

MAHARISHI DAYANAND UNIVERSITY,
ROHTAK

B. ARCHITECTURE

ORDINANCE

2010

ORDINANCE FOR BACHELOR OF ARCHITECTURE

Notwithstanding anything contained in any other ordinance with regard to the matters hereunder, the course of studies for the Degree of Bachelor of Architecture and the conditions for admission thereto shall be as under :-

- 1 The B.Arch. course shall extend over a minimum period of 5 academic years. Teaching in each academic year shall be divided into two semesters extending to about sixteen weeks duration. Teaching for odd semesters will normally be during August to December and for even semesters from January to May.
- 2 A candidate can be admitted to first semester of this course only if he fulfills the following requirements:
 - (a) That s/he has passed 10+2 examination of Haryana School Education Board or its equivalent examination from a recognized Board/university with Mathematics and must have obtained at least 50% marks (without any rounding off) in the aggregate.

However, in case of Scheduled Caste/Scheduled Tribes no minimum percentage of marks is prescribed and merely pass in qualifying examination with the said subjects is adequate.
 - (b) Admission may be allowed in the beginning of the session to the candidates who are permitted to migrate to the University in accordance with the migration rules of the University for B.Arch. course.
- 3.1 At the end of each semester there shall be an examination except in case of the seventh semester during which there shall be 24 weeks of practical training for which the examination will be conducted according to the procedure laid in clause 4(e) of this Ordinance. Each semester examination shall be designated as First Semester Exam, Second Semester Exam and so on.
- 3.2 The examination for all semesters will normally be held in December/January and also in May/June on such dates as may be fixed by the Vice - Chancellor. The date(s) of commencement of examinations as well as the last date(s) for the receipt of examination forms and fees as fixed by the Vice – Chancellor shall be notified by the Controller of Examinations to the concerned University Teaching Departments and the College/Institutes admitted to the privileges of the University.

However, in case of late declaration of result by the University, forms can be submitted without late fee within 10 days of declaration of result by the University subject to the requirements of Clause B.

The course of study and the subjects of examination shall be the same as approved by the Academic Council from time to time. The examination shall consist of :-

(a) Theory papers

- (i) The paper will be set the internal/external paper setter.
- (ii) The evaluation will be done by the internal examiner.

(b) Sessionals

- (i) Sessional work of all the subjects will be evaluated by the teachers of the various subjects based on the work done during the semester and in accordance with the guidelines/procedures recommended by the Principal/In charge of Department of B. Arch. and approved by the Director of the College. The marks obtained in the sessional work shall be awarded by the teacher concerned and duly countersigned by the Principal/In charge Department of B. Arch. of the College and then duly countersigned and forwarded by the Director of the College to the Controller of Examinations of the University before the last theory exam of that semester.

- (c) Portfolio
- (i) In the subjects conducted in the Studio requiring drawing work there will be no theory examinations. The complete/part work done in these subjects during the semester will be evaluated by a jury comprising one external and one internal examiner. The work will be presented as a portfolio and will be evaluated through viva-voce. The subjects to be evaluated through portfolio examination will be according to the scheme of examination approved by the University.
- (d) Thesis
- (i) Every student shall prepare a thesis under the supervision of a guide on a topic approved by the Principal/In charge Department of B. Arch. of the college. The thesis shall be submitted in the form of Research, Report, Drawings, Models etc. through the Principal/In charge Department of B. Arch. of the college to the Director of the college.
- (ii) The evaluation of the thesis will be through sessionals and portfolio evaluation. The sessional work made up of numerous stages, will be evaluated through a viva – voce by a jury comprising the thesis coordinator, the guide and an external examiner. The portfolio evaluation will be conducted by a jury of two external members, Principal/In charge Department of B. Arch. of the college act as coordinator.
- (e) Practical Training
- (i) During the 9th and 10th semester the students are required to undergo practical training of 48 weeks. Every student is required to submit copies of representative work done and study report during this period together with a certificate from the organization to the Principal/In charge Department of B. Arch. The practical training work will be evaluated, through seminar/viva-voce by a jury consisting of one external and one internal examiner to be appointed by the University.
- The student will be required to repeat the training when:
- (i) the report from the employer is not satisfactory.
- (ii) the attendance in the office is less than 70% of the number of days required for training.

A candidate is allowed to take a theory paper, present the portfolio/thesis when:--

- (a) The candidate has his name submitted to the Registrar/Controller of Examination by the Director of the College
- (b) The candidate has passed in Sessional of the concerned subject in the semester.
- (c) The candidate has attended no less than 75% of the total classes held in that semester in the subject offered by him/her for the examination provided that his/her subject attendance in each individual subject is not less than 60%. The Director of the College/Chairperson of the concerned University Department may in bona-fide cases, condone deficiency up to 10% in the total and/or 5% in individual subjects.
- (d) The candidate is certified by the Director-Principal to have behaved in a manner befitting a student of a professional institution.
- (e) A candidate not covered under clause 6 below whose result declaration for no fault of his is delayed, should attend classes of the next higher semester provisionally at his own risk and responsibility. His attendance and/or sessionals will be, however, credited subject to his passing the concerned semester examination. Such candidates shall also be governed by clause 5.
6. If a candidate has after attending the course of studies in the college either not appeared or appeared in any semester examination and failed in one of more courses for that examination he can appear for

such course(s) at subsequent examination(s) without attending a fresh course for the next semester(s) and appear in the examination(s) for the same along with the examination for the lower semester(s).

Provided that a candidate shall not be allowed to attend classes and appear in that semester examination(s) mentioned in column(a) unless he/she has passed in the semester examination mentioned in column(B) below:--

A	B
5 th semester onwards	1st semester
6 th semester onwards	2nd semester
7 th semester onwards	3rd semester
8 th semester onwards	4 th semester

Provided that candidate who is unable to complete the first 6 semesters of the B.Arch. course within a maximum of 5 consecutive academic years and or is unable to complete the B.Arch. course in 8 consecutive years from the date of his admission shall not be eligible for appearing in any subsequent B.Arch. examination.

7 (a) The minimum marks required to pass the examination shall be: _

- (i) 40% in each theory paper
- (ii) 50% in each sessionals
- (iii) 50% in Portfolio evaluation
- (iv) 50% in thesis
- (v) 50% in practical training

(b) Any student who secures less than 50% marks in the sessional part of any subject shall not be eligible to take the theory examination in that subject. Similarly in studio course and thesis any student who secures less than 50% marks in the sessional part of the subject shall not be eligible to make the portfolio presentation. He may be permitted to appear in the next examination in those subjects only if he has secured the pass marks in those subjects/thesis sessionals.

(c) Grace marks, if any, will be given by the University only in theory papers and not in sessional, portfolio, thesis or practical training.

8 In order to determine the division in which a candidate shall be placed the scaled marks will be :

<u>Name of Examination</u>	<u>Scaled marks</u>
1st and 2 nd semester	40 % of aggregate marks
3 rd and 4 th semester	60 % of aggregate marks
5 th and 6 th semester	80 % of aggregate marks
7 th , 8 th , 9 th & 10 th semester	100% of aggregate marks

Candidates who pass prescribed subjects for all the semesters but obtain:

Less than 50%	Pass Class
50% or more but less than 60%	Second Division
60% or more but less than 70%	First Division
70% or more	First division with Honours provided they have passed all the semesters examinations within the normal period of five years of the course

Provided that in the case of a candidate who is permitted from any other University the marks obtained by him in this University will be taken into account. These marks, however, be increased proportionately so as to raise them to the level of maximum marks of University.

- 9 The medium of instructions and examination shall be in English.
- 10 The amount of examination admission fee to be paid by a candidate for each semester shall be as decided by the Vice – Chancellor from time to time. A candidate who appears in one or more papers shall pay the full examination fee.
- 11 At the end of each semester examination Controller of Examinations shall publish the result provided that in case of a candidate who was permitted to take examination for higher semester under clause 6 has not cleared the lower examination his result for the higher semester examination will be declared provisionally and would be confirmed only when he passes in all the written papers/sessionals/architectural design etc. of the examination.
- 12 Notwithstanding the integrated nature of this course, which is spread over more than one academic year, the ordinance in force at the time a student joins the course shall hold good only for the examination held during or at the end of the academic year and nothing in this ordinance shall be deemed to debar the University from amending the ordinance and the amended ordinance if any shall apply to all students together old or new.
- 13 A candidate, who has passed the final examination of this University and is desirous of improving his /her performance, will be allowed to appear as an ex-student in even/odd Semester examinations, as and when held, twice within the period permissible under clause 6. Such a candidate in the first instance shall be required to intimate all the paper(s) in which he/she would like to improve his/her performance. He/she will then appear in the respective paper(s) at the concerned semester examinations simultaneously as and when held. If he/she does not improve his/her performance, he/she shall be eligible to do so in the following examinations which would be treated as second chance.

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SCHEME OF EXAMINATION

W. E. F. SESSION 2010 – 2011

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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	
	Total	32	600	250	150	1000	

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
	Total	30	575	225	200	1000	

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	
	Total	32	575	225	150	1000	

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	
	Total	30	600	200	200	1000	

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/ Week	Sessional Marks	Portfolio Marks	Theory Exam Marks	Total Marks	Duration 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,
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BACHELOR OF ARCHITECTURE

SYLLABUS

W. E. F. SESSION 2010 – 2011

SEMESTER-1

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.

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.

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]

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]

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]

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

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.

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.

 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]

 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

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]

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]

 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]

 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.

 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]

 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.

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]

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 visual 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.

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 from the 12th to the 18th 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
 16th 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]

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

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.

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.

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]

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 works of Walter Gropius
- Study of life, philosophy and works of Frank Lloyd Wright
- Study of life, philosophy and works of Mies Van Der Rohe
- Study of life, philosophy and works of LeCorbusier
- Study of life, philosophy and works of Alvar, Alto
- Study of life, philosophy and works of Louis Khan
- Study of life, philosophy and works of Joseph Alleen Stein
- Study of life, philosophy and works of Charles Correa
- Study of life, philosophy and works of Achut. P. Kanvinde
- Study of life, philosophy and works of B.V. Doshi
- Study of life, philosophy and works 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]

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]

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

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

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]

 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.

**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]

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 18th century to the advent of European modernism.

COURSE MODULES

SECTION I: THE WESTERN WORLD

- i) Industrial Revolution and its architectural Implications
- ii) 19th 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 19th and early 20th 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]

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

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.

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.

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]

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 6th 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 20th 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]

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

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 8th 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.

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]

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]

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]

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]

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]

INDIAN ARCHITECTURE

AR- 709B

Periods/week: 2

Sessional Marks: 50

Theory Exam. Marks: 50

Duration of exam: 2hrs

INTENT

The 7th 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 restore 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]

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]

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

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 or 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.

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, 20th 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]

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]

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]

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, constraints 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]

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]

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]