

**MAHARISHI DAYANAND UNIVERSITY,  
ROHTAK**

**BACHELOR OF ARCHITECTURE**

**SCHEME OF EXAMINATION**

**W. E. F. SESSION 2010 – 2011**

**MAHARISHI DAYANAND UNIVERSITY, ROHTAK**  
**BACHELOR OF ARCHITECTURE**  
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**SEMESTER I**

| Course Code | Course Title                  | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|-------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 101B     | Architectural Design-I        | 6            | 100             | 100             | ...               | 200         |                  |
| AR 102B     | Building Const & Material-I   | 6            | 100             | 50              | ...               | 150         |                  |
| AR 103B     | Structural Design-I           | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 104B     | Architectural Graphics-I      | 6            | 100             | 50              | ...               | 150         |                  |
| AR 105B     | Graphics-I                    | 4            | 100             | 50              | ...               | 150         |                  |
| AR 106B     | History Of Architecture-I     | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 107B     | Architectural Design Theory-I | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 108B     | Workshop-I                    | 4            | 50              | ...             | ...               | 50          |                  |
|             | <b>Total</b>                  | <b>32</b>    | <b>600</b>      | <b>250</b>      | <b>150</b>        | <b>1000</b> |                  |

**SEMESTER II**

| Course Code | Course Title                   | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|--------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 201B     | Architectural Design-II        | 6            | 100             | 100             | ...               | 200         |                  |
| AR 202B     | Building Const & Material-II   | 6            | 100             | 50              | ...               | 150         |                  |
| AR 203B     | Structural Design-II           | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 204B     | Architectural Graphics-II      | 6            | 100             | 50              | ...               | 150         |                  |
| AR 205B     | Building Services -II          | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 206B     | Graphics -II                   | 4            | 75              | 25              | ...               | 100         |                  |
| AR 207B     | Architectural Design Theory-II | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 208B     | Surveying -II                  | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 209B     | Environmental Science          | 3            |                 |                 |                   |             | 3                |
|             | <b>Total</b>                   | <b>30</b>    | <b>575</b>      | <b>225</b>      | <b>200</b>        | <b>1000</b> |                  |

**SEMESTER III**

| Course Code | Course Title                  | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|-------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 301B     | Architectural Design-III      | 6            | 100             | 100             | ...               | 200         |                  |
| AR 302B     | Building Const & Material-III | 6            | 100             | 50              | ...               | 150         |                  |
| AR 303B     | Structural Design-III         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 304B     | Architectural Graphics-III    | 6            | 100             | 50              | ...               | 150         |                  |
| AR 305B     | Building Services-III         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 306B     | Graphics-III                  | 4            | 75              | 25              | ...               | 100         |                  |
| AR 307B     | History of Architecture -III  | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 308B     | Workshop-III                  | 4            | 100             | ...             | ...               | 100         |                  |
|             | <b>Total</b>                  | <b>32</b>    | <b>575</b>      | <b>225</b>      | <b>150</b>        | <b>1000</b> |                  |

**SEMESTER IV**

| Course Code | Course Title                  | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|-------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 401B     | Architectural Design-IV       | 6            | 100             | 100             | ...               | 200         |                  |
| AR 402B     | Building Const & Material-IV  | 6            | 100             | 50              | ...               | 150         |                  |
| AR 403B     | Structural Design-IV          | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 404B     | Landscape Design-IV           | 6            | 100             | 50              | ...               | 150         |                  |
| AR 405B     | Building Services-IV          | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 406B     | Architecture Design theory-IV | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 407B     | Communication Skills-IV       | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 408B     | Workshop-IV                   | 4            | 100             | ...             | ...               | 100         |                  |
|             | <b>Total</b>                  | <b>30</b>    | <b>600</b>      | <b>200</b>      | <b>200</b>        | <b>1000</b> |                  |

**SEMESTER V**

| Course Code | Course Title                | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|-----------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 501B     | Architectural Design-V      | 12           | 125             | 125             | ...               | 250         |                  |
| AR 502B     | Building Const & Material-V | 6            | 100             | 50              | ...               | 150         |                  |
| AR 503B     | Structural Design-V         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 504B     | Urban Design-V              | 4            | 100             | ...             | ...               | 100         |                  |
| AR 505B     | Building Services-V         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 506B     | History of Architecture -V  | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 507B     | Estimating & Costing-V      | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 508 B    | Bldg B Laws & Office mgmt-V | 2            | 50              | ...             | 50                | 100         | 2                |
|             | Total                       | 32           | 575             | 175             | 250               | 1000        |                  |

**SEMESTER VI**

| Course Code | Course Title                 | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 601      | Architectural Design-VI      | 12           | 125             | 125             | ...               | 250         |                  |
| AR 602      | Building Const & Material-VI | 6            | 100             | 50              | ...               | 150         |                  |
| AR 603      | Structural Design-VI         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 604      | Green Architecture-VI        | 2            | 100             | ...             | ...               | 100         |                  |
| AR 605      | Building Services-VI         | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 606      | Graphics -VI                 | 4            | 75              | 25              | ...               | 100         |                  |
| AR 607      | History of Architecture-VI   | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 608      | Specification-VI             | 2            | 50              | ...             | 50                | 100         | 2                |
|             | Total                        | 32           | 600             | 200             | 200               | 1000        |                  |

**SEMESTER VII**

| Course Code | Course Title                  | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|-------------------------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 701B     | Architectural Design-VII      | 12           | 125             | 125             | ...               | 250         |                  |
| AR 702B     | Building Const & Material-VII | 6            | 100             | 50              | ...               | 150         |                  |
| AR 703B     | Research Methodology-VII      | 4            | 100             | ...             | ...               | 100         |                  |
| AR 704B     | Professional Practice-VII     | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 705B     | Elective-I                    | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 706B     | Elective-II                   | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 707B     | Elective-III                  | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 708B     | Elective IV                   | 2            | 50              | ...             | 50                | 100         | 2                |
|             | Total                         | 32           | 575             | 175             | 250               | 1000        |                  |

**SEMESTER VIII**

| Course Code | Course Title  | Periods/Week | Sessional Marks | Portfolio Marks | Theory Exam Marks | Total Marks | Duration of Exam |
|-------------|---------------|--------------|-----------------|-----------------|-------------------|-------------|------------------|
| AR 801B     | Thesis        | 22           | 400             | 200             | ...               | 600         |                  |
| AR 802B     | Elective-V    | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 803B     | Elective-VI   | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 804B     | Elective-VII  | 2            | 50              | ...             | 50                | 100         | 2                |
| AR 805B     | Elective-VIII | 2            | 50              | ...             | 50                | 100         | 2                |
|             | Total         | 30           | 600             | 200             | 200               | 1000        |                  |

**SEMESTER IX**

| Course Code | Course Title       | Periods/Week | Office Marks | Report Marks | Viva Voce Marks | Total Marks | Duration of Exam |
|-------------|--------------------|--------------|--------------|--------------|-----------------|-------------|------------------|
| AR 901B     | Practical Training | 35           | 400          | 200          | 400             | 1000        |                  |

**SEMESTER X**

| Course Code | Course Title       | Periods/Week | Office Marks | Report Marks | Viva Voce Marks | Total Marks | Duration of Exam |
|-------------|--------------------|--------------|--------------|--------------|-----------------|-------------|------------------|
| AR1001B     | Practical Training | 35           | 400          | 200          | 400             | 1000        |                  |

### LIST OF ELECTIVES

|         | Subject                       | Periods/<br>Week | Sessional<br>Marks | Portfolio<br>Marks | Theory<br>Exam<br>Marks | Total<br>Marks | Duration<br>of Exam |
|---------|-------------------------------|------------------|--------------------|--------------------|-------------------------|----------------|---------------------|
| AR 705B | Interior Design               | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 706B | Housing                       | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 707B | Regional Planning             | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 708B | Architectural Conservation    | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 709B | Indian Architecture           | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 710B | Building Maintenance          | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 711B | Energy Conscious Architecture | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 712B | Rural Architecture            | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 802B | Town Planning                 | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 803B | Traffic And Transportation    | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 804B | Construction Management       | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 805B | Multistoried Buildings        | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 806B | Low Cost Building             | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 807B | Art And Architecture          | 2                | 50                 | ...                | 50                      | 100            | 2                   |
| AR 808B | Architectural Journalism      | 2                | 50                 | ...                | 50                      | 100            | 2                   |

**MAHARISHI DAYANAND UNIVERSITY,  
ROHTAK**

**BACHELOR OF ARCHITECTURE**

**SYLLABUS**

**W. E. F. SESSION 2010 – 2011**

## SEMESTER-1

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### ARCHITECTURAL DESIGN I

AR 101B

Periods per Week: 6

Sessional Marks: 100

Portfolio Marks: 100

#### INTENT

Introduce in to the mathematical mind set of the students from the science stream an aesthetic line of thinking. Inculcating a sense of joy in 'design' and its process.

#### CONTENT

Potential of a line, composition using lines.

Two dimensional compositions of simple geometric shapes (triangles, rectangles, circles) as lines and as two dimensional solid shapes in monochromatic schemes and in color schemes.

Application of form and color in differing visual creative situation like design of a carpet, a sari border, a necktie, a rangoli, a pavement pattern, curtain fabric and the like.

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

At least 12 exercises must be attempted out of which half should be on design of 2-D compositions applicable in different situations.

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### BUILDING CONSTRUCTION MATERIALS-I

AR 102B

Periods per Week: 6

Sessional Marks: 100

Portfolio Marks: 50

#### INTENT

To introduce the students to the dynamics of Building Construction and an appreciation of the use of Building Materials in architecture as an integral component of the conversion of Architectural Concepts into tangible reality.

To make the students aware with the basic components of building envelope and to familiarize them with elementary and basic building material like brick and stone and with the principle of construction using these material.

#### CONTENTS

Basic components of a "building"

Role of Construction in Architecture

Brick as a building material

Brick Masonry tools

Brick walling and joints

Brick Jallies

Brick Arches

Stone as a building material

Stone Masonry Tools

**NOTES**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
This course will be supported by site visits off the studio hours. At least 12 sheets must be prepared in the Studio.

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**STRUCTURAL DESIGN-I**
**AR-103B**

Periods per Week: 2  
Sessional Marks: 50  
Theory Exam Marks: 50  
Duration of exam: 2hrs

**INTENT**

To inculcate the understanding of the basic principles of structural mechanics for understanding of Structural Systems and Design

**CONTENTS**

Forces in structures  
Moments in structures  
Loads in structures  
IS:875  
Types of supports  
Shear Force, Bending Moment  
Center of Gravity, Moment of Inertia  
Forces in a simple wooden truss  
Design of members of a wooden truss

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Exercises must be done at the end of each lecture.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**ARCHITECTURAL GRAPHICS –I**
**AR 104B**

Periods per Week: 6  
Sessional Marks: 100  
Portfolio Marks: 50

**INTENT**

To develop the skill of drafting using computers/manually.

## CONTENT

Acquaintance with the computer Introduction to drafting equipment/computers

Drafting of lines, Orthographic projections, Representing simple solids, Lettering, Architectural Graphic Symbols, Drawing Scales, Measured drawing of a simple object/ Drawing, editing, modifying commands in 2-d using AutoCAD, Setting and plotting drawings on standard formats

## NOTES

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
At least 12 exercises must be prepared in the studio under supervision.

## GRAPHICS I

AR-105B

Periods per week: 4  
Sessional Marks: 100  
Portfolio Marks: 50

### INTENT:

To develop the skill of using the pencil in free hand drawing and rendering to support Architectural Design and Drawing

### CONTENTS

Use of Pencil  
Lines  
Shading with pencil  
Indoor sketching  
Drawing scaled graphics

### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
At least 8 sheets and 20 sketches to be made under supervision in the studio.

## HISTORY OF ARCHITECTURE –1

AR 106B

Periods per Week: 2  
Sessional Marks: 50  
Theory Exam Marks: 50  
Duration of exam: 2hrs

### INTENT

To inculcate the appreciation of 'History of Architecture' in the larger context of Time, Space, Man and Architecture; to develop a curiosity of a past era; to appreciate the glory of a past era through its Architecture.



**CONTENTS –****SECTION I (Indian Subcontinent)**

Indus valley civilization

Aryan/Vedic civilization Buddhist  
and Jain civilization Indio Aryan

Temple Architecture

Early and late Chalukyan architecture.

Dravidian Temple Architecture SECTION

II: Western world

Ancient civilizations-Mesopotamian, Sumerian, Babylonian, Persian,  
Assyrian Egyptian civilization

Classical Greek architecture

Roman architecture

Early Christian architecture

Romanesque architecture

Early Gothic architecture

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Each topic concerned should be followed by a written assignment by the students along with stress on sketches.

**NOTE –** Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**ARCHITECTURAL DESIGN THEORY I**

AR 107B

Periods per Week: 2

Sessional Marks: 50

Theory Exam Marks: 50

Duration of exam: 2hrs

**INTENT**

To appreciate “design”, the background thinking in the design of art forms; the design of natural objects

**CONTENT**

Meaning of design

Appreciation of beautiful objects

Design in everyday life.

Logic in design.

Geometry in design

Elements of Design- Line, form, color texture

Principles of Design-Unity, variety, hierarchy,

Scale and proportions

Balance, emphasis,

Focus, fashion, decoration.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Assignments must be illustrated with visuals

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**WORKSHOP –I**

AR 108B

Periods per Week: 4

Sessional Marks: 50

**INTENT**

To appreciate the complexity of working by ones own hand; to familiarize students with the complexity of making quick and rendered models to sport design presentation.

**CONTENT**

Bricks masonry tools

Brick masonry on building site

Model making materials

Model making techniques for quick study models

**NOTE:** detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
At least 6 quick models and 3 rendered models to be made

## SEMESTER-II

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### ARCHITECTURAL DESIGN II

AR-201B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 100

#### INTENT

To appreciate the process of design and the complexities involved in architectural design.

#### CONTENT

Exercises in composing 3 dimensional objects and their representation in 2-D  
 Exercises in design of simple mono cellular buildings like guard house, flower kiosk, milk parlor etc.

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.  
 Visits to proto type situations to be arranged off the studio hours  
 At least 2 exercises in 3-D composition studies and 6 exercises in design should be done.

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### BUILDING CONSTRUCTION MATERIAL-II

AR-202B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 50

#### INTENT

The intention of the course is to familiarize the student with the various aspects of building construction with the basic material as wood.

#### CONTENT

Timber as a building material  
 Carpentry tools  
 Plywood and boards – types and qualities  
 Types of Doors, Windows, Ventilators, and their details  
 Moldings.  
 Types of wooden staircase and their details  
 Sliding and folding wooden doors, sliding wooden doors  
 Substitute wood products

#### TEACHING AIDS:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

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## STRUCTURAL DESIGN-II

AR-203B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam Marks: 50  
Duration of exam: 2hrs

### INTENT

To develop an understanding of simple timber (monolith material) and brick masonry (composite material) structural elements.

### CONTENTS

Timber as a structural material  
Design of simple timber beams  
Design of simple timber short and long columns  
Design of simple trusses and their members  
Brick as a structural material  
Design of load bearing brick walls  
Design of brick wall footings.

### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester. Appropriate Standards must be explained and used. Exercises must be done in each class

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## ARCHITECTURAL GRAPHICS -II

AR204B

Periods/week: 6  
Sessional Marks: 100  
Portfolio Marks: 50

### INTENT

To develop in the students the capability of understanding and drawing three dimensional solids and their various complex sections to finally make drawings required in the representation of architectural design.

### CONTENT

Projection of group of solids, section of solids, development of surface, inter penetration of solids, isometric view of simple forms Axonometric view/Drawing, editing, modifying commands in 3-d using AutoCAD

### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester. At least 12 sheets to be prepared in the studio under supervision

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**BUILDING SERVICES-II**  
**(SEWERAGE AND WATER SUPPLY)**

AR-205B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam Marks: 50  
Duration of exam: 2hrs

**INTENT**

Appreciating designing and layout of water supply, plumbing, drainage and sanitation of simple buildings.

**CONTENT**

Sources of surface and ground water, treatment of water, transportation and distribution at town level.  
Water supply system: fittings, direct and indirect supply, layout and sizes of pipes, hot water supply, storage.  
Sewerage system: systems, fitting and fixtures, sizes and layout, sewage collection, sewage treatment and disposal at town level.  
Solid waste management  
Rainwater drainage

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.  
Theory to be supported with site visits to be conducted off the class hours.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**GRAPHICS-II**

AR-206B

Periods/week: 4  
Sessional Marks: 75  
Portfolio Marks: 25

**INTENT**

To make students experiments in different color mediums for the final application of rendering architectural drawings.

**CONTENT**

Use of pencil colors for rendering  
Color wheel  
Theory of color aesthetics  
Representing building material and color  
Use of poster color and rendering  
Use of ink for rendering

Rendering on different kinds of paper

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 At least 10 sheets to be made in the studio under supervision  
Drawing of current semester in arch. design may be taken up for rendering exercises.

### ARCHITECTURAL DESIGN THEORY-II

AR-207B

Periods/week: 2

Sessional Marks: 50

Theory Exam Marks: 50

Duration of exam: 2hrs

#### INTENT

To generate and appreciation of background aspects of thinking required in architectural design.

#### CONTENT

Basic Design and Architectural Design- Elemental Differentiation  
 Perception and Experience  
 Tangible and Intangible in Architecture  
 Function, Structure and Form  
 Space, Space Usage and Interrelationship of spaces  
 Circulation within Spatial Units  
 Horizontal Circulation  
 Vertical Circulation  
 Circulation and Spaces Between buildings  
 Relationship of plan, Section and Elevation  
 Architectural Scale  
 Programming in Architectural Design

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.  
 Each lecture to be followed by a written assignment

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## SURVEYING -II

AR-208B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Marks: 50  
 Duration of exam: 2hrs

**INTENT**

Acquaintance with instruments and techniques of simple Surveying and leveling as used by an architect in the profession.

**CONTENT**

Definition and concepts; Instruments used; acquaintance with electronic surveying instruments  
 Principles of surveying; Units of measurements Chain surveying  
 Compass  
 surveying Leveling  
 Contouring: Topographic maps Plane tabling  
 Marking foundations  
 Measuring buildings under construction

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 Field work to be done off class hours.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## ENVIRONMENTAL STUDIES – II

AR-209B

Periods/week: 3  
 Sessional Marks:  
 Theory Marks: (Only qualifying examination)

**INTENT**

To acquaint the students with issues related to environmental problems.

**CONTENTS**

Unit 1: The Multidisciplinary nature of environmental studies, Definition, scope and importance.  
 Unit 2: Natural Resources:  
 Renewable and non-renewable resources:  
 Natural resources and associated problems.  
 Unit 3: Ecosystems  
 Unit 4: Biodiversity and its conservation

Unit 5: Environmental Pollution



- Unit 6: Social issues and the Environment  
Unit 7: Human Population and the Environment  
Unit 8: Field Work

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Field work to be done off class hours.

## SEMESTER III

### ARCHITECTURAL DESIGN-III

AR-301B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 100

#### INTENT

Appreciation of the complexities and contradictions in the architectural design process

#### CONTENT

Exercises in design of small buildings like primary health clinic, nursery school, neighborhood shopping incorporating services and basic elements of structural systems.

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 Visits to proto type situations to be arranged off the studio hours At least 4 exercises should be done.

### BUILDING CONSTRUCTION MATERIAL-III

AR-302B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 50

#### INTENT

To understand the RCC construction details used in 3-4 storied buildings.

#### CONTENT

RCC as a material  
 RCC staircase  
 Flooring and roofing details  
 Detailed section through a 4 storied building  
 Concept of frame structures  
 RCC frame structure with in-fills  
 RCC footings and foundations

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 At least 10 sheets to be made under supervision.

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 STRUCTURAL DESIGN-III

AR-303B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam Marks: 50  
 Duration of exam: 2hrs

## INTENT

To understand the principles of design of RCC structures

## CONTENT

Concept of RCC and introduction to IS: 456 Working stress method of design for RCC structure  
 Theory of singly reinforced sections – neutral axis, under reinforced sections, over reinforced sections, and moment of resistance  
 Shear, Bond and development length  
 Analysis and design of singly reinforced rectangular RCC beam  
 Analysis and design of double reinforced rectangular RCC beam  
 Theory and design of: one way RCC slab, two way RCC slab and Cantilever slab Theory and design of long and short square, rectangular and circular RCC columns

## NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 Appropriate standards must be explained and used Exercises must be done in each class

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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 ARCHITECTURAL GRAPHICS-III

AR304B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 50

## INTENT

To make students understand the concept of computer representation and study of advanced software.

## CONTENT:

Autocad / Drawing, editing, modifying commands Revit.

## NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 Exercises related to other subjects may be given to make the subject more useful and relevant.

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### BUILDING SERVICES-III(CLIMATOLOGY)

AR-305B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam. Marks: 50  
Duration of exam: 2hrs

#### INTENT

Basic intent of this course is to make student familiar with concepts of climatology which they can incorporate their design exercise.

#### CONTENTS

Traditional use of material and shelter design  
Climate and its elements  
Classifications of various climatic zones and their characteristics  
Human Comfort design guidelines  
Micro climate  
Thermal comfort factors  
Solar position, shadow angles shading devices  
Architectural climatic control devices  
Ventilation and air movement and their architectural implications  
Climate design rules affecting settlement planning and architecture

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### GRAPHICS III

AR-306B

Periods/week: 4  
Sessional Marks: 75  
Portfolio Marks: 25

#### INTENT

The intention of this course is to further augment and enhance the architectural rendering techniques of students using various mediums ( in relation to appropriate base material ) with an ultimate objective, that at the completion of this particular programme the students should be able to render a set of arch. Presentation drawings of a small building in varied medium color pencil water color including landscape, automobiles and human figures.

#### CONTENT

Perspective drawing, its concepts and various elements and methods.  
2 point Perspective drawings of simple forms with changes in different parameters  
2 point Perspective drawings of small structures with changes in different parameters

1 point perspective drawing of a simple situation  
 Shade and shadow of object of different shape at different levels  
 and planes Shade and shadows of architectural fenestrations  
 Shade and shadow of façade of simple building

Techniques for rendering drawings in color pencil, water color and  
 Rendering of plan, sections and elevation in different mediums  
 Rendering of two point perspective of a building in different mediums  
 Rendering of one point perspective of an interior space in ink

Note: Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 Drawing made by the student in architectural design may be taken up for rendering exercises.

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### HISTORY OF ARCHITECTURE -III

AR- 307B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

To appreciate the growth and development of architecture form the 12<sup>th</sup> to the 18<sup>th</sup> century in the Indian subcontinent and Europe in terms of the idea of the time converted to architectural enterprise at that time.

#### THE INDIAN SUBCONTINENT

The coming of Islam to the region and its Architectural Implications  
 Architecture of the Sultans in the Delhi Region  
 Development of architecture in the important provinces  
 Architecture of the Early Rulers of the Mughal Dynasty  
 Shahjahan's Contribution to Mughal Architecture.

#### EUROPE

THE BIRTH OF Renaissance in Florence  
 16<sup>th</sup> century Renaissance in Italy  
 Renaissance and the Cult of personality  
 Baroque And Rococo as outlying Styles of Renaissance  
 Influence of Italian Renaissance on Architecture in England.

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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WORKSHOP –III

AR- 308B

Periods/week: 4

Sessional Marks: 100

**INTENT**

To study the characteristics of timber and importance of carpentry joints in architecture model making helps to inculcate skills in architectural model making which is a important component of design.

**CONTENT**

Use of carpentry tools

Characteristics of wood

Exercise in making of carpentry joints

Exercises using commercial boards

Model making in mount board and thermocol Making

of one detailed model of a building Making of detailed

site model of a contouring site

**NOTE:** Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

## SEMESTER IV

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### ARCHITECTURAL DESIGN -IV

AR-401B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 100

#### INTENT

To explore the process and complexities in architectural design;  
 Physical pattern of a small settlement built form and various factors that contribute to its development

#### CONTENT

Study of built environment of a rural settlement, covering various aspects related to physical built form. This semester shall have preferably minimum of three problems First shall deal with physical study of environment of a rural settlement, covering various aspects related to physical and civil infrastructure. Second problem shall deal with the study of an urban area, covering various aspects related to physical and civic be a small problem related to design of a community building related to the studied urban area.

Note: The Design of this semester shall be supported by frequent site visits. Service the students have studied climatologic, so they should be encourage to perform climatic evaluation appraisal of few selected buildings.

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### BUILDING CONSTRUCTION MATERIAL-IV

AR- 402B

Periods/week: 6  
 Sessional Marks: 100  
 Portfolio Marks: 50

#### INTENT

To make the students aware of steel as building material The course aims to bring about an awareness about enormous potential of steel that goes beyond its role of reinforcement in RCC Programme explores possibilities in steel constructions frame foundation to roof.

#### CONTENT

Structural Steel members and sections  
 Joining detail of various steel members  
 Steel connections  
 Steel foundations  
 Structural steel frame  
 Steel staircase  
 Steel mezzanine floor  
 Steel sport system for roofing  
 Steel trusses  
 Steel cladding  
 Collapsible and rolling shutters.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
This course will be supported with site visits and market surveys outside studio hours

**STRUCTURAL DESIGN IV**

AR-403B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam Marks: 50  
Duration of exam: 2hrs

**INTENT**

To enhance the understanding of RCC structures

**CONTENTS**

Theory and design of simply supported circular and ribbed slabs subjected to uniformly distributed loads  
Fixed beams: Bending moment diagrams for a fixed beam subjected to uniformly distributed load and point load. Formula to be explained – no derivation)  
Theory and design of reinforced T-beams, inverted T-beams and isolated T-beams, singly reinforced L-beams  
Theory and design of isolated sloped column footing for a square, rectangular and circular column subjected for axial loads  
Column footings subjected to eccentric loading  
RCC footing for axially loaded RCC and brick walls.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Appropriate Standards must be explained and used Exercises must be done in each class.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

**LANDSCAPE DESIGN -IV**

AR- 404B

Periods/week: 6  
Sessional Marks: 100  
Portfolio Marks: 50

**INTENT**

To appreciate the issues related to site planning and small landscape situations.



**CONTENT**

Principles of landscape design  
 Elements of landscape design and their various manifestations  
 Plant material: Shrubs, trees, plants, ground cover.  
 Water and its manifestations  
 Use of earth and stone as element of landscape.  
 Site planning  
 Landscape Design Exercises for different architectural situations.  
 Landscape and climatology.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 This course should be supported with appropriate and manageable visits to the concerned works off the class hours  
 Extensive field visits to various landscape design Nursery so as to have actual feel of various plant material are required.

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**BUILDING SERVICES –IV (LIGHTING)**

AR- 405B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

**INTENT**

To understand the implication and application of natural and artificial lighting in Architecture.

**CONTENT**

Natural lighting  
 Artificial lighting  
 Requirement for different situations  
 Lamps and luminaries  
 Outdoor lighting  
 Specialized lighting like art galleries etc.  
 Electrical system wires  
 Electricity distribution system with a building  
 Safety devices  
 Electrical wiring systems  
 Generation transmission and distribution of electricity  
 Graphic electrical symbols  
 Load calculation of a small building

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### ARCHITECTURAL DESIGN THEORY -IV

AR- 406B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

#### INTENT

The intention of this particular course is to make students aware about the life, time, workshop and philosophy of contemporary recognized architectures in India and abroad.

#### CONTENTS

- historical scene in Europe, America and India after the Industrial Revolution.
- Study of life, philosophy and weeks of Walter Gropius
- Study of life, philosophy and weeks of Frank Lloyd Wright
- Study of life, philosophy and weeks of Mies Van Der Rohe
- Study of life, philosophy and weeks of LeCorbusier
- Study of life, philosophy and weeks of Alvar, Alto
- Study of life, philosophy and weeks of Louis Khan
- Study of life, philosophy and weeks of Joseph Allein Stein
- Study of life, philosophy and weeks of Charles Correa
- Study of life, philosophy and weeks of Achut. P. Kanvinde
- Study of life, philosophy and weeks of B.V. Doshi
- Study of life, philosophy and weeks of Raj Rewal

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### COMMUNICATION SKILLS IV

AR- 407B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

#### INTENT

To inculcate the technique and skill of effective communication mediums for the running of an effective architectural practice.

**CONTENT**

Principles of communication  
 Office English  
 Interview skill, technical presentation  
 Report writing  
 Writing for publication:  
 Spoken English (oral presentation)  
 Meetings  
 Annotative English  
 Creative writing

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
 An exercise should be done in each class.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**WORKSHOP-IV**

AR- 408B

Periods/week: 4

Sessional Marks: 100

**INTENT**

To develop skills of making architectural models.

**CONTENT**

Various model making materials  
 Tools for model making  
 Practicing cutting and joining for architectural models  
 Making one detailed model of individual designs

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

## SEMESTER V

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### ARCHITECTURAL DESIGN -V

AR-501B

Periods/week: 12

Sessional Marks: 125

Portfolio Marks: 125

#### INTENT

To inculcate the appreciation of the design process and an understanding of the design complexities and contradictions to resolve architectural design problems for different situations.

#### CONTENT

Design of an institutional/ educational building (6 weeks)

Time problem of six hours.

Design of a housing (7 weeks)

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

This course needs to be supported by frequent site visits but care must be taken that drawings are prepared under supervision in the studio

Design problem can have a thrust direction such as socio economic studies or some building service

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### BUILDING CONSTRUCTION MATERIAL-V

AR- 502B

Periods/week: 6

Sessional Marks: 100

Portfolio Marks: 50

#### INTENT

To understand the design, detailing and drawing of building elements in different materials like PVC and aluminum.

#### CONTENT

PVC as a material

PVC sections

PVC doors and windows

Aluminum as a material

Aluminum doors and windows

Aluminum cladding

Different cladding materials like aluco-bond etc.

---

## STRUCTURAL DESIGN-V

AR 503B

Period per wk : 2

Sessional Marks : 50

Theory Exam Marks: 50

Duration of exam: 2hrs

### INTENT

To understand the principles and design of simple steel structures

### CONTENT

Design of steel beams

Design of built-up girders

Design of steel columns, long and short, built-up

Column bases slabs, grillage, gusted

Steel joints

Theory and design of steel frames

### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester  
Appropriate IS codes should be explained

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## URBAN DESIGN -V

AR- 504B

Periods/week: 4

Sessional Marks: 100

### INTENT

To familiarize the students with basic aspects of urban design as one of the specialization of Architecture.

### CONTENT

Urban design vocabulary

Elements of urban design

History of urban design

Urban spaces

Circulations: intercity/intra-city

urban Visual surveys

Building typology and its impact on urban form

Physical and non physical determinants of city form

patterns Urban design tools

Principles and techniques of urban design, legislations related to urban design

**NOTE**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

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**BUILDING SERVICES-V  
(ACOUSTICS AND FIRE FIGHTING)**

AR- 505B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

**INTENT**

To appreciate the role of acoustics and fire protection in building.

**CONTENT**

Terminology in acoustics.  
 Behavior of sound.  
 Acoustical defects and their solutions.  
 Acoustics material  
 Principles of good acoustical design for different building types.  
 Noise  
 Fire-fighting  
 First resistant rating  
 Fire resisting materials  
 Fire protection equipments  
 NBC standards for fire fighting

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**HISTORY OF ARCHITECTURE -V**

AR- 506B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

**INTENT**

To understand the growth and development of architecture and appreciation of the role of the intangibles that brought this growth and development from the 18<sup>th</sup> century to the advent of European modernism.

## COURSE MODULES

### SECTION I: THE WESTERN WORLD

- i) Industrial Revolution and its architectural Implications
- ii) 19<sup>th</sup> century Neo Classicism in Europe and America
- iii) Development of Architecture in Victorian England
- iv) Technology of Iron and Steel
- v) Town Planning Trends in Europe
- vi) Rise of the Idea of Expositions
- vii) Birth of the American Skyscraper
- viii) Alternate Trends in late 19<sup>th</sup> and early 20<sup>th</sup> century in Europe.

### SECTION II: INDIA

- i) Culture of colonialism and British Response to Indian Context
- ii) Early British Architecture
- iii) Birth of Indo Saracenic Style
- iv) Classical Revival and Building of New Delhi.

#### NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

## ESTIMATING AND COSTING -V

AR- 506B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

To make students understand the importance, techniques of estimating and costing and valuation and principles of economics in building design.

#### CONTENT

- i) Importance and estimating costing
- ii) Costing and valuation, different types of estimates
- iii) Thumb rules used in estimating
- vi) Methods of preparing BOQ, long wall short wall method
- v) Centre line Method
- vi) BOQ for journey works
- vii) Quantity estimation for finishes
- viii) Principles of economics in building planning.
- ix) Price rise Mechanism in tenders.
- x) Abstract of cost of estimate of Project.
- xi) Valuation
- xii) Various forms of tenders in building civil works
- xiii) Analysis of rates for various building works.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### BUILDING BYE LAW AND OFFICE MANAGEMENT -V

AR- 508B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

**INTENT**

To acquaint the student with building legislation and basic office procedure and management techniques .

**CONTENT**

Building Bye Laws professional practice, office management, project management.

**TOPIC**

Study of building Bye laws and study of national building code. Study of building Bye laws of Chandigarh and Delhi Submission drawings – study and requirements Architect's Act 1972, Council of Architecture, norms and standards regarding fees and scale of charges.  
 Architectural office administration  
 Office Correspondence, Filing and record keeping. Dealing with different personnel.  
 Legal responsibilities and ethics.  
 Architectural competitions.  
 Notice inviting tenders, tender documents agreement contract.  
 Professional practice: Negotiation arbitration, arbitrator its advantages/disadvantages, billing, accounting .  
 Project management  
 Site organization and Networking techniques Time analysis , CPM PERT .  
 Value engineering Man power and labor laws.  
 Basic accounts techniques and book keeping.

**NOTE:**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]



## SEMESTER VI

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### ARCHITECTURAL DESIGN – VI

AR 601B

Periods/week: 12

Sessional Marks: 125

Portfolio Marks: 125

#### INTENT

To inculcate the appreciation of the design process and an understanding of the design complexities and contradictions to resolve architectural design problems for complex situations.

#### CONTENT

Design of a recreational building (club, theatre etc.)

(6weeks) Time problem of six hour

Design of a commercial organization (sector shopping, small shopping mall, etc.) (7weeks)

#### NOTE:

This course needs to be supported by frequent site visits but care must be taken that drawings are prepared under supervision in the studio.

Design problems can have a thrust direction such as climatic control or some other building service.

Second major project to form the portfolio assignment.

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### BUILDING CONSTRUCTION AND MATERIALS – VI

AR 602B

Periods/week: 6

Sessional Marks: 100

Portfolio Marks: 50

#### INTENT

To be aware of the content, methodology and technique of preparing working drawings before proceeding on practical training.

#### CONTENT

Complete working drawings with specification documentation of the previous semesters design project preferably an appropriate part of the housing comprising:

Foundation plan

All floor plans All

elevations

Necessary

sections Joinery

details Kitchen

detail Toilet detail

Staircase detail

Wardrobe detail

## Services layout

Site plan

NOTE:

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

### STRUCTURAL DESIGN-VI

AR-603B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

INTENT

To appreciate the numerous possibilities of structural systems and the techniques of dealing structural drawings.

CONTENT

Analyze of the structure of a previous design(preferably an appropriate part of the housings). Calculation of the structural component of the selected design.

Preparing structural drawings for the selected design. Bulk active structures

Form active structures

Surface active structures

Vector active structure

NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

### GREEN ARCHITECTURE -VI

AR- 604B

Periods/week: 2

Sessional Marks: 100

INTENT

To appreciate the issues and features related to green architecture.

CONTENT

Ecological impact of buildings

Sustainable methods of construction

LEED

Green Building Councils

Green features in buildings

Greening the city

**NOTE**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

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**BUILDING SERVICES –VI (AIR-CONDITIONING)**

AR- 605B Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

**INTENT**

To appreciate how building can be made more comfortable by adding mechanical systems like artificial ventilation, air conditioning and conveyor systems.

**CONTENT**

Human comforts conditions Natural and mechanical ventilations

Air-conditioning principles, systems and methods

Architectural interventions in air-conditioned buildings, study of materials (interiors) for air conditioned spaces

Types and layout of centrally air-conditioning systems Lift location, systems, sizes equipment spatial requirement Escalators location, equipment

**NOTE**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester. This course should be supported with site visits arranged of the class hours and expert lectures.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**GRAPHICS -VI**

AR- 606B

Periods/week: 4

Sessional Marks: 75

Portfolio Exam. Marks: 25

**INTENT**

To argument and enhance the skill and techniques in architectural rendering using different mediums.

**CONTENT**

Rendering of all architectural drawings in  
 Oil Patels  
 Markers  
 Charcoal Pencil  
 Cut and Paste  
 Water Color  
 Poster Color

**NOTE**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.  
 At least 12 sheets to be prepared for the portfolio in as many different mediums as possible.

---

**HISTORY OF ARCHITECTURE -VI**

AR- 607B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

**INTENT**

The 6<sup>th</sup> semester History of Architecture course is tailored to trace the development of architecture in a chronological sequence from the advent of the Modern Movement in the early decades of the 20<sup>th</sup> century to contemporary trends. The evaluation of the various architectural stylistic 'isms' is to be studied in the context of both the sub-continent and the west. The course aims at tracing the evaluation and development of an architectural event or trend and its illustration through the work of contemporary architects.

**CONTENT****SECTION I: The western world:**

Early modernism  
 Post War decades: The international Styles  
 Alternatives to the International Styles  
 Late Modernism  
 Sick Tech. Architecture  
 Post Modernism  
 Neo Modernism

**SECTION II: India**

Post independence Architecture  
 The arrival of modernism  
 Rediscovering our Roots  
 Current trends in Indian Architecture  
 Exploring Regionalism in Indian Architecture

**NOTE**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### SPECIFICATION -VI

AR-608B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam. Marks: 50  
Duration of exam: 2hrs

#### INTENT

Techniques and Phraseology of writing specifications of basic and composite materials and various building works.

#### CONTENT

Writing specifications of  
Excavations  
Earthwork  
Foundations  
Damp proof course  
Brick Masonry  
Concreting  
Flooring  
Timber doors and windows  
Metal doors and windows  
Painting and other finishes  
Sanitary fittings and fixtures  
Electrical wiring and fixtures  
Specifications as part of the tender document

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

## SEMESTER VII

### ARCHITECTURAL DESIGN -VII

|                        |     |
|------------------------|-----|
| AR- 701B               |     |
| Periods/week:          | 12  |
| Sessional Marks:       | 200 |
| Portfolio Exam. Marks: | 200 |

#### INTENT

The intention of this particular course is to make students apply their knowledge and develop design skills for multistoried and other large scale public buildings, while testing out the theories and methods and other intricate nuances learnt during the practical training i.e. design of multi-cellular, multi-planar buildings of varied typologies.

#### CONTENT

Design of a commercial/cultural/recreational building (office/institutional complex, shopping arcade etc.) (6 weeks)

Time problem of 6-12 hours

Design of a services oriented building (large hotel, hospital etc) (7 weeks)

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

This course needs to be supported by frequent site visits but care must be taken that drawings are prepared under supervision in the studio

Design problems can have a thrust direction of resolving some building services The second major problem will be the portfolio project

### BUILDING CONSTRUCTION -VII

|                        |     |
|------------------------|-----|
| AR- 702B               |     |
| Periods/week:          | 6   |
| Sessional Marks:       | 100 |
| Portfolio Exam. Marks: | 50  |

#### INTENT

To make the students learn about advance construction technology and its application, advance building materials and typical construction details of multistoried building and areas requiring special detailing.

#### CONTENT

- i) Modern Formwork techniques in steel, lift slab construction and slip form formwork and formwork of special profiles.
- ii) Prefabrication using prestresses and post stressed RCC and post stressed RCC joints in prefabrication, construction details of typical RC wall in prefab mode.
- iii) Expansion joints and construction joints.
- iv) Water proofing construction details. And basement construction
- v) Construction details of energy efficient buildings.

- vi) Construction Details including insulation, drainage materials and construction system of large span structures.
- vii) Advance building material and their properties
- viii) Curtain walls and their detailing.
- ix) Partition details and design, Paneling design and details, Staircase design and details

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester. This course needs to be supported by frequent site visits but care must be taken that drawings are prepared under supervision in the studio

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#### RESEARCH METHODOLOGY-VII

AR- 703B

Periods/week: 4

Sessional Marks: 100

#### INTENT

The intention is to introduce and initiate research thinking and to initiate the thesis project that will be taken up and completed in the 8<sup>th</sup> semester.

#### CONTENT

Research in Architecture, Construction Technology and allied areas.  
 Scientific methods with special emphasis on architectural research.  
 Data collection, compiling and analysis  
 Evaluation  
 Report writing  
 Presentation techniques and methodologies  
 Introduction to architectural thesis  
 Preparation of synopsis

#### NOTES

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

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#### PROFESSIONAL PRACTICE-VII

AR- 704B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

#### INTENT

The intention is to acquaint the students with issues related to office management and professional practice.



**CONTENT**

Study of office practices  
 Office administration  
 Accounting  
 Building bye laws  
 Tendering  
 Contracts and arbitration  
 Valuation  
 Professional Conduct and Ethics  
 Architects Act 1972  
 Role of COA, IIA and UIA  
 Implementing a building contract.

**NOTES**

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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**INTERIOR DESIGN**

AR- 705B

|                     |      |
|---------------------|------|
| Periods/week:       | 2    |
| Sessional Marks:    | 50   |
| Theory Exam. Marks: | 50   |
| Duration of exam:   | 2hrs |

**INTENT**

To appreciate the complexities and constraints in the design and execution of architectural interiors.

**CONTENT**

History of Interior Design  
 Theory of Interior Design  
 Study of constrains affective interior designs  
 Art in Interior Design  
 Furniture and Furnishings  
 Case studies.

**TOPICS**

Theory of interior design  
 Principles of aesthetic composition in interiors.  
 Interior design in history  
 Constrains of unction on different interiors  
 Color in interior design  
 Natural and artificial lighting in interiors  
 Built-in furniture

Furnishing and paneling materials and types of movable furniture  
 Interior design accessories and decorative elements  
 Buildings materials for interior finishes.  
 Electrical wiring and fixtures, materials and methods.

#### NOTE

This subject should be done through seminars and reports which are given as individual assignments and through case studies which may be done as group assignments. At least one design project must be attempted.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### HOUSING

AR- 706B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

This course addresses the basic issues related to housing and should help in understanding knowing the present day scenario and handling the housing projects.

#### CONTENTS

Definition and vocabulary  
 History of housing  
 Housing scenario in the context of the National and the State  
 Housing surveys  
 National housing  
 Housings sites and planning  
 Architectural design of various types of housing  
 Housing an planning codes  
 Ownership types, cooperatives  
 Factors influencing land value  
 Housing finance  
 Slums  
 Housing construction technology  
 Housing physical infrastructure  
 Housing legislation

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### REGIONAL PLANNING

No. of periods per week

AR- 707B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

Understanding of physical, social and economic parameters for regional planning. Relationship of Macro-planning and Micro-planning. Relationship fo regional planning with national level planning. Development of new towns/cities. Redevelopments and expansion of existing towns. Implementation of regional plans. Methods of making future projects. Over-lay methods of developing regional plans.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### ARCHITECTURAL CONSERVATION

AR- 708B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

To inculcate the ability to appreciate the historical architecture and familiarize the basic issues of conservation as one of the specializations of architecture.

Introduction, History of conservation, modern movement in architecture and its association with conservation movement in architecture and its association with conservation movement prominent debates associated with conservation,- SPAB and violet –Le-ducs contribution and approach towards.

Various definitions: Heritage, culture, historicity, historic/Historical building, monument, authenticity, historic site, building fabric, setting of a monument conservation, restoration, repair reconstruction maintenance, refurbishment, adaptive reuse architecture in conservation new buildings in historic settings. Abbreviation: ICC ROM, ICOMOS, SPAB, ASI, INTACH.

Values in conservation, ethics of conservation, degrees of intervention

Charters for conservation of historic properties: charters of Athens, Venice, Burra and Nara.

Conservation in India, Role of agencies like the archaeological survey of India (A.S.I.) and the India National trust for Art and cultural Heritage (INTACH) various laws and acts associated with conservation in India.

Listing a historic site (building and its setting) documentation, equipment after recording; types of recording principles and procedure for recording ICOMDS guidelines for recording historic structures.

Structural appraisal: Causes of decay and damage to structures, causes and interpretation of structural problems methods of recording structural defects.

Causes of deterioration of historic buildings.

Monitoring a historic structure, techniques of monitoring interpretation and preservation of observations.

Approach to case and maintenance of historic building, principles of repair

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### INDIAN ARCHITECTURE

AR- 709B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

#### INTENT

The 7<sup>th</sup> semester Indian Architecture course aims at trying to appreciate the vocabulary of Indian Architecture, its multidimensional facets through a rich overlay of disparate influences. These influences that have shaped India's architecture from the advent of civilization in the Indus Valley to the contemporary trends, are to be studied not so much in themselves, as they appear to have influenced the evolution of Indian Architecture over the ages, Considering the vast spread of the subject, the course will focus on the settlement types that evolved in a chronological sequence from the earliest days of architectural inception in the Indian subcontinent to the contemporary scenario. The settlement types will be studied in the backdrop of climate, political, socio-cultural and economic considerations. Further, the study shall entail a detailed analytical discussion on the settlement layout; elements of design; system of construction; usage of materials; spatial delineation and motifs of decoration.

#### CONTENTS

- i) Early India
- ii) Hinduism and evolution of the temple
- iii) Arrival of Muslims and urbanization

- iv) British Imperial Colonialism and India
- v) A new capital for India
- vi) Post Independence Architectural Scenario
- vii) A new Capital for Punjab
- viii) Going Back to roots
- ix) Indian Vernacular
- x) Role of Vaastushastra in contemporary Indian Architecture
- xi) Current trends in Indian Architecture
- xii) Architecture Without Architects

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

### BUILDING MAINTENANCE

AR- 710B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

The environment of built-up buildings expresses in physical form the complex social and economics factors which give structure and life to the people. The condition and quality of buildings reflect public pride or indifference, the level of prosperity in the area, the social values and depicts other characteristics of the community. Dilapidated and unhealthy buildings in a decaying environment depress the quality of life and contributes in some measure to anti-social behavior. These social consequences are however difficult to quantify and as a result are rarely given proper consideration.

On the economic front as per the statistical information available the total capital values of the buildings represents two thirds of the nation's capital stock, not only does it represent wealth accumulated over many years, but it is also a vital factor in the production of new wealth.

The preservation of the value and utility of the stock of buildings is therefore essential to the economic well-being of the country. Proper and effective maintenance of these buildings, thus, becomes an activity of prime importance. Effective maintenance is a combination of actions carried out to retain a building in, or restor it to, an acceptable level of its services and surrounds, to sustain the utility and safety, to increase its economic life and to protect the capital investment. To do so, one must possess the know-how and the do-how of maintenance and also understand its complete philosophy.

Further, in its back-flow, a thorough knowledge of building maintenance can substantially contribute towards adequacy of design and suitability of materials specified in the very first stage in the design office.

Seen in the context as has been explained above, this in essence is the INTENT of providing this optional course in the curriculum. The professional student of Architecture can now exercise his option in acquiring know-how and expertise in this important sphere of activity in the total spectrum of his professional studies in the degree course of architecture.

## CONTENT AND TOPICS

### 1. Introduction

Maintenance defined. Need and importance of building maintenance its economic and social significance.

### 2 Categories of Maintenance

Planned maintenance: preventive maintenance, running caretaker maintenance, PWD pattern of maintenance; A/R and S/R Maintenance cycles. Maintenance profiles.

### 3 Maintenance Generators

Climatic conditions; usages: Defects in original design/construction; changing standards and tastes.

### 4 Maintenance Standards.

Determinants of maintenance standards. Statutory standards. Buildings bye laws and Acts. Legislative controls. Buildings and Housing Acts. Directive principles act.

### 5 Organizing Maintenance

Managing maintenance. Financing and budgeting for maintenance Understanding technology and techniques involved in maintenance. Execution of maintenance work, Controlling costs.

### 6 Information systems in maintenance

Inspections: Annual periodical; special. Check – lists pro-

forma. 7 Creating Data-base for maintenance.

Maintaining building registers; inventories; Inspection reports records; user complaints. Buildings in danger.

### 8 Understanding Building Defects and Ailments.

Examining symptoms of various types and patterns of building diseases and ailments; structural, non-structural; finishing's; stains; services' ailments; leakages dampness; corrosion protection; sulphate attacks on metal.

Diagnosing and determining causes. Prescribing effective remedial action

## NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## ENERGY CONSCIOUS ARCHITECTURE

AR- 711B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

### INTENT

The intention of this course is to sensitize the students towards conserving energy in architecture and buildings.

### CONTENT

Use of energy in buildings  
 Conserving energy  
 Solar passive and solar active systems  
 Wind energy  
 Biomass energy  
 Recycling of waste  
 Intelligent building systems

### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## RURAL ARCHITECTURE

AR- 712B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

An In depth analysis of the spatial organizations of our villages and the social and economic forces which shape these organizations.

An analysis of the public spaces in a village  
 A study of village housing and places for animal habitation Use of material and construction technology.

Aesthetics of rural architecture Rural economy  
 Rural social structuring.

### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]



## SEMESTER VIII

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### THESIS

AR- 801B

Periods/week: 22  
 Sessional Marks: 400  
 Portfolio Marks: 200

The development of thesis is the students opportunity to prove that he has adequate ability to handle all phases of building design. The definition of thesis is a proposition that offers to prove. It is a subject for scholastic study through analysis. It is a development and presentation of the design of a building including its setting in a specific environment and its technical aspects. In former – times the thesis was perhaps the only evidence of a student's academic ability in the subject.

After an orientation talk by the thesis coordinator each student will submit to the HOD, Arch. his/her subject he/she proposes to work upon. The criterion for the choice of the subject will be its relevance to the actual needs of the region/country. The student will commence the work on the subject only after it has been approved by the HOD/Principal. Students are divided into groups for thesis work, each group being entrusted for guidance to a thesis guide who will be responsible for one particular group.

#### Contents of Thesis

Among other things, a thesis project will comprise of the following:

- a) A written and illustrated report which should include validity of the chosen project, methodology, prototype studios, client's and architect's briefs, conclusion design criteria along with sketches, photographs, tables and diagrams etc.
- b) A fully worked-out design proposal.

#### Submission of Thesis

Students will submit two copies of their thesis report on standard format complete in all respects to the HOD/Principal, on the date decided by him.

Other thesis material, such as drawings and models, etc. will be received and retained by the HOD/Principal, on a subsequent date to be fixed by him.

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### TOWN PLANNING

AR- 802B

Period/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

#### INTENT

To familiarize the students with basic issues of town and urban planning

## CONTENT

- i) Introduction to planning, planning – definitions, types, goals and indicators, factor influencing planning, urban area – definition, classification, characteristics, urbanization process – trends, and issues.
- ii) Historical evolution of town planning River valley civilization, Greeks, Romans, Dark ages and Medieval periods, Renaissance and baroque periods, Indus revolution, 20<sup>th</sup> country development.
- iii) Evaluation of town planning practice and process in India evolution since 1898- issues.
- iv) Urban structure and form urban structure – concepts, types, theory and models, urban form – concept, types potential and limitations.
- v) Planning process: Urban developments planning system, types of planning process – comprehensive plan, structure plan, strategy plan, advocacy planning, system approach relevance in Indian context.
- vi) Physical surveys of towns land use land use survey, density, survey, are and condition of building, other related surveys, housing, socio economic activity traffic and transportation surveys land use: concept, classification system land use patterns, zoning regulations and development controls.
- vii) Analytical Techniques in town planning urban structure quantification, Demographic and socio economic analysis, projection techniques- population socio economic, housing threshold analysis.
- viii) Planning norms and space standards, method and approach Planning norms/ standards for land use, physical and social infrastructure, commercial facilities, recreation, traffic and transportation.
- ix) Preparation of a town plan process, design considerations, Regional Planning, concepts, types of regions delineation methods, regional planning theories.
- x) Planning legislation,. Town planning acts: ULCRA, LAA UPDA, functions of town and country planning organizations development authorities, 74 m constitutional amendment act.

## NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## TRAFFIC AND TRANSPORTATION

AR- 803B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

### CONTENTS

- i) Urbanization and transport problem:, transport problem and issues.
- ii) Traffic surveys studies: Objectives methods analysis and presentation of survey data
- iii) Land use transportation interaction: Urban form transports inter relationship.
- iv) Road Network Planning: functional hierarchy.
- v) Geometric design of roads and inter sections.
- vi) Transport system characteristics planning for public transport.
- vii) Urban transport planning process and policies: characteristics, Transport planning in small and medium cities.
- viii) Transport economics: Cost benefit analysis of transport projects.
- ix) Planning norms and space
- x) Parking characteristics space requirements, design standards.
- xi) Traffic management and regulations scope, measures potential and limitations.
- xii) Traffic and environment: effects, abatement measures and strategies.

### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## CONSTRUCTION MANAGEMENT

AR- 804B

Periods/week: 2  
 Sessional Marks: 50  
 Theory Exam. Marks: 50  
 Duration of exam: 2hrs

### INTENT

To bring forth management consciousness in students in the field of building design and construction and give them a basic working knowledge of common management techniques applied to one off and repetitive building projects.

### CONTENT

Need for construction management, its aims and objectives and available management tools. Role of architect in construction management  
 Management techniques and tools for one off projects

Management techniques and tools for repetitive projects.  
Site clearance, safety precaution, noise and pollution control.

#### TOPIC

- 1
  - a) Introduction to construction management aims and objectives
  - b) Introduction to available management tools and techniques.
  - c) Role of architect in construction management both at Design and execution stages.
- 2
  - a) Management techniques and tools, Bar charts, CPM PERT, etc.
  - b) Critical path method for project management, its working knowledge with exercises.
- 3 Project management for repetitive type of buildings. Line of balance method and its working knowledge with exercise.
- 4 Resources scheduling methods through Bar – charts, CPM and line of balance methods.
- 5 Site clearance, safety precaution, noise and pollution control.

#### NOTE

The subject is to be taught with practical orientation by arranging site visits to projects under execution any giving practical exercises.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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### MULTISTORIED BUILDINGS

AR- 805B

Periods/week: 2  
Sessional Marks: 50  
Theory Exam. Marks: 50  
Duration of exam: 2hrs

#### INTENT

To realize and appreciate the needs constraints and complexities in High rise development.

#### CONTENT

Need, reasons, methods, constrains and problems arising out of high-rise development. Form of multistoried buildings and their effect on urban space. Structure and services for multistoried buildings. Psychological implications of using such spatial organizations. Construction methods and site management.

#### TOPIC

Definition of multistoried buildings  
Need to go vertical  
Siting of Multistoried buildings  
Spatial considerations in multistoried buildings  
Criterion for deciding bulk and form in multistoried buildings.

Aesthetics of the high-rise building Psycho-social aspect of the high-rise buildings

Constraints of material usage for high-rise building.

Methods used for construction and site management for high-rise buildings. Structure of the high-rise buildings.

Building services for the high-rise buildings : water supply, sewage, waste disposal, electrical, air conditioning ventilation, natural and artificial lighting, lifts and escalators.

Fire prevention and fire lighting systems for high-rise buildings.

#### NOTE

This subject should be done through seminars and reports which are given as individual assignments and through case studies which may be done as group assignments.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

### LOW COST BUILDING

No. of periods per week

AR- 806B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

#### INTENT

To acquaint the students with the need and methods of reducing costs in buildings.

#### CONTENT

Need for low cost buildings

Analysis of space norms for low cost buildings.

Study of usage pattern of low cost buildings by the habitants.

Cost analysis of low cost buildings

Comparative analysis of building materials and costing.

#### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## ART AND ARCHITECTURE

AR- 807B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

A brief history of the world highlighting the interdependence or otherwise of art and architecture.

Study of art and architecture as inseparable entities such as in rural/folk architecture of various regions of the world.

Study of art as a decorative element of architecture, in the form of sculpture, bas-reliefs, paintings etc.

Art in architecture at the levels of the dwelling the cluster, the neighborhood, the city, etc.

Art in the form of industrial design like automobiles, furniture, light-fittings, kitchenware, etc. and how it effects architecture.

How architecture can be made an all-encompassing creative discipline incorporating art from the stage of design conception. Contribution of renowned artists to the enrichment of architecture, viz. Michelangelo. Leonardo da vinci, Henri Moore Rodin, Satish Gujral, Alexander Calder, MF Hussein etc.

### NOTE

The course should be offered with special reference to the work of artists architects like Le Corbusier, Michelangelo, Satish Gujral etc.

Students should be asked to find out suitable examples from their own experience/exposure that can add to the quality of the course content.

Eminent artists may be associated to give special lectures on the manner in which they can contribute to realizing a fuller architectural concept.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt **4** Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]

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## ARCHITECTURAL JOURNALISM

AR- 808B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

### INTENT

This course is intended to help those, who have inclination for writing, develop their skills to enable them to record, report, analysis and evaluate architecture both in its theoretical and practical forms.

### CONTENT

The board contents of the courses would be as follows:

- 1) Use of language as applied to journalistic exercise.
- 2) Recording/collecting material for report writing pertaining to events/activities
- 3) Editing and summing of material for publications.

### TOPICS

The following forms of architectural journalism should be studied and developed:

- i) Paraphrasing and summarizing given reports.
- ii) Editing given material
- iii) Writing original reports on design projects/buildings/complexes, etc.
- iv) Reporting editorials for magazines and journals
- v) Reporting activities like seminars, panel discussions conference, etc.
- vi) Thesis or research report writing.
- vii) The job of subbing like condensing, connecting, titling, etc. of reports/write-ups submitted for publication.
- viii) Writing captions for pictures, programmes and events.
- ix) Organizing material for publication in newspapers magazines etc.
- x) Book reviews

### NOTE

Detailed teaching programme to be made before the commencement of the semester and circulated to the students at the commencement of the semester.

**NOTE** – Examiner will set Seven questions in total, covering the whole syllabus. Students will have to attempt 4 Questions in all . All the questions carry equal marks [ 12.5 X 4 = 50]