PCC: Professional Core Course

Architectural Design 02 – Enclosure and Environment

Course Code	**2BAT 201**	CIE Marks	100
Teaching Hours/Week (L:T:P: S)	10 Hours	SEE Marks – Viva Voce	100
Total Hours of Pedagogy	140 Hours	Total Marks	200
Credits	10	Exam Hours	-

COURSE OBJECTIVES:

To understand the nature of 'Enclosure' in an environment and how the sense of enclosure is fundamental in the process of space making. Through this process, students will get exposed to the grammar of creating architectural space and form - layering it with the reading of Immediate context and environmental factors like, land, water, light, wind, view including the study of movement, transformation, scale and structure.

COURSE CONTENT:

*… I wonder: what is this **Magic of the Real** – Café at a student's hostel, a thirties picture by Baumgartner. Men, just sitting around – and they're enjoying themselves too. And I ask myself: can I achieve that as an architect – an atmosphere like that, its intensity, its mood. And if so, how do I go about it?* – Excerpt from Atmospheres by Peter Zumthor.

1. To build a vocabulary of **fundamentals of space making** - each element to be discussed individually – Horizontal surface (base plane and overhead plane), Vertical surface, frame and enclosure – this is studied in conjunction with ordering principles such as Scale, Proportion, Transition, Orientation, Boundary, Hierarchy, Axis, Datum, Grid etc. - Short Exercises – 2 Weeks
   Method of Learning – Input Lectures, Sketch-noting, Guided peer discussions, Collective reading, Observational sketches, Short Hands-on Exercise(s) to explore the relationships between the elements of space-making and impact of scale | Degrees of enclosure.

   Suggestive Exercises – Blooms Taxonomy Level 01,02 and 03
   (i) Exercises can be designed to build into the next two themes as a continuum.
   (ii) Exercises that explore the potential of each of the Horizontal and Vertical Planes (Floor / Wall/ Roof)– (re)Design a verandah (House or shop front) / Pavilion / Ground modulation in a Courtyard/cafe – Consider a real or a hypothetical situation which can be modified or added on to, using the fundamental elements of space making.

2. To further the learnings from module one by layering it with (i) **Introduction to tectonics of form** – Geometry, Volume, Transparency, opacity, density, porosity, deliberations of Nature of Openings, ideas of liminal spaces and material logic. - Short Exercises – 2 Weeks
   Method of Learning – Input Lectures, Guided peer discussions, Collective reading, Observational sketches, the exercises can be an extension to the previous module. Emphasis on Model Making - Learning to choose appropriate mediums for model making.

   Suggestive Exercises – Blooms Taxonomy Level 01,02 and 03
   (i) Design exercise with focus on the Material attributes and assembly, Nature of openings and thresholds. Can be a layered extension of the first exercise or an abstract exercise in a hypothetical condition.
   (ii) Exercises that explore the design potential of the Pavilion as a tectonic space – Yoga pavilion, Terrace extension to a house, Canteen seating area and so on.

3. To further the learnings from module one by layering it with (ii) **Introduction to the poetics of space** – role of Light, shadow/shade, temperature, texture and sound (sensory perception), plinth modulation, Ideas of intimacy, social geometry, bodily comfort, and so on and their impact on the experience of space. - Short Exercises – 2-3 Weeks
   Method of Learning – Input Lectures, Guided peer discussions, Collective reading, Observational sketches, the exercises can be an extension to the previous module. Emphasis on Drawing with different mediums to express the quality of space – Charcoal, water colors, dry pastel, wax pastels. Learning to choose appropriate mediums of representation

Suggestive Exercises – Blooms Taxonomy Level 01,02 and 03

(i) Design exercise with focus on the atmosphere of the space and its relation to sensory and emotional perceptions. Can be a layered extension of the first exercise or an abstract exercise to in a hypothetical condition.

(ii) Exercises that explore the design potential of the enclosure as a stereotomic space – Personal space design, workspace for specific professionals (musician, artist, acrobats, author, etc.)

4. To understand **the importance of immediate environment** in the making of architecture. Students should be taught how read the geography of the site, what to draw from it and most importantly how it impacts design decisions. Define a real or hypothetical context with specific site conditions - including the study of physical (unbuilt) and natural elements such as landform, sunlight and sun movement, heat, wind direction and wind movement, water bodies, presence of flora and fauna etc. - Exercises leading to Final Design Task – 2-3 Weeks

Method of Learning – Input Lectures, Guided peer discussions, Observational sketches, Site Visits. The exercises should lead to the final design task. Diagramming and Writing as a key tool to understand, analyze and infer from the site environment (Context Vicinity to be within 1000sqm). Students should be encouraged to write and narrate their experiences of the site.

Suggestive Exercises – Blooms Taxonomy Level 01,02 and 04

(i) Mixed Media exercises to observe and analyze the site environment including Sketching, Diagramming, Writing, Photo annotation, Model Making etc. – Site Studies must aid the final task in a comprehensive manner

5. **Application and demonstration of learnings** from Modules 01 – 04 through a neighborhood scale, multi-user and multi-function project. The user group can be defined by the students. The aim is to distill the learnings from the semester and organizing a sequence of spaces that responds to its environment and function effectively. – Final Design Task – 4-6 Weeks

Method of Learning – Input Lectures, Guided peer discussions, Observational sketches, Writing, concept note and design intent. Emphasis on guided Case studies, and drawing of Plans, sections and elevations along with physical models. The Project scale can range between 200-250sqm.

Suggestive Exercises – Blooms Taxonomy Level 03,05 and 06

(i) Design Project can be a multi-generational residence, Primary health care center, kindergarten, any small scale neighborhood project of the specified scale.

(ii) The exercises can be curated like game play, with each step adding further complexities and levels of understanding/ learning building it up to the final task

(iii) Peer engagement to be encouraged at all stages.

METHOD OF EVALUATION:

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50%, and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

As a foundational studio, the evaluation method should consider consistent progressive growth of the students along with the representational skills.

CIE: GRADING SCHEME:

All Minor Projects: **50 %**
Final Design Project: **50 %**

For each task the grading rubric must be as follows:
Weekly progressive grades – **40 %** weightage
Skill Enhancement – **30 %** weightage

Understanding and ability to demonstrate of concepts – **30 %** weightage

SEE: VIVA VOCE

COURSE METHODOLOGY:

The studio will be fully guided as it is a foundational course – Each Module will be supplemented with lecture presentations, Informal discussions, Peer engagement, on-location deliberation, guided sketching and diagramming and making physical models.
The Smaller exercises can be curated such that it may build towards the final task and the learnings can be made visible to the student. Studio Tutors are encouraged to look for opportunities to integrate the Exercises with other courses such as Building Construction, History of Architecture, Architectural Graphics and Digital tools.
Students should be made aware of the *stages of thinking – Noticing, Recognizing, Interpreting, Coding and Decoding – Les Staves.*

COURSE OUTCOME:
The perception of spatial relationships (between built spaces, between built and open spaces). Conceptualizing spatial experience by modulating the built elements - Wall, Floor, Roof, Openings and Sequencing of Spaces.

Sl no	Key Topics covered + Skill Enhancement	Blooms Taxonomy Level
1	**Fundamentals of Space making** Sketching to scale, Relate experience to drawing	**BL 01 – BL 03**
2	**Tectonics of Form** Model Making, Assimilating and correlating multiple concepts together	**BL 01 – BL 03**
3	**Poetics of Space** Drawing to Express feeling, recognizing and applying intangibles in design process.	**BL 01 – BL 03**
4	**Importance of reading Site environment** Ability to extract important inferences from site environment and use that to make informed design decisions.	**BL 01 – BL 02 | BL 04**
5	**Application and demonstration of learnings** Schematic Design Drawings – Plan/Section/Elevation/Site Plan.	**BL 03| BL 05| BL 06**

REFERENCES:

1. Architecture Without Architects by Bernard Rudofsky
2. A Pattern Language by Christopher Alexander and Murray Silverstein
3. Conversations with Form: A Workbook for Students of Architecture by Jonathan Teicher and N. John Habraken
4. Conversations with Form by N John Habraken, Andres Mignucci, Jonathan Teicher
5. Analysing Architecture by Simon Unwin
6. Twenty-five buildings every architect should understand by Simon Unwin
7. Drawn to Design by Eric J Jenkins
8. Landscape architecture: a manual of environmental planning and design by, John Ormsbee Simonds, Barry W Starke
9. Form Follows Love: Building by Intuition – from Bangladesh to Europe and Beyond by Anna Haringer and Dominique Gauzin-Muller
10. Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis by Michael Pause and Roger H. Clark
11. Indian Anthropometric Dimensions for Ergonomic Design Practice by Debkumar Chakrabarti
12. Lessons for Students in Architecture by Herman Hertzberger
13. Site less: 1001 Building Forms by François Blanciak
14. Tree houses. Fairy tale castles in the air by Philip Jodidio
15. Form, Function and Design by Paul Jacques Grillo
16. What is Design? by Paul Jacques Grillo
17. Notes on the Synthesis of Form by Christopher Alexander

Materials and Construction – II / Tectonic Construction Systems - I			
Course Code	2BAT202	CIE Marks	100
Teaching Learning hours (L: T:S:SL)	28: 00: 42: 80	SEE Marks	100
Total Hours of Teaching and Learning	150 hrs	Total Marks	200
Credits	05	Exam Hours	4

Course Learning objectives:

This course introduces students to tectonic construction systems and the philosophy of architecture as an expression of frame and bending. It develops an understanding of timber and bamboo materials, construction assemblies, and vernacular and contemporary frame-based building systems and their influence on building form and envelope. It aims at enabling students to evaluate their structural behaviour, climatic response, sustainability, and architectural expression.

Module 1 - Architectural Logic, Material Origin & History (2 Weeks - 4:0:6:10)

Introduction to Tectonic Construction Systems:

- Introduction of stereotomic and tectonic systems and their influence on built form
- Definition of tectonic construction systems as an expression of frame, tension and compression.
- Tracing timber construction systems across different cultures through case examples (Japan, Norway, the Netherlands, Kerala, Himachal Pradesh, Gujarat and Karnataka).

Teaching-Learning Process	Theory with relevant examples for timber construction traditions. Interactive exercises to explore timber cultures in various countries. Field visit to explore timber traditions.

Module 2 - Material in Basic Unit Form, its Properties and Structural Behaviour (1 Week - 2:0:3:5)

Material Behaviour and Classification:

- Classification of Natural Timber (Soft and Hardwood), Processed Timber (sections, planks, boards), Engineered Timber (CLT, Glu Lam, LVL) and Bamboo (Laminated Bamboo, Bamboo Boards)
- Understanding material properties - density, durability, shrinkage, strength to weight ratio, seasoning, fire behaviour and other relevant precautionary treatments
- Awareness of Indian codes like IS 883 - Design of Structural Timber in Buildings: Code of Practice

Teaching-Learning Process	Factory visit to understand materials and their process. Students should touch, weigh, measure, and test the materials. Theory with demonstrative sessions in the studio/material lab.

Module 3 - Material Assembly and Fenestrations (4 Weeks - 8:0:12:25)

Assembly Systems:

- Introduction to framed (post and beam) systems in timber, balloon frame and timber platform assemblies with necessary connections, their load path, bracing and lateral stability.
- Learning and using carpentry connections - Mortice & Tenon, Dovetail, Half lap, Scarf, Wedge and any other relevant connection techniques.

Fenestration Systems:

- Door - Overview of types and detailing techniques in timber - Battened, Panelled, Flush, with its relevant mechanisms and hardware
- Windows - Overview of types and detailing techniques in timber - Sliding, folding, top-hung, side-hung, pivot, fixed, louvres

Teaching-Learning Process	Theory with demonstrative sessions in the studio/material lab. Factory visit / Field visit to understand the making of fenestration. Workshop exercises to explore carpentry techniques in fenestration.

Module 4 - Substructures, Roof and Floor Systems (4 Weeks - 8:0:12:25)

Substructures:

- Understanding sub-structure systems - raised timber platforms along with composite masonry, timber-masonry junction in composite foundations. Necessity of a damp-proof course and plinth.

Horizontal Spanning:

- Identify and classify roof and floor spanning systems in timber
- Principles of timber truss systems and its types w.r.t spanning, like lean-to, King post, Queen Post, Collared, Fink
- Principles of timber floor and roof systems w.r.t. application of Engineered timber like CLT, Glu-Lam.

Vertical circulation

- Understanding timber and composite staircases with support systems.

Teaching-Learning Process	Theory with demonstrative sessions in the studio to understand spanning systems. Measure drawing as a tool to explore the logic of the truss.

Module 5 - Advanced Form Systems (3 Weeks - 6:0:12:15)

Alternate Construction in Timber:

- Exploring alternate forms of timber construction systems like straw bale, hempcrete, et. al.
- Exploring recent advances in timber tectonics systems i.e. CLT, GluLam, Engineered Bamboo, LVL, and composite timber steel assemblies.

Sustainability:

- Parameters of sustainability for design decisions - Sustainable Forestry, Carbon Storage, Timber certification, Embodied Energy, Density, Durability, and Life Cycle thinking.

Synthesis:

- Studio exercise to develop a comprehensive timber wall section. Students must choose timber and masonry construction systems by synthesising the learning outcomes from Material and Construction I and II.

Teaching-Learning Process	Student seminar/Group discussion on alternate timber systems. Theory inputs and group discussion on sustainable parameters.

Course Outcomes

At the end of the course the student will be able to:

Sl. No.	Particulars	Blooms Level
CO1	Understand the relevance of tectonic construction, as distinct from stereotomic systems, and its application in spatial quality of architectural design	BL 02
CO2	Understand the physical and structural properties of natural timber, bamboo, and engineered timber.	BL 01 - 02
CO3	Apply principles of timber and bamboo construction by developing appropriate structural assemblies and joinery details based on load path, stability, and construction sequence.	BL 03 - 04
CO4	Evaluate contemporary timber construction systems and sustainable design strategies to support informed material selection in architectural design.	BL 04 - 05
CO5	Develop a complete, detailed drawing of a timber and masonry construction system that integrates construction sequence from substructure to superstructure including finishes.	BL 05

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50%, and for Semester End Exam (SEE) is 50%. The minimum passing mark for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/ course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

1. Students will be required to produce a portfolio, compiled with exercises from all modules and topics, for assessment at the end of the semester. The portfolio will be a mix of hand-drafted sheets, seminar assignments, case study/site visit/workshop reports and any other assignments and documentation proposed by the studio faculty.
2. Methods of CIE can be defined topic wise i.e.- Submission of construction drawing sheets, Journal of materials, Multiple Choice Question, Quizzes, open-book test, Seminar or micro project
3. The subject faculty, at the beginning of the semester, shall decide the method and weightage of evaluation, which should total to 100 marks.
4. Suggested assignments can be on the lines of
    a. Module 1 - Material Narratives (Graphic Narrative to understand timelines and evolution). **Suggested method:** Site visit, Seminar/ graphic narrative sheet. **CO mapping:** CO1
    b. Module 2 - Addressing the distinctions between, Natural, processed, Engineered Timber and Bamboo. **Suggested method:** Journal of materials,. **CO mapping:** CO2
    c. Module 3 - Exploration of logic and types of fenestration and connections. **Suggested method:** Construction drawing/measure drawing for door and windows. | Models for carpentry joinery in studio/material lab. **CO mapping:** CO3
    d. Module 4 - Exploring the logic of spanning techniques along with interpreting and understanding the mechanical properties and constraints. **Suggested method:** Construction drawing/measure drawing for spanning techniques | Workshop exercises to experiment with various spanning techniques. **CO mapping:** CO4
    e. Module 5 - Hand-drafted wall section synthesising construction sequence, finishes, and other learning from previous modules, including representations of foundation systems + DPC systems. Case Studies covering alternative and advanced Timber construction systems. **Suggested method:** Micro-project/Construction sheets requiring students to demonstrate all learning from the previous modules. | Seminars and Group Discussions **CO mapping:** CO5

Semester End Examination:

The student will sit for a written-drafting examination, administered by the university in alignment with other theory examinations. Suggested scheme for the Question Paper

Module 1: Question 1 - Theory | Question 2 - Theory

Module 2: Question 3 - Theory | Question 4 - Theory

Module 3: Question 5 - Drafting | Question 6 - Drafting

Module 4: Question 7 - Drafting | Question 8 - Drafting

Module 5: Question 9 - Drafting | Question 10 - Drafting

Suggested Learning Resources:

Books

Core References

1. Ching, Francis D. K. ***Building Construction Illustrated.*** 7th ed. Hoboken, NJ: Wiley, 2025.
2. Ching, Francis D. K., Barry S. Onouye, and Douglas Zuberbuhler. ***Building Structures Illustrated: Patterns, Systems, and Design.*** 2nd ed. Hoboken, NJ: Wiley, 2013.
3. Chudley, Roy, Roger Greeno, and Karl Kovac. ***Chudley and Greeno's Building Construction Handbook.*** 13th ed. New York: Routledge, 2024.
4. Deplazes, Andrea, ed. ***Constructing Architecture: Materials, Processes, Structures — A Handbook.*** 3rd, extended ed. Basel: Birkhäuser, 2013.
5. Mehta, Madan, Walter Scarborough, and Diane Armpriest. ***Building Construction: Principles, Materials, and Systems.*** 3rd ed. Hoboken, NJ: Pearson, 2017.

Construction Philosophy

6. Frampton, Kenneth. ***Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture.*** Edited by John Cava. Cambridge, MA: MIT Press, 2001.
7. Höweler, Eric. ***Design for Construction: Tectonic Imagination in Contemporary Architecture.*** New York: Routledge, 2025.
8. Schwartz, Chad. ***Introducing Architectural Tectonics: Exploring the Intersection of Design and Construction.*** 2nd ed. New York: Routledge, 2021.

Timber, Joinery & Mass Timber Systems

9. Herzog, Thomas, Julius Natterer, Roland Schweitzer, Michael Volz, and Wolfgang Winter. ***Timber Construction Manual.*** Basel: Birkhäuser, 2004.
10. Pryce, Will. ***Architecture in Wood: A World History.*** London: Thames & Hudson, 2016.
11. Seike, Kiyosi. ***The Art of Japanese Joinery.*** New York: Weatherhill, 1977.
12. Waugh, Andrew, and Anthony Thistleton. ***100 Projects UK CLT. London:*** Waugh Thistleton Architects, 2018.
13. Minke, Gernot. ***Building with Bamboo: Design and Technology of a Sustainable Architecture.*** 3rd, rev. ed. Berlin: Birkhäuser, 2023.
14. Hidalgo-López, Oscar. ***Bamboo: The Gift of the Gods.*** Bogotá: D'Vinni Editorial Ltda., 2003.

Sustainability

15. Conway, ***Ed. Material World: A Substantial Story of Our Past and Future.*** London: WH Allen, 2024.
16. Lewis, David J., Marc Tsurumaki, and Paul Lewis. ***Manual of Biogenic House Sections: Materials and Carbon.*** San Francisco: ORO Editions, 2022.

Web links and Video Lectures (e-Resources):

PDFs

1. Swedish Wood. The CLT Handbook: CLT Structures — Facts and Planning. Stockholm: Swedish Wood, 2019.
2. Swedish Wood. The Glulam Handbook. 4 vols. Stockholm: Swedish Wood, 2024.
3. Bureau of Indian Standards. IS 883: Design of Structural Timber in Buildings — Code of Practice. New Delhi: BIS.

HISTORY OF ARCHITECTURE II			
Course Code	**2BAT203**	Scheme	2026-27
Type of Course	PCC	Semester	02
Teaching Hours/Week (L:T:P)	03	CIE Marks	100
Total Hours of Pedagogy per semester L /T/S/P/SL&TW:	90	SEE Marks	100
Credits	03	Total Marks	200
Examination type (SEE)	Theory	Exam Hours	03

Global Architectural History - 330 CE - 2000 CE

Overview of world architectural histories to establish a broad global framework of concepts, movements, and contexts. Study architecture through its **context, setting, rituals, and social structures** as primary influences on the built form.

Diagramming as an analytical tool to interpret:

- Composition principles
- Organisation Principles
- Scale & Proportion Systems
- Ordering systems
- Circulation
- Light
- Plasticity (elevation)

Use **comparative analysis** to examine architectural responses across different geographies within similar historical timelines.

Course outcome (Course Skill Set)

At the end of the course, the student will be able to:

- Overview of world architectural histories to establish a broad global framework of concepts, movements, and contexts.
- Exposure to seminal works and periods in architecture
- Transformations of conceptual and intellectual concerns to architecture
- Architecture as a product of people, place and time
  - Form
  - Building materials
  - Method of construction
  - Characteristic & anomalous examples - recognizing continuity, innovation, and departures from conventions.

Module-1

Early Christian, Byzantine, Islamic, Romanesque & Gothic Architecture

Framework for Module 1 & 2

SYNOPTIC STUDY

Civilization / Period
↓
Regional Character (Setting, Rituals, Resources)
↓
Form + Building Materials + Construction Systems
↓
Characteristic Examples + Anomalous Examples
↓
Continuity + Change

Early Christian Architecture - St. Peters Basilica as a prototype

Byzantine Architecture - Characteristic features, Hagia Sophia and St. Marks Venice.

Islamic - Prototype of the mosque as an evolution of the Prophet's house with an open courtyard, prayer hall, and community functions.

Romanesque - Pisa Cathedral and civic space

Gothic - Notre Dame (Paris), Chartres Cathedral

Number of Hours: 06

Module-2

Renaissance Architecture, Baroque, Rococo, Revival Styles, Industrial Revolution, Arts & Crafts, Art Nouveau Movements, Modernism

Renaissance - Florence Cathedral, St Andrea (Mantua), Palazzo Rucellai, Villa Rotunda (Capra), St Peters' (Michelangelo, Rome)

Baroque, Rococo, Revival Styles - St. Peters' Piazza (Bernini), St. Pauls Cathedral (London)

Industrial Revolution - Crystal Palace, Eiffel Tower, Exhibitions in London & Paris.

Arts & crafts, Art Nouveau Movements – Sagrada Familia (1882), The Secession Building (1898)

Modernism and The Bauhaus – Development from art, evolution and transition from Industrial and Revival styles.

Chicago School & Skyscrapers – Auditorium Building (1889), Empire State Building (1930)

Module-3

Architecture of the 20th century - Modern Architecture

Early Modernism – Evolution, philosophies, methods, characteristics and seminal architecture –

Modern Masters - Works and evolution of ideas of:

- **Frank Lloyd Wright** – Unity Temple (1908), Herbert Jacobs House (1936), Fallingwater (1939)
- **Walter Gropius** – Fagus Factory (1925), Bauhaus School (1926), Gropius House (1938)
- **Mies van der Rohe** – Barcelona Pavilion (1929), Farnsworth House (1951), Seagram Building (1958)
- **Le Corbusier** – Villa Savoye (1929), Unite d'habitation (1945), Notre-Dame du Haut Ronchamp (1955)
- **Alvar Aalto** – Villa Mairea (1939), Saynatsalo Town Hall (1952)
- **Louis Kahn** – Exeter Library (1972), Salk Institute (1963), Escherick House (1961)
- Schroeder House (1924)

Number of Hours: 12

Module-4

Architecture of the 20th century – Post World War II - Modern Architecture

Synoptic Study and Characteristic Features of:

- **TWA Terminal** (1962) - Eero Saarinen
- **Yoyogi National Gymnasium** (1964)- Kenzo Tange
- **Habitat 67** (1967) - Moshe Safdie
- **Sydney Opera House** (1973)- Jorn Utzon
- **Archigram** – Plug-In City, Walking City & Instant City
  Metabolism - Shizuoka Press and Broadcasting Center (1967), Yamanashi Culture Hall (1967), Nakagin Capsule Tower (1972)

Postmodern Architecture - Evolution, philosophies, methods, characteristics and seminal architecture Works and evolution of ideas of:

- **Robert Venturi** – Vanna Venturi House (1964), Franklin Court (1976)
- **Charles Moore** –Piazza d'Italia (1978)
- **James Stirling** – Leicester Engineering Building (1963), Cambridge History Faculty Building (1967), Florey Building, Oxford (1971) Neue Staatsgalerie (1984)

Number of Hours: 09

Module-5

Architecture of the 20th century - Late Modern Architecture

Late Modernism & Hi-Tech Architecture - - Evolution, philosophies, methods, characteristics and seminal architecture. Works and evolution of ideas of:

- **Richard Rogers** – Centre Pompidou (1977), Lloyds Building (1986), Millennium Dome (1999),
- **Norman Foster** – HSBC Headquarters (1985), Great Court of British Museum, UK (2000), Reichstag Building (1999)
- **Renzo Piano** - Centre Pompidou (1977), The Menil Collection, Houston (1987), Jean-Marie Tjibaou Cultural Centre, Noumea (1998)
- **Tadao Ando** - Water temple, Hyogo, (1999), Church of Light, Osaka, (1999) Chichu Art Museum (2004)
- **Santiago Calatrava** - Milwaukee Art Museum (2001)

Deconstruction - Evolution, philosophies, methods, characteristics and seminal architecture
Works and evolution of ideas of:

Frank Gehry – Guggenheim Bilbao (1997)
Peter Eisenman – Wexner Centre (1989)
Coop Himmelb(l)au – Rooftop Remodelling Falkenstrasse (1988)
Bernard Tschumi – Parc de la Villette (1987)
Rem Koolhaas – Seattle Central Library (2004)
Daniel Libeskind – Jewish Museum (2001)
Zaha Hadid – Vitra Fire Station (1993)

Number of Hours: 09

Suggested Learning Resources: (Text Book/ Reference Book/ Manuals):

Text books:

1. A Global History of Architecture by Francis DK Ching, Mark Jarzombek, and Vikramaditya Prakash
   Francis D. K. Ching, Mark M. Jarzombek, Vikramaditya Prakash, 'Global History of Architecture', 3rd Ed, Wiley, 2017
2. A History of Architecture: Settings and Rituals by Spiro Kostof
   Spiro Kostof, Greg Castillo, Richard Tobias, 'A History of Architecture: Settings and Rituals', 2nd Ed, Oxford University Press, 1995
3. Classical Language of Architecture (World of Art) by John Summerson (Author)
   John Summerson, 'The Classical Language of Architecture (World of Art), Thames & Hudson, 1980
4. History of Architecture by Sir Banister Fletcher
   Banister Fletcher, Dan Cruickshank, 'Sir Banister Fletcher's a History of Architecture', Routledge, 1996
5. Modern Architecture: A Critical History by Kenneth Frampton
   Kenneth Frampton, 'Modern Architecture 4e: A Critical History (World of Art), Thames & Hudson, 2007
6. Changing Ideals in Modern Architecture 1750–1950 by Peter Collins
   Peter Collins , 'Changing Ideals in Modern Architecture 1750-1950, 2nd Ed, McGill Queens University, 1998

Reference books / Manuals:

1. Studies in Tectonic Culture by Kenneth Frampton
   Kenneth Frampton, John Cava, 'Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture', MIT Press, 2005
2. Space, Time and Architecture: The Growth of a New Tradition by Siegfried Giedion
   Sigfried Giedion, 'Space, Time and Architecture: The Growth of a New Tradition: 1938-1939 (The Charles Eliot Norton Lectures)', Harvard University Press, 1967
3. Theory and Design in the First Machine Age by Reyner Banham
   Reyner Banham, 'Theory and Design in the First Machine Age', 2nd Ed, MIT Press, 1982

Web links and Video Lectures (e-Resources):

Precedent, Diagram, and the Activation of History, ROBERT WEDDLE, Drury University

Youtube - **@archimarathon**

Introduction to Architecture by Jeff Kipnis **@knowltonosu**

Learning Resources

- Integrate site visits, archives, and local case studies.
- Leverage digital archives, GIS, photogrammetry, and virtual tours.

Encourage engagement with primary sources alongside textbooks

Suggested Learning Activities:

Method and Design Integration

- Shift from information recall to interpretation.
- Encourage abstraction, diagramming, and analytical thinking.
- Emphasize spatial, climatic, structural, and cultural ideas over stylistic classification.
- Foster comparative analysis across periods, regions, and building types to connect history with contemporary design.

Skills Development

- Strengthen visual literacy through analytical drawing and diagramming.
- Develop research, writing, presentation, and graphic communication skills.

Assessment Structure:

The assessment in each course is divided equally between Continuous Internal Evaluation (CIE) and the Semester End Examination (SEE), with each carrying 50% weightage.

- To qualify and become eligible to appear for SEE, in the **CIE**, a student must score at least **40% of maximum marks for CIE**,.
- To pass the **SEE**, a student must score at least **50 % of Maximum marks for SEE.**
- Notwithstanding the above, a student is considered to have **passed the course,** provided the combined total of **CIE and SEE** is at least **50 out of 100 marks**.

Continuous Internal Evaluation (CIE):

Assessment

- Reduce reliance on memory-based examinations.

Use iterative assignments that value inquiry, process, and critical exploration.

Semester End Examination (SEE):

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject (duration 03 hours)
1. The question paper will have ten questions. Each question is set for 20 marks.
2. There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), should have a mix of topics under that module.
The students have to answer 5 full questions, selecting one full question from each module.
Marks scored by the student will be scale downed to 50 Marks

Building Structure I: Form and Forces			
Course Code	2BAT204	CIE Marks	50
Teaching Hours/Week (L:T:P:S)	2:1:0:0	SEE Marks (THEORY)	50
Total Hours of Pedagogy	40	Total Marks	100
Credits	03	Exam Hours	3

Course objectives:
To equip students with foundational knowledge of structural systems, materials, and basic mechanics principles essential for architectural design and building construction, enabling them to analyze load paths, structural elements, and beam behaviors while understanding historical and practical applications

Teaching-Learning Process (General Instructions)
These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.
1. Use of theory, activities, sketches, drawings, assignment and tutorial for teaching.
2. Evaluation by quiz, tests, classroom activities.

Module-1	***5hrs***

Structural Systems overview:
Structure- Substructure, Superstructure, Basic Structural Systems- Load Bearing Wall System, Framed/Skeleton System, Wall-Frame (Dual) System.
Structural elements- Foundation (Substructure), Vertical Members (Columns/Walls), Horizontal Members (Beams/Joists), Slabs/Floor Systems.
Different types of Loads on the structure as per IS 875 (Dead, Live, Wind, Seismic).
Load Path in building (Load bearing & Framed system).

Teaching-Learning Process	1) The teacher can use PPTs, Videos to discuss the topic. 2) The students need to sketch and note the discussions. 3) Quizzes, models, seminars from students can be encouraged

Module-2	***5hrs***

Material Properties: Different construction materials with emphasis on structural properties viz. steel , concrete, wood, glass, Aluminium in building construction.
Basic principles of mechanics: Tension, compression, shear, bending, torsion; symbols and notations; force and stress (Importance, causes & effects on materials).

Teaching-Learning Process	1) The teacher can use PPTs, Videos to discuss the topic. 2) The students need to sketch and note the discussions. 3) Quizzes, models, seminars from students can be encouraged

Module-3	***6hrs***

Mechanics:
Classification of mechanics, Force, characteristics of force, classification of force system, Resultant of force, Composition of force, Principles of transmissibility, Free body diagrams, Parallelogram law, Moment of force, Varignon's theorem of moments, Resultant of coplanar concurrent force system, Lami's

Theorem (Numericals), Resultant of coplanar noncurrent force system(Numericals).	
Teaching-Learning Process	1) The teacher can use PPTs, Videos to discuss the topic. 2) The students need to sketch and note the discussions. 3) Quizzes, models, seminars from students can be encouraged
Module-4	***5hrs***
Beams & Loads: Different types of loads(Concentrated, UDL, UVL, External moment, general loading), different types of beams, statically determinate & statically indeterminate, different types of supports, problems on support reactions. **Note:** In the numerical pertaining to support reactions, loading on the beam shall be restricted to only **point load & uniformly distributed load** for Cantilever, Simple support, Overhanging beam.	
Teaching-Learning Process	1) The teacher can use PPTs, Videos to discuss the topic. 2) The students need to sketch and note the discussions. 3) Quizzes, models, seminars from students can be encouraged
Module-5	***5hrs***
Center of gravity, centroid, to locate centroid of the composite sections from 1st principles(Numericals). **Moment of inertia**, radius of gyration, parallel axis theorem, perpendicular axis theorem (No derivations). Numericals on determination of moment of inertia of sections (Box, T, I, L, hollow sections) about any defined axis (X & Y axis).	
Teaching-Learning Process	1) The teacher can use PPTs, Videos to discuss the topic. 2) The students need to sketch and note the discussions. 3) Quizzes, models, seminars from students can be encouraged
Course outcome (Course Skill Set) 1. Identify and differentiate basic structural systems (e.g., load-bearing walls, framed, dual, truss), elements (foundations, columns, beams, slabs), load types per IS 875, and load paths in buildings. 2. Explain material properties (steel, concrete, wood, glass, aluminum) and their structural applications, along with fundamental mechanics concepts like tension, compression, shear, bending, and torsion. 3. Analyze force systems, resultants, free body diagrams, moments, and theorems (e.g., Varignon's) for coplanar concurrent and non-concurrent forces. 4. Solve problems on beam support reactions for statically determinate beams under point and uniformly distributed loads, classifying beam types and supports. 5. Calculate centroids, centers of gravity, moments of inertia, radii of gyration, and apply parallel/perpendicular axis theorems for composite sections.	
Assessment Details (both CIE and SEE) The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40 % marks in SEE to pass. Semester End Exam (SEE) is conducted for 50 marks (Viva-voce) and a minimum of 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Continuous Internal Evaluation: Three Unit Tests each of **20 Marks (duration 01 hour)** First test at the end of 5th week of the semester Second test at the end of the 10th week of the semester Third test at the end of the 15th week of the semester Two assignments each of **10 Marks**	

First assignment at the end of 4th week of the semester
Second assignment at the end of 9th week of the semester
Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**
At the end of the 13th week of the semester
The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**
(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).
CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:
Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for the subject **(duration 03 hours)**
The question paper will have ten questions. Each question is set for 20 marks.
There will be 2 questions from each module. Each of the two questions under a module (with a maximum of 3 sub-questions), **should have a mix of topics** under that module.
The students have to answer 5 full questions, selecting one full question from each module.
Theory paper will be out of 100 marks and will be scaled down to 50 marks.

Suggested Learning Resources:
Books/References:

1. R.K.Bansal, " A Textbook of Engineering Mechanics", 8th Ed, Laxmi Publications, 2011
2) S.S. Bhavikatti, " Engineering Mechanics", New Age International, 2026
3) S. Ramamrutham, "Engineering Mechanics ", Dhanpat Rai Publishing, New Delhi, 2016.
4) B.S.Basavarajaiah & P. Mahadevappa, "Strength of Materials", 3rd Ed, CRC Press, 2010.
5) R.S.Khurmi & N. Khurmi, " Strength of Materials", 26th Ed, S Chand Pub., 2018

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in
- https://www.youtube.com/watch?v=CcHPzDPYkho
- https://www.youtube.com/watch?v=Hn_iozUo9m4
- https://www.youtube.com/channel/UCXAS_Ekkq0iFJ9dSUIkcAkw
- https://ndl.iitkgp.ac.in
- https://www.youtube.com/watch?v=arr_xwk-JsM
- https://www.youtube.com/watch?v=WWkv4D2LHtk

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning
1) Visit a construction yard/site to understand uses of building materials in a structure.
2) 1) Visit to a construction site to analyse various forces acting on different components of a building.
3) Seminar by students in groups on their learnings.

Digital Tools II

Course Code	2BAT205	**CIE Marks**	100
Teaching Hours/Week (L: T:P:S)	0:0:3:0	**SEE Marks**	--
Total Hours of Pedagogy	90	**Total Marks**	100
Credits	03	**Exam Hours**	-

Course Objectives

- Develop proficiency in advanced AutoCAD drafting and basic SketchUp modeling for architectural representation.
- Understand the role of Artificial Intelligence as a collaborative tool in architectural ideation, visualization, and creative design exploration.
- Apply AI-assisted workflows to generate, refine, and evaluate architectural design concepts using contemporary AI tools.
- Recognize the ethical, legal, and social implications of AI in architecture, including issues of bias, authorship, privacy, and responsible practice.
- Document, communicate, and critically evaluate AI-assisted design processes and outcomes through structured presentations and reports.

Module 1: Advanced AutoCAD and Introduction to SketchUp

- Reviews fundamental AutoCAD drafting concepts and introduces advanced drawing and editing tools.
- Develops proficiency in creating accurate architectural plans, elevations, and sections using layers, blocks, dimensions, and annotation.
- Introduces the SketchUp interface, workspace, navigation, and modeling environment.
- Explores basic 3D modeling tools, including drawing, push–pull, grouping, components, and materials.
- Demonstrates the conversion of 2D AutoCAD drawings into simple 3D architectural models in SketchUp.
- Introduces basic scene creation, styles, shadows, and model organization for architectural presentation.

Module 2: AI-Assisted Architectural Ideation and Design Exploration

- Introduces AI as a collaborative partner in architectural design and creative workflows.
- Explores co-creation, associative ideation, and the architect's role as a critical curator.
- Develops prompt writing to communicate design intent using descriptive, stylistic, and contextual prompts.
- Encourages iterative design exploration through refinement, style references, and precedent-based ideation.
- Emphasizes critical evaluation and refinement of AI-generated design alternatives while maintaining human creativity and design authorship.

Module 3: AI Applications in Architectural Design

- AI-assisted concept development using text-to-image tools.
- Residential and spatial concept visualization.
- Material, texture, façade, and lighting exploration.
- Massing studies and design iterations.
- Image-to-image transformation and design refinement.
- Originality, plagiarism, and intellectual property in AI-assisted design.

Module 4: Responsible AI in Architectural Practice

- Ethical use of AI in architecture and design.
- Authorship and plagiarism.
- Bias and representation in AI-generated content.
- Environmental impact of AI technologies.
- Labour, attribution, privacy, and data rights.
- Responsible integration of AI in architectural practice.

Module 5: Explainable Design and AI Documentation

- Understanding and explaining AI-assisted design decisions.
- Documentation of AI-supported design workflows.
- Critical evaluation of AI-generated outcomes.
- Preparing AI-assisted design reports and presentations.
- Developing a Personal Ethical Framework for responsible AI use.
- Reflection on AI-assisted design processes and future architectural practice.

Course Outcomes (Semester II)

- **CO1:** Create accurate architectural drawings and basic three-dimensional models using advanced AutoCAD and SketchUp tools.
- **CO2:** Apply AI-assisted ideation techniques, prompt writing, and iterative workflows to generate and refine architectural design concepts.
- **CO3:** Utilize AI tools for architectural visualization, concept development, material exploration, massing studies, and image-based design refinement.
- **CO4:** Evaluate AI-generated architectural content critically by considering ethical, legal, environmental, and intellectual property issues in professional practice.
- **CO5:** Document, present, and justify AI-assisted design workflows and outcomes while demonstrating responsible and ethical use of AI in architectural design.

Assessment — CIE (100 Marks)

Assessed within the Year-1 40 / 30 / 30 scheme: module assignments (including Form Exploration) 40% · studio integration with the Architectural Design studio 30% the year-level 1,500-word critical essay 30%. Semester II carries the Personal Ethical Framework and the 500-word design justification. Grading rule: no partial credit for impressive outputs without critical engagement.

Suggested Learning Resources

Books

- AI Fundamentals for Architects — Sahil Tanveer, RBDS AI Lab (forthcoming).
- Delirious Architecture: Midjourney for Architects — Sahil Tanveer.

Sahil Tanveer, 'Delirious Architecture: Midjourney for Architects: Hallucinations and Reality', Notion Press, 2024

- Neil Leach, Architecture in the Age of Artificial Intelligence (Bloomsbury, 2022).

Neil Leach, 'Architecture in the Age of Artificial Intelligence: An Introduction to AI for Architects', Ava Pub Sa, 2025

Papers and reports

- Bender, Gebru et al., "On the Dangers of Stochastic Parrots" (FAccT, 2021); Gebru et al., "Datasheets for Datasets."
- U.S. Copyright Office, Copyright and Artificial Intelligence, Part 2: Copyrightability (2025).

Digital instruments and articles

- Midjourney documentation and Runway Academy — for the generative-design workflow.

Site Surveying and Analysis			
Course Code	2BAT206	CIE Marks	50
Teaching Hours/Week (L:T:P:S)	2:1:0:0	SEE Marks (VIVA)	50
Total Hours of Pedagogy	40	Total Marks	100
Credits	03	Exam Hours	—

Course objectives:
To develop the knowledge and skills related to surveying and levelling principles and practice and carrying out surveys of land of medium complexity and preparation of survey plans.

Teaching-Learning Process (General Instructions)
These are sample Strategies, which teachers can use to accelerate the attainment of the various course outcomes.
3. Use of theory, activities, sketches, drawings, assignment and tutorial for teaching.
4. Evaluation by quiz, tests, classroom activities.

Module-1	***6hrs***
4) **Introduction to Surveying** – Definition, classification, principles of surveying, character of work, shrunk scale. 5) **Levelling** – Definition, Classification, Instruments, booking & reduction of levels using mobile applications (Like Level Book, Auto Level Calc, Smart Level Book etc). 6) **Levelling** – Profile levelling – understand plotting the profile with example.	
Teaching-Learning Process	4) The teacher can use PPTs, Videos to discuss the topic. 5) The students need to sketch and note the discussions. 6) Quizzes, models, seminars from students can be encouraged

Module-2	***4hrs***
4. Introduction to **Survey Instruments** – Theodolite, Total Station, GPS Theodolite – Basic Concepts, Measuring horizontal and vertical angles, Total Station – Uses of total station and applications, Introduction to GPS	
Teaching-Learning Process	4) The teacher can use PPTs, Videos to discuss the topic. 5) The students need to sketch and note the discussions. 6) Quizzes, models, seminars from students can be encouraged

Module-3	***6hrs***
5. **Contouring**: Contour, contour Interval, Characteristics of contours, direct and indirect methods of contours, interpolation and uses of contours. *Exercise of preparing the contour map using levelling instruments and interpolation by arithmetic calculation or using CAD software.*	
Teaching-Learning	4) The teacher can use PPTs, Videos to discuss the topic. 5) The students need to sketch and note the discussions.

Process	3) Quizzes, models, seminars from students can be encouraged
Module-4	***4hrs***
4) **Observation of a Site** – Aim is to sharpen observatory skills through visual, tactile and sensory means. For eg; Measurement through pacing, Tactile feel for texture of soil, sense of level differences through walk or quick checks on site using flow of water, direction of flow. 5) **Analysis of a Site** – Observe, document, analyse elements of a site; Topography: Landforms, contours, Types of soils, Types and location of existing vegetation, other existing site features, Broad climatic study and micro climate on site.	
Teaching-Learning Process	6. The teacher can use PPTs, Videos to discuss the topic. 7. The students need to sketch and note the discussions. 8. Quizzes, models, seminars from students can be encouraged
Module-5	***4hrs***
6) **Studying Survey Drawing** – Learning to read a land survey drawing, types of land survey drawing, scale and north, legends and symbols. 7) **Field work** – Setting out works such as center lines of a building instruments used in center line marking (exercise setting up the marking of building layout using centerline method).	
Teaching-Learning Process	□ The teacher can use PPTs, Videos to discuss the topic. □ The students need to sketch and note the discussions. □ Quizzes, models, seminars from students can be encouraged

Course outcome (Course Skill Set)

4) Apply principles of basic land surveying and levelling
5) Generate and interpret contour maps
6) Utilize contemporary surveying equipment
7) Conduct intuitive and measured site analyses
8) Read survey drawings and execute layout fieldwork

Assessment Details (both CIE and SEE)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40 % marks in SEE to pass. Semester End Exam (SEE) is conducted for 50 marks (Viva-voce) and a minimum of 50% (50 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together. Based on this grading will be awarded

Continuous Internal Evaluation:

Three Unit Tests each of **20 Marks (duration 01 hour)**

- First test at the end of 5th week of the semester
- Second test at the end of the 10th week of the semester
- Third test at the end of the 15th week of the semester

Two assignments each of **10 Marks**

- First assignment at the end of 4th week of the semester
- Second assignment at the end of 9th week of the semester

Group discussion/Seminar/quiz any one of three suitably planned to attain the COs and POs for **20 Marks (duration 01 hours)**

- At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

(to have less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:
The student needs to submit his/her works done throughout the semester, including rough sheets for the Viva examination, at least one day prior to the Viva work examination to the course teacher/coordinator.

1. The Viva-voce will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.
2. The SEE marks list generated is to be signed by both internal and external examiners and submitted to VTU in the sealed cover through the Principal of the institution.

Suggested Learning Resources:
Books/References:

1) Surveying Vol I by DR PC Punmia
B.C. Punmia, Ashok Kumar Jain, Arun Kumar Jain, 'Surveying Vol.1', 17th Ed, Laxmu Publications, 2016

2) Surveying and Levelling (Part-1) by Kanetkar TP and Kulkarni SV
Kanetkar T.P, and Kulkarni S.V, 'Surveying and Levelling (Part-1)' Pune Vidyarthi Griha Prakashan

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in
- https://www.faro.com/en/Industries/Architecture-Engineering-and-Construction
- https://www.youtube.com/watch?v=-JgCfsooiu0
- https://www.youtube.com/watch?v=4hJs81gbl7o
- https://www.youtube.com/watch?v=ZGx37X7KXvc
- https://www.youtube.com/watch?v=3ZQd0_fXrnU
- https://www.youtube.com/watch?v=mdo2HuM9ciM
- https://www.youtube.com/watch?v=MEtAlrcjNc8
- https://www.youtube.com/watch?v=j8poe2vvD2Q

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning
1) Use of modern tools and technology in surveying to be encouraged.

Indian Constitution

Course Title:	**Indian Constitution**		
Course Code:	**2BAT207**	CIE Marks	50
Course Type(Theory/Practical/Integrated)	Theory	SEE Marks	
		Total Marks	50
Teaching Hours/Week(L:T:P:S)	1:0:0:0	Exam Hours	Theory
Total Hours of Pedagogy	15hours	Credits	00 (PP)

Course objectives:

The course **INDIAN CONSTITUTION (22ICO17/27)** will enable the students,

1. To know about the basic structure of Indian Constitution.
2. To know the Fundamental Rights (FR's),DPSP's and Fundamental Duties (FD's)of our constitution.
3. To know about our Union Government, political structure & codes, procedures.
4. To know the State Executive & Elections system of India.
5. To learn the Amendments and Emergency Provisions, other important provisions given by the constitution.

Teaching-Learning Process

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcome sand make Teaching –Learning more effective: Teachers shall adopt suitable pedagogy for effective teaching - learning process. The pedagogy shall involve the combination of different methodologies which suit modern technological tools.

(i) Direct instructional method (Low / Old Technology), (ii) Flipped classrooms (High /advanced Technological tools), (iii) Blended learning (Combination of both), (iv) Enquiry and evaluation based learning, (v) Personalized learning, (vi) Problems based learning through discussion.

(ii) Apart from conventional lecture methods, various types of innovative teaching techniques through videos, animation films may be adapted so that the delivered lessons can progress the students In theoretical applied and practical skills.

Module-1 (03 hours of pedagogy)

Indian Constitution: Necessity of the Constitution, Societies before and after the Constitution adoption. Introduction to the Indian constitution, Making of the Constitution, Role of the Constituent Assembly.

Module-2 (03 hours of pedagogy)

Salient features of India Constitution. Preamble of Indian Constitution & Key concepts of the Preamble. Fundamental Rights (FR's) and its Restriction and limitations in different Complex Situations. building.

Module-3 (03 hours of pedagogy)

Directive Principles of State Policy (DPSP's) and its present relevance in Indian society. Fundamental Duties and its Scope and significance in Nation, Union Executive : Parliamentary System, Union Executive – President, Prime Minister, Union Cabinet.

Module-4 (03 hours of pedagogy)

Parliament-L Sand R S, Parliamentary Committees, Important Parliamentary Terminologies. Judicial System of India, Supreme Court of India and other Courts, Judicial Reviews and Judicial Activism.

Module-5 (03 hours of pedagogy)

State Executive and Governor, CM, State Cabinet, Legislature-VS&VP, Election Commission, Elections & Electoral Process. Amendment to Constitution, and Important Constitutional Amendments till today. Emergency Provisions.

Course out come(Course Skill Set)

At the end of the course 22ICO17/27 the student will be able to:

CO1	Analyse the basic structure of Indian Constitution.
CO2	Remember their Fundamental Rights, DPSP's and Fundamental Duties (FD's) of our constitution.
CO3	Know about our Union Government, political structure & codes, procedures.
CO4	Understand our State Executive & Elections system of India.
CO5	Remember the Amendments and Emergency Provisions, other important provisions given by the constitution.

Assessment Details (both CIE and SEE)

The course is having only Continuous Internal Evaluation (CIE) is of 50. The minimum passing mark for the CIE is 40% of the maximum marks (20 marks out of 50).

Continuous Internal Evaluation (CIE):

Two Unit Tests each of 30 Marks (duration 01 hour)

- First test after the completion of 30-40% of the syllabus
- Second test after completion of 80-90% of the syllabus

One Improvement test before the closing of the academic term may be conducted if necessary. How ever best two tests out of three shall be taken into consideration

Two assignments each of 20 Marks

The teacher has to plan the assignments and get them completed by the students well before the closing of the term so that marks entry in the examination portal shall be done in time. Formative (Successive) Assessments include Assignments/Quizzes/Seminars/ Course projects/Field surveys/ Case studies/ Hands-on practice (experiments)/Group Discussions/ others. The Teachers shall choose the types of assignments depending on the requirement of the course and plan to attain the Cos and POs. (to have a less stressed CIE, the portion of the syllabus should not be common /repeated for any of the methods of the CIE. Each method of CIE should have a different syllabus portion of the course).CIE methods /test question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

The sum of two tests, two assignments, will be out of 100 marks and will be scaled down to 50 marks

Suggested Learning Resources:

Text book:

1. **"Constitution of India"(for Competitive Exams)**- Published by Naidhruva Edutech Learning Solutions, Bengaluru. – 2022.
2. "**Introduction to the Constitution of India**",(Students Edition.) by Durga Das Basu (**DD Basu**): Prentice – Hall, 2008.

Reference Books:

1. **"Constitution of India, Professional Ethics and Human Rights"** by Shubham Singles, Charles E. Haries, and etal: published by Cengage Learning India, Latest Edition – 2019.
2. **"The Constitution of India"** by Merunandan K B: published by Merugu Publication, Second Edition, Bengaluru.
3. **"Samvidhana Odu"-for Students & Youths by Justice H N Nagamohan Dhas, Sahayana, kerekon.**
4. M.Govinda rajan, S.Natarajan, V.S.Senthilkumar, "**Engineering Ethics**", Prentice–Hall, 2004.

Activity Based Learning (Suggested Activities in Class)/Practical Based learning

- ✓ Contents related activities (Activity-based discussions)
- ✓ For active participation of students instruct the students to prepare Flowcharts and Hand outs
- ✓ Organizing Group wise discussions Connecting to placement activities
- ✓ Quizzes and Discussions
- ✓ Seminars and assignments