sketching of human figures, trees and vehicles on an appropriate scale.
- Sketches of scenes and activities from memory involving public spaces, markets, festivals, recreational spaces etc.

PART B
Poster Colours and its use
- Colour Wheel showing Primary, Secondary and Tertiary colours.
- Colour Schemes & Charts showing Tints and Shades of various colours.
- Effect of colours in relief compositions.

GUIDELINES
- A total of **four questions** are to be set, out of which students will be required to attempt any **two questions**. (All Questions carry equal marks)
- Question paper is to be set covering the entire syllabus.

REFERENCE:
1. **Graphic Illustrations in Black and White** by Jaccueline, Design Press, New York, 1991
2. **Architectural Rendering**, Crowe Philip- Rofovision S.A.Switzerland, 1991
3. **Rendering with Pen & Ink**, Robert W. Gill, Thames & Hudson London, 2008.

B.ARCHITECTURE-II SEM.
THEORY OF DESIGN-I
(AR -105A)

Uni. Exam Marks - 60 **Credits: 03**
Sessional Marks - 40
Duration of Exam. - 03 hours
No. of periods – 03 per week

INTENT :- To establish the Role and Importance of Theory of Design as a broad, comprehensive activity to help students appreciate the difference between a responsible opinion and a well reasoned judgement by looking at the design in depth and in a critical way .

CONTENT
PART A
Theory of design, its scope and application
Primary Elements of Design such as Point, Line, Planes and Volume.
Principles of Architecture Design

PART B
Introduction to Form
Visual Properties of Forms.
Regular and Irregular Forms.
Transformation of Forms.
Formal Collision of Geometry.
Articulation of Forms

PART C
Form defining Space with Horizontal Elements and Vertical Elements.
Quality of Architectural Space.
Organization of Form and Space, Spatial Organization.
Circulation Elements including Approach, Entrance, Configuration of the Path,
Path- Space Relation, Form of the Circulation Space.
Proportion and Space.

GUIDELINES FOR PAPER SETTER
Eight questions are to be set from each part and students have to attempt five questions.

REFERENCE:
· Form, Space and order- D.K.Ching.
· Design strategies in Architecture- Geoffery H. Baker
(An approach to the analysis of Form)
· Theory of Design-Parmar

B.ARCHITECTURE- I SEMESTER
BUILDING SCIENCE – I
(MATERIALS)
(AR – 106A)

Sessional Marks - 40 **Credits: 03**
Uni.Exam.Marks - 60
Duration of Exam. - 03 hrs.
No. of periods – 03 per week

Contents:

PART A
- The study of constituents, properties, types, available market forms and uses of Bricks, Stones, Cement, Lime and Sand
- The study of constituents, Cement mortar, Surkhi and Mud mortar

PART B
- Properties and uses of mortar, Lime mortar
- Surface Finishes – Plastering and pointing, Tile & Stone cladding.

PART C
- Timber- Types , Seasoning, Defect & Decay and uses of timber.

Teaching Methodology:
Site visit to Brick kiln/Construction site. Market Survey for above said materials with respect to their availability, trade names, market rates etc. site report should be evaluated and shall form part of the sessional work.

GUIDELINES :
Stress is to be laid on the use and behaviour of building materials in given situations than on manufacture.

Instructions for Examiner / Paper Setter:
Two questions are to be set from each part. Out of each unit only one question is to be attempted by the candidate. Total four questions are to be attempted by the students.

REFERENCE:

Engineering materials Rangwala
Building Construction Punmia, B.C.

B.ARCHITECTURE - I SEMESTER
WORKSHOP- I
(AR- 107A)

University Exam Marks – 00 (No Exam) **Credits: 01**
Sessional Marks - 50
No. of contact hrs. - 02 per week

INTENT
To acquaint the students with the basic skills of Carpentry and Brick Masonry.

CONTENTS

TOPICS

- Form Work - Use of Clay, Brick and Soap for creating three dimensional forms in space.
- Carpentry – Introduction to the use of different types of Tools used in Carpentry.
- Block Making- Three dimensional building blocks and forms using different materials
- Joints – Different types of Joints, Joinery details commonly used in Timber construction and interiors.
- Brick Masonry – Small brick masonry construction models for understanding of various bonds, jallies, etc.

GUIDELINES
Continuous Evaluation shall be made of students work based on various models, assignments and market surveys.

B.ARCHITECTURE – I SEM.

English (BTHU-101B) **L T P**

2 0 1

Internal Marks: 40
External Marks: 60
Total Marks: 100

COURSE OUTCOMES

After studying this course, the students shall be able to:

- Understand the significance of effective communication in English at work place.
- Enhance vocabulary and acquire effective reading skills for academic and professional efficiency.
- Utilise suitable writing styles while expressing their thoughts and ideas in an organized way in written form.
- Produce effectively different forms of professional writing.
- Enhance grammatical competence in English language

Detailed contents

Importance of Communication in English

Communication: Its meaning, Process, Types, Channels and Barriers to effective communication.

Language as a tool of communication, significance of communicating in English

Reading Skills &Vocabulary Building

Reading Process; Reading Strategies, Reading Comprehension.

Synonyms, Antonyms, and Standard abbreviations.

Basic Writing Skills & Writing Styles

Sentence Structure; Use of phrases and clauses in sentences; creating coherence; organizing principles of paragraphs in documents, Paragraph writing.

Describing, Defining, Providing examples or evidence, Writing introduction and conclusion: Essay writing, Précis writing.

Writing Practices

Business Writing-Business letters: Complaint letter, Collection Letter, Sales Letter, Inquiry Letter, Order Placement Letter; Job Applications and Resume/CV Writing, Business Emails, Memorandum and Report Writing.

Identifying Common Errors in Writing

Subject-verb agreement, Noun-pronoun agreement, Misplaced modifiers, Articles and Prepositions

Suggested Readings:

(i) Fundamentals of Technical Communication ,Meenakshi Raman & Sangeeta Sharma,Oxford university Press.

(ii) Effective business Communication,Asha Kaul, Prentice Hall of India.

(iii) Communication Skills For Engineers, Sunita Mishra & C. Mualikrishna, Pearson Education.

(iv) Effective Technical Communication, M. Ashraf Rizvi, McGraw Hill

(v) Remedial English Grammar. F.T. Wood. Macmillan.2007

(vi) On Writing Well. William Zinsser. Harper Resource Book. 2001

(vii) Study Writing. Liz Hamp-Lyons and Ben Heasly. Cambridge University Press. 2006

(viii) Communication Skills. Sanjay Kumar and PushpLata. Oxford University Press. 2011.

English Laboratory- I SEM.

(BTHU-102B)

L T P

0 0 2

Internal Marks: 30

External Marks: 20

Total Marks: 50

COURSE OUTCOMES

After studying this course, the students shall be able to:

Receive and understand spoken material accurately besides developing ability to converse fluently.

Demonstrate fluency in speech in acceptable accent.

- Acquire proficiency in skills involved in effective workplace communication.
- Develop a knack for structured public talk.
- Imbibe the skills required to perform satisfactorily in job interviews.

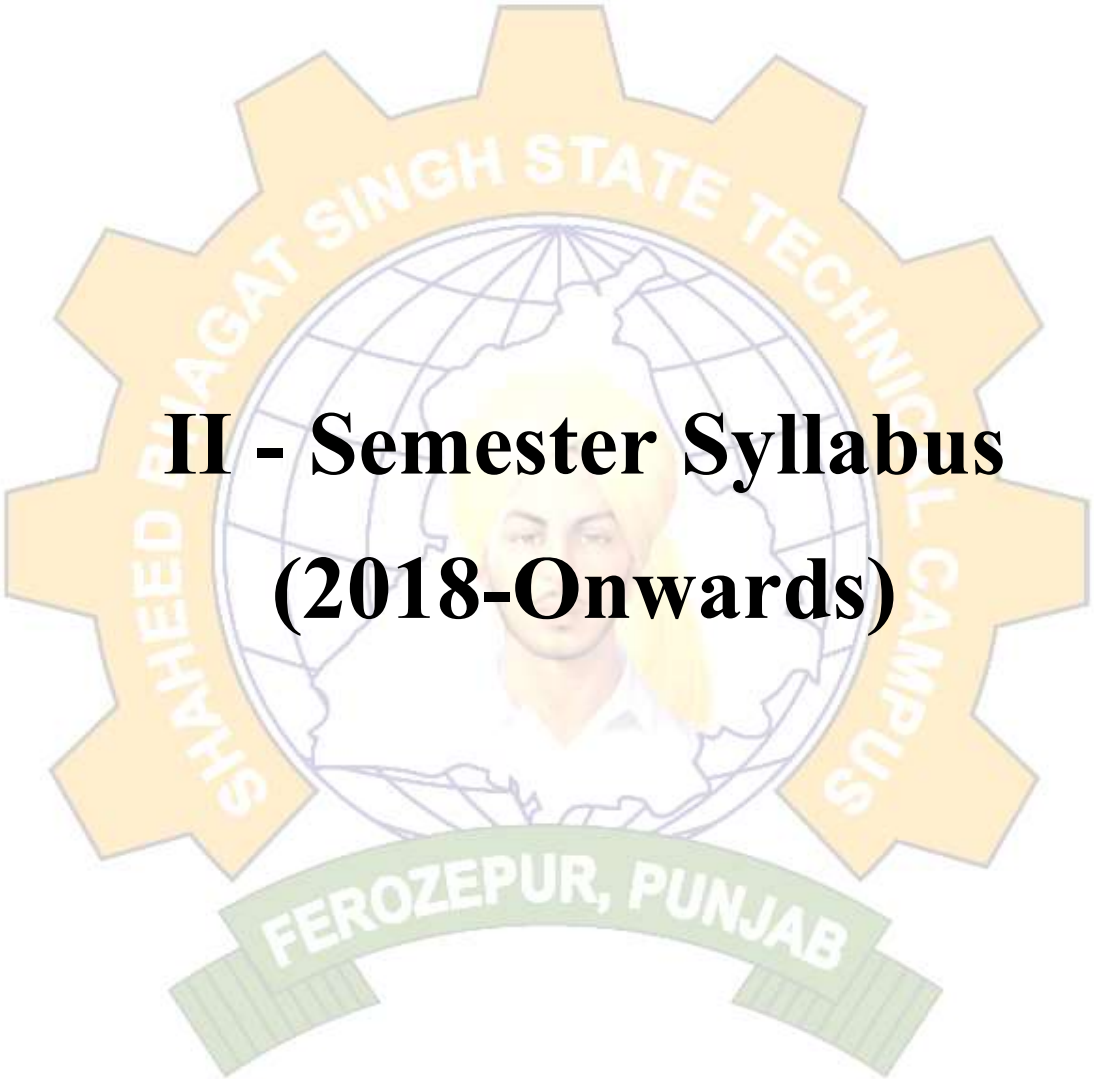
Detailed Contents:

Interactive practice sessions in Language Lab on Oral Communication Listening Comprehension:

- Listening to a recorded talk and participation in conversation.
- English Sound System, Pronunciation and Stress Placement.
- Communication at Workplace: Self-introduction, Discussion Skills, Meeting Skills and Telephonic Skills.
- Oral Presentations: Power Point Presentation.
- Interviews: Pre-interview Preparation, Question-answer Strategies, Projecting a positive image.

Suggested Readings/Books

- Practical English Usage. Michael Swan. OUP. 1995.
- Handbook of Practical Communication. Chrissie Wright. Jaico Publishers.
- Effective Technical Communication, M.Ashraf Rizvi Tata McGraw Hills.
- Spoken English , R.K. Bansal & J.B. Harrison Orient Longman.
- A Practical Course in English Pronunciation, J.Sethi, Kamlesh Sadanand & D. V. Jindal , Prentice Hall of India Pvt. Ltd. New Delhi.
- A Text book Of English Phonetics for Indian Students T. Balasubramaniam, Macmillan English Pronouncing Dictionary ,Daniel Jones, Current Edition with CD
- Exercises in Spoken English. Parts. I-III. CIEFL, Hyderabad. Oxford University Press



II - Semester Syllabus

(2018-Onwards)

Semester – II										
Course Code	**Course Title**	**L**	**T**	**S**	**P**	**Marks Distribution**		**Total Marks**	**Credits**	**Duration of Exam**
						Internal	External			
AR-201A	Architectural Design -II	1	0	5	0	120	80	200	6	6hrs *
AR-202A	Building Construction -II	1	0	3	0	60	40	100	4	4 hrs
AR-203A	Architectural Drawing-II	1	0	2	0	60	40	100	3	3 hrs
AR-204A	Architectural Graphics-II	1	0	3	0	60	40	100	4	4 hrs
AR-205A	Structure Design-I	2	1	0	0	40	60	100	3	3 hrs
AR-206A	Structure System-I	2	1	0	0	50	-	50	3	No Exam (Internal viva-voce)
AR-207A	History of Architecture-I	3	0	0	0	40	60	100	3	3 hrs
AR-208A	Workshop-II	0	0	0	2	50	-	50	1	No Exam(Internal viva voce)
***Note:** The External marks should be awarded through external jury viva voce. Short study tour of one week during or at the end of the semester.										
	Total	**11**	**2**	**14**	**2**	**480**	**320**	**800**	**27**	

B.ARCHITECTURE- II SEM.
ARCHITECTURAL DESIGN- II
(AR – 201A)

Uni.Exam.Marks - 80 **Credits: 06**
Sessional Marks - 120
Duration of Exam. – 06 hours (Evaluation to be done through university viva- voce by external jury)
No. of periods – 06 per week

INTENT
To appreciate the constraints in the Architectural design of a small building with reference to function, form and structures.

CONTENTS
Importance of physical factors in Architectural design e.g. orientation, ventilation, adequate protection from rain, dust, insects etc. and human dimensions in various postures (in applied form),their relation to everyday utilities like the table, chair, bed, sink etc. Understanding measured drawing of an existing small unit.

TOPICS
Introduction of physical factors / geographical aspects for basic design.
Form and Space Relationship in with regards of the activities and anthropometrics.

PART A
Design of small buildings involving functional, structure system & constructional methods e.g. Milk booths, Kiosks, Bus stop, Cafes, Drinking water fountains, Canopy, Cycle stand, Security Check post, Installations for Circulation etc.

PART B
A small single storied dwelling unit like Bachelor house, Tourist cottage, dog house, gardener's House etc.

PART C
Acquainting, the students with drawing the plans sections and elevations of a room. Layouts of furniture, fixtures in various spaces like dining room, Bed room, Class room, Office etc.

Minimum 1 exercise to be taken from each part.
All buildings should have accessibility to the physically challenged persons.

Design Teaching Methodology:
The Basic methodology of teaching should be based on
- Library study to understand the basic functions of building and anthropometric.
- Case Study to understand the similar buildings in similar context.
- The emphasis of design should be on the space organisation and built form**.**

GUIDELINES FOR PAPER SETTER
1. One compulsory question is to be set from the entire syllabus
2. The topic of the project is to be displayed on College Notice Board fifteen days in advance.

NOTE : Evaluation is to be done through viva voce by external jury appointed by the COE at college. Answer sheets after the university exam shall be retained at college level for the viva- voce.

REFERENCE:
1. V.S.Pramar, Design Fundamentals in Architecture, Somaiya Publications Private Ltd., New Delhi, 1973.
2. Francis D.K.Ching, Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York,

B.ARCHITECTURE- II SEM.
BUILDING CONSTRUCTION-II
(AR – 202A)

Uni.Exam.Marks - 40 **Credits: 04**
Sessional Marks - 60
Duration of Exam. - 04 hours
No. of periods – 04 per week

INTENT
To study various construction methods in co-ordination with the building materials and science related to them.

CONTENTS

PART A
Foundation and Damp proof course
· Types of Foundations and its important details.
· Application of Damp proof course, its material and laying. Detailing of Horizontal and Vertical D.P.C.

PART B
Doors
· Introduction to Joints in Carpentry.(Different Types of Joints, Joinery details)
· Types of Doors
· Design and construction details of Framed, Ledged, Braced & Battened Door, Flush Door, Wire mesh Door, Panelled Door
Windows
· Types of Windows in timber, Design and Construction details of Casement, Bay, Clearstory, Corner window etc.

PART C
Construction of roof
· R.C.C, R.B.C. Roof & Jack Arch Roof, Tiled and Battened Roof, I- Channel Roof.
· Concepts of water proofing & Thermal Insulation of Roofs.
. Section through Single Story of load bearing structure and Frame structure.

GUIDELINES FOR PAPER SETTER
1. Five questions are to be set in all and students should attempt any three.
2. Questions paper is to be set covering entire syllabus by making parts and mixing the topics.

Note: Emphasis should be laid on making students understand complete construction details of single story structure.

REFERENCES:
Mckay W.B.; Building construction . Vol. 1 to 4
Barry R.; Construction of Buildings.- Vol. 1 to 4
Chudley; Construction Technology- Vol. 1 to 4
Ching Francis D.K; Building Construction illustrated
Michell ; Elementary Building Construction
Rangwala ; Engineering Materials
National Building Code- 2005

B.ARCHITECTURE- II SEM.
ARCHITECTURAL DRAWING-II
(AR – 203A)

Uni.Exam.Marks - 40 **Credits: 03**
Sessional Marks - 60
Duration of Exam. - 03 hours
No. of periods – 03 per week

INTENT:-To familiarize the students with learning techniques & skills in representing different objects through 3D geometry and developing visualisation of 3-D , for using in the design solutions.

CONTENT:- To familiarize students with the 3-dimensional drawings of the building and perspective views.

PART A
Isometric/ Axonometric projections
 Isometric /Axonometric of simple forms.

PART B
Perspective Drawing :- Introduction to theory of Geometrical Perspective Drawing.
 Perspective by Side Elevation Method.
 Angular (Two Point Perspective) and Parallel (One Point Perspective) Perspective.
 Perspective of different Solids and Building elements
 Perspectives having more than 2 Vanishing Points.

GUIDELINES FOR PAPER SETTER
1. Two questions are to be set from each part, out of each part & only one question is to be attempted by the candidate.
2. Questions paper is to be set covering entire syllabus by making parts and mixing the topics.

REFERENCE :
· Gill Robert W.; Rendering with Pen and Ink.
· Bhatt N.D.; Engineering Drawing.
· Ching Franc D.K ; Architectural Graphics.
· Dhawan R.K; Engineering Drawing

B.ARCHITECTURE-II SEM.
ARCHITECTURAL GRAPHICS-II
(AR – 204A)

Uni.Exam.Marks - 40 **Credits: 04**
Sessional Marks - 60
Duration of Exam. - 04 hours
No. of periods – 04 per week

INTENT:-To develop conceptual and perceptual skills, in different media and techniques.

CONTENT:-Rendering in Pencils and Colour media.

PART A -Pencil Crayons and Oil Pastels as presentation medium

- Rendering of various surfaces such as brick, stone, grass, timber etc.
- Trees, Human figures, Automobiles, Lamp Posts, Street furniture in **Plan, Elevation and Perspective**.
- Rendering of View / Perspective in Crayons and Oil Pastels.
- Outdoor sketching of simple building forms.

PART B- Colour Rendering.

- Outdoor free hand sketching and Colour rendering of Trees, Shrubs, Vegetation, Buildings, Vehicles etc.
- Colour Rendering of various scenes such as Garden Scene, Street Scene, Lake Scene, Village Scene etc.
- Sketching of Furniture pieces, parts of Building in relation with Human Scale and Proportions.
- Cut & Paste method for making Compositions & for Rendering Perspectives

PART C- Pen & Ink Rendering

- Use of Pen & Ink Rendering to show Texture of Grass, Brickwork, Stone work, Sky, Trees, Human figures etc.
- Stencilling in Ink
- Calligraphy Handwriting

GUIDELINES FOR PAPER SETTER

- A total of **four questions** are to be set, out of which students will be required to attempt any **two questions**.
- **One compulsory question** is to be set.
- Question paper is to be set covering the entire syllabus.

REFERENCE:

· Crowe Philip; Architectural Rendering
· Albert & Halse ; Architectural Rendering
· Jaxtheim ; How to Paint & Draw

B.ARCHITECTURE- II SEM.
STRUCTURE DESIGN - I
(AR – 205A)

University Exam Marks – 60 **Credits: 03**
Sessional Marks – 40
Duration of Exam. - 03 Hrs
No. of periods - 03 per week

INTENT
To inculcate in the student an awareness of basic structural principles used in various building systems.

CONTENTS

PART A
Introduction to Elementary theory of structure, Centre of gravity (CG), definition, centre of gravity of plane figures, CG by method of moments, numerical problems, Moment of Inertia; MI of plane area, MI by method of integration, MI of rectangular section, theorem of parallel axis (M1) and perpendicular axis and numerical problems.

PART B
Bending moment (BM), shear force (SF), type of supports, loads and beams, relation between SF and BM, BM and SF diagram for cantilever and simply supported beams with concentrated load, uniformly distributed load, design examples.
Moment of resistance, theory of bending, bending stresses, basic equation of bending, section modulus of rectangular and circular sections. Numerical problems.

PART C
Classification of frames, analysis of perfect frame, assumptions, method of sections, method of joints and design examples. Link polygon, method of construction, resultant of concurrent forces, non–concurrent forces, co–planar parallel force system and numerical problems.

GUIDELINES

1. Total eight questions are to be set from entire syllabus.
2. Students should attempt total five questions including compulsory question.

REFERENCE:

1. Punmia, B.C.,"Strength of Materials and Theory of Structures", Vol. I, Laxmi Publications, New Delhi, 2010.
2. Ramamurtham, S.; "Strength of Materials", Dhanpatrai & Sons, New Delhi, 2011.
3. Nash, W.A., "Strength of Materials", Schaums Series, McGraw Hill Book Company, New York, 1989.
4. Bansal, R.K., "Engineering Mechanics and Strength of Materials", Lakshmi Publications, New Delhi, 2009.
5. Rajput, R.K., "Strength of Materials", S .Chand & Company Ltd., New Delhi 2010.

B.ARCHITECTURE - I SEMESTER
STRUCTURE SYSTEM- I
(AR-206A)

University Exam Marks – 00(No Exam) **Credits: 03**
Sessional Marks - 50
No. of contact hrs. - 03 per week

INTENT:
 To make students aware about the design methodology adopted and principles involved in designing the structural elements used in the built environment with focus on steel

CONTENTS

PART A
Cellular system
1. Cell as a natural unit of space.
2. Cell transformation.
3. Polygonal Cellular Systems leading to evolution of Geodesic Domes
4. Applications of Cellular System in Building

PART B
Bulk Active Structure System:
- Framed structure
- Slabs (one way and two way)
- Flat slab
- Waffle slab

Vector Active Structure System:
- Trusses
- Space frames
- Geodesic Dome

TEACHING METHODOLOGY
 Emphasis shall be on making students understand the principles and systems involved in various topics. The students should be made to Coordinate the fabrication of at least four models to demonstrate the various structural system. Students be taken to Pragati Maidan & other Building centres in New Delhi for better exposure..

REFERENCE:

 RCC:- Krishna Murthy
 R. K. Bansal, "Engineering Mechanics & Strength of Materials Publisher, Laxmi Publications Pvt Limited, 1998.
 Khurmi-Structure Mechanics
 Prof.Harbhajan Singh-Theory of Structure

B.ARCHITECTURE- II SEM
HISTORY OF ARCHITECTURE- I
(AR-207A)

Uni. Exam. Marks - 60 **Credits: 03**
Sessional Marks - 40
Duration of Exam. - 03 hours
No. of periods – 03 per week

INTENT:- To make student understand how different Architectural Solutions were evolved (in successive historical periods) within the limitation imposed by prevalent Social and Religious Customs, available Building Materials , Climate of region/Topography, Complex Structural Problems and the limited Technology available at the time**.**

CONTENT:-
For each of the topic given in syllabus, stress is to be laid on Architectural characters with only one or two representative examples to highlight those features.

PART A

- Introduction and importance of History of Architecture
- Primitive Architecture.
- Early Mesopotamian.
- Egyptian Architecture

PART B

- Greek Architecture
- Roman Architecture

PART C
Introduction to Indus Valley Civilization & its Architecture—Citadels, Granary, Housing, Baths etc.

- Vedic Architecture.
- Buddhist Architecture- Stupas, Viharas, Chaitya Halls etc.

GUIDELINES FOR PAPER SETTER
Eight questions are to be set in total, out of each part only five questions is to be attempted by the candidate.

REFERENCES:
Fletcher Banister; A History of Architecture
Brown Percy ; History of Architecture , Buddhist and Indian
Grover Satish; History of Architecture-Hindu & Buddhist Period
Fergusson James; History of Eastern Architecture
Tad gill. Indian Architecture

B.ARCHITECTURE- II SEM.
WORKSHOP- II
(AR – 208A)

Uni. Exam. Marks - No exam **Credits: 02**
Sessional Marks - 50
Duration of Exam. – Internal Viva Voce
No. of periods – 02 per week

INTENT
To make students aware of various Model Making Techniques and to familiarize them with the Art of Sculpture Making using Different Materials.

CONTENT
Introduction to Basic Model Making Techniques with Paper, Paper Board, Woods, Plaster of Paris and Soap for Basic Design and Architecture Design Studio .

PART A
Product design
Design & Model Making of Furniture, Lamp shades and other Interior & Exterior Elements

Sculpture Making
Sculptures in Plaster of Paris, Wires, Scrap, Wood, Soap etc.

PART B
Clay Modelling
Pinching
Coiling Techniques
Slab Techniques

PART C
Model Making
Model Making ---Making of Study Model of one of Design Project done during the Semester or of a Small Buildings

GUIDELINES FOR PAPER SETTER
Continuous Evaluation shall be made of students work based on various Models, Assignments and Market Surveys.
Evaluation will be made based on the Student's work during Semester in Internal Viva- Voce conducted by two internal examiners.