# MAHARISHI DAYANAND UNIVERSITY, ROHTAK

B. ARCHITECTURE (INTERIOR DESIGN)

ORDINANCE

2010

#### ORDINANCE FOR BACHELOR OF ARCHITECTURE (INTERIOR DESIGN) (B. Arch. Interior Design) EXAMINATION

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

- 1 The B.Arch. (Interior Design) 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. (Interior Design) 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) <u>Theory papers</u>
  - (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. (Interior Design) 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. (Interior Design) 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. (Interior Design) 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. (Interior Design) 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. (Interior Design) of the college act as coordinator.

#### (e) Practical Training

(i) During the 9<sup>th</sup> and 10<sup>th</sup> 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. (Interior Design). 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 that 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:--

А	В
5 <sup>th</sup> semester onwards	1st semester
6 <sup>th</sup> semester onwards	2nd semester
7 <sup>th</sup> semester onwards	3rd semester
8 <sup>th</sup> semester onwards	4 <sup>th</sup> semester

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

#### Name of Examination

#### Scaled marks

1st and 2 <sup>nd</sup> semester	40 % of aggregate marks
3 <sup>rd</sup> and 4 <sup>th</sup> semester	60 % of aggregate marks
5 <sup>th</sup> and 6 <sup>th</sup> semester	80 % of aggregate marks
$7^{\text{th}}, 8^{\text{th}}, 9^{\text{th}} \& 10^{\text{th}} \text{ semester}$	100% of aggregate marks

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

Less than 50% 50% or more but less than 60%	Pass Class Second Division
60% or more but less than 70%	First Division
70% or more	First division with Honors 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.

# MAHARISHI DAYANAND UNIVERSITY, ROHTAK

# **BACHELOR OF ARCHITECTURE (INTERIOR DESIGN)**

# SCHEME OF EXAMINATION

W. E. F. SESSION 2010 - 2011

#### MAHARISHI DAYANAND UNIVERSITY, ROHTAK BACHELOR OF ARCHITECTURE (INTERIOR DESIGN) SCHEME OF EXAMINATION W. E. F. SESSION 2010 – 2011 SEMESTER I

		SEMI	ESTER I				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 101	Architectural Design-I	6	100	100		200	
ARID 102	Building Const & Material-I	6	100	50		150	
ARID 103	Structural Design-I	2	50		50	100	2
ARID 104	Architectural Graphics-I	6	100	50		150	
ARID 105	Graphics-I	4	100	50		150	
ARID 106	History Of Architecture-I	2	50		50	100	2
ARID 107	Architectural Design Theory-I	2	50		50	100	2
ARID 108	Workshop-I	4	50			50	
	Total	32	600	250	150	1000	
		SEME	STER II				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 201	Architectural Design-II	6	100	100		200	
ARID 202	Building Const & Material-II	6	100	50		150	
ARID 203	Structural Design-II	2	50		50	100	2
ARID 204	Architectural Graphics-II	6	100	50		150	
ARID 205	Building Services -II	2	50		50	100	2
ARID 206	Graphics -II	4	75	25		100	
ARID 207	Architectural Design Theory-II	2	50		50	100	2
ARID 208	Surveying -II	2	50		50	100	2
ARID 209	Environmental Science	3					3
	Total	30	575	225	200	1000	
		SEME	STER III				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 301	Architectural Design-III	6	100	100		200	
ARID 302	Building Const & Material-III	6	100	50		150	
ARID 303	Structural Design-III	2	50		50	100	2
ARID 304	Architectural Graphics-III	6	100	50		150	
ARID 305	Building Services-III	2	50		50	100	2
ARID 306	Graphics-III	4	75	25		100	
ARID 307	History of Architecture -III	2	50		50	100	2
ARID 308	Workshop-III	4	100			100	
	Total	32	575	225	150	1000	
		SEME	STER IV				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 401	Architectural Design-IV	6	100	100		200	
ARID 402	Building Const & Material-IV	6	100	50		150	
ARID 403	Structural Design-IV	2	50		50	100	2
ARID 404	Landscape Design-IV	6	100	50		150	
ARID 405	Building Services-IV	2	50		50	100	2
ARID 406	Architecture Design theory-IV	2	50		50	100	2
ARID 407	Communication Skills-IV	2	50		50	100	2
ARID 408	Workshop-IV	4	100				1
AKID 400	workshop-rv	4	100			100	

		SEME	STER V				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 501	Architectural Design-V	12	125	125		250	
ARID 502	Building Const & Material-V	6	100	50		150	
ARID 503	Structural Design-V	2	50		50	100	2
ARID 504	Urban Design-V	4	100			100	
ARID 505	Building Services-V	2	50		50	100	2
ARID 506	History of Architecture -V	2	50		50	100	2
ARID 507	Estimating & Costing-V	2	50		50	100	2
ARID 508	Bldg B Laws & Office mgmt-V	2	50		50	100	2
	Total	32	575	175	250	1000	
		SEME	STER VI				
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 601	Architectural Design-VI	12	125	125		250	
ARID 602	Building Const & Material-VI	6	100	50		150	
ARID 603	Structural Design-VI	2	50		50	100	2
ARID 604	Green Architecture-VI	2	100			100	
ARID 605	Building Services-VI	2	50		50	100	2
ARID 606	Graphics -VI	4	75	25		100	
ARID 607	History of Architecture-VI	2	50		50	100	2
ARID 608	Specification-VI	2	50		50	100	2
	Total	32	600	200	200	1000	
	1000		STER VII	200	200	1000	
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
Code		WEEK	WhatKS	WICHNS	Marks	101unx5	Of EXam
ARID 701	Architectural Design-VII	12	125	125		250	
ARID 702	Building Const & Material-VII	6	100	50		150	
ARID 703	Research Methodology-VII	4	100			100	
ARID 704	Professional Practice-VII	2	50		50	100	2
ARID 705	Interior Design Theory-VII	2	50		50	100	2
ARID 706	Elective-I	2	50		50	100	2
ARID 707	Elective-II	2	50		50	100	2
ARID 708	Elective III	2	50		50	100	2
	Total	32	575	175	250	1000	
	1000		TER VIII	1,0	200	1000	
Course	Course Title	Periods/	Sessional	Portfolio	Theory	Total	Duration
Code		Week	Marks	Marks	Exam	Marks	of Exam
					Marks		or Limiti
ARID 801	Thesis	22	400	200		600	
ARID 802	Elective-V	22	50		50	100	2
ARID 803	Elective-VI	2	50		50	100	2
ARID 804		2	50		50	100	2
	Elective-VII						
ARID 805	Elective-VII Elective-VIII	2	50		50	100	2
AKID 805	Elective-VIII	2	50 600	 200	50 200	100 1000	2
ARID 805		2 30	600	200	50 200	100 1000	2
	Elective-VIII Total	2 30 <b>SEME</b>	600 STER IX	200	200	1000	
Course	Elective-VIII	2 30 SEME Periods/	600 STER IX Office	200 Report	200 Viva	1000 Total	Duration
	Elective-VIII Total	2 30 <b>SEME</b>	600 STER IX	200	200 Viva Voce	1000	
Course	Elective-VIII Total Course Title	2 30 SEME Periods/	600 STER IX Office Marks	200 Report Marks	200 Viva Voce Marks	1000 Total Marks	Duration
Course Code	Elective-VIII Total	2 30 SEME Periods/ Week 35	600 STER IX Office Marks 400	200 Report	200 Viva Voce	1000 Total	Duration
Course Code ARID 901	Elective-VIII Total Course Title Practical Training	2 30 SEME Periods/ Week 35 SEME	600 STER IX Office Marks 400 STER X	200 Report Marks 200	200 Viva Voce Marks 400	1000 Total Marks 1000	Duration of Exam
Course Code ARID 901 Course	Elective-VIII Total Course Title	2 30 SEME Periods/ Week 35 SEME Periods/	600 STER IX Office Marks 400 STER X Office	200 Report Marks 200 Report	200 Viva Voce Marks 400 Viva	1000 Total Marks 1000 Total	Duration of Exam Duration
Course Code ARID 901	Elective-VIII Total Course Title Practical Training	2 30 SEME Periods/ Week 35 SEME	600 STER IX Office Marks 400 STER X	200 Report Marks 200	200VivaVoceMarks400VivaVoce	1000 Total Marks 1000	Duration of Exam
Course Code ARID 901 Course	Elective-VIII Total Course Title Practical Training	2 30 SEME Periods/ Week 35 SEME Periods/	600 STER IX Office Marks 400 STER X Office	200 Report Marks 200 Report	200 Viva Voce Marks 400 Viva	1000 Total Marks 1000 Total	Duration of Exam Duration

# SEMESTER V

	1	JOI OF 1	LECITVE	0			
	Subject	Periods/	Sessional	Portfolio	Theory	Total	Duration
	5	Week	Marks	Marks	Exam	Marks	of Exam
					Marks		
ARID 706	Interior Lighting Design	2	50		50	100	2
ARID 707	Interior Typology Studies	2	50		50	100	2
ARID 708	Furniture Design	2	50		50	100	2
ARID 709	History of Interiors	2	50		50	100	2
ARID 710	Indian Architecture	2	50		50	100	2
ARID 711	Interior Maintenance	2	50		50	100	2
ARID 712	Energy Conscious Architecture	2	50		50	100	2
ARID 713	Interior Materials	2	50		50	100	2
ARID 802	Color in Interiors	2	50		50	100	2
ARID 803	Interior Accessories	2	50		50	100	2
ARID 804	Construction Management	2	50		50	100	2
ARID 805	Multistoried Buildings	2	50		50	100	2
ARID 806	Low Cost Interiors	2	50		50	100	2
ARID 807	Art And Architecture	2	50		50	100	2
ARID 808	Architectural Journalism	2	50		50	100	2

# LIST OF ELECTIVES

# MAHARISHI DAYANAND UNIVERSITY, ROHTAK

# B. ARCHITECTURE (INTERIOR DESIGN)

SYLLABUS

w. e. f. 2010-11

# **SEMESTER-1**

#### ARCHITECTURAL DESIGN I

#### ARID 101

Periods per Week:6Sessional Marks:100Portfolio 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

#### ARID 102

Periods per Week:6Sessional Marks:100Portfolio 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

ARID 103Periods per Week:2Sessional Marks:50Theory Exam Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# ARCHITECTURAL GRAPHICS -I

ARID 104 Periods per Week:

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

ARID 105Periods per week:4Sessional Marks:100Portfolio 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

ARID 106Periods per Week:2Sessional Marks:50Theory Exam Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

#### ARCHITECTURAL DESIGN THEORY I

ARID 107Periods per Week:2Sessional Marks:50Theory Exam Marks:50Duration of exams: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  $[12.5 \times 4 = 50]$ 

# WORKSHOP -- I

ARID 108 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

#### ARID 201

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

#### ARID 202

Periods/week:6Sessional Marks:100Portfolio 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

ARID 203Periods/week:2Sessional Marks:50Theory Exam Marks:50Duration of exams: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  $[12.5 \times 4 = 50]$ 

# ARCHITECTURAL GRAPHICS -II

ARID 204	
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)

ARID 205Periods/week:2Sessional Marks:50Theory Exam Marks:50Duration 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**

ARID 206 Periods/week:

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

4

#### 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

ARID 207 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  $[12.5 \times 4 = 50]$ 

SURVEYING -II

ARID 208Periods/week:2Sessional Marks:50Theory Marks:50Duration 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 he 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  $[12.5 \times 4 = 50]$ 

# **ENVIRONMENTAL STUDIES - II**

ARID 210	
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

Unit 8:

# NOTE:

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

#### **SEMESTER III**

#### ARCHITECTURAL DESIGN-III

# **ARID 301**

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

ARID 302 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

ARID 303Periods/week:2Sessional Marks:50Theory Exam Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# ARCHITECTURAL GRAPHICS-III

ARID 304Periods/week:6Sessional Marks:100Portfolio 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)

ARID 305Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

# INTENT

Basic intent of this course is to make student familiar with concepts of climatology which they can incorporate their deign 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  $[12.5 \times 4 = 50]$ 

# GRAPHICS III

ARID 306Periods/week:4Sessional Marks:75Portfolio Marks:25

#### INTENT

The intention of this course is to further augment and enhance the architectural rendering techniques of students using viral 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

ARID 307Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

#### WORKSHOP -- III

ARID 308 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

#### ARCHITECTURAL DESIGN -IV

# ARID 401

Periods/week:6Sessional Marks:100Portfolio 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

ARID 402Periods/week:6Sessional Marks:100Portfolio 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.

#### 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

ARID 403Periods/week:2Sessional Marks:50Theory Exam Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

#### LANDSCAPE DESIGN -IV

ARID 404Periods/week:6Sessional Marks:100Portfolio 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)

# ARID 405

Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# ARCHITECTURAL DESIGN THEORY -IV

ARID 406Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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 Llyod Wright
- Study of life, philosophy and weeks of Mies Van Der Rohe
- Study of life, philosophy and weeks of Le-corbusier
- 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  $[12.5 \times 4 = 50]$ 

#### COMMUNICATION SKILLS IV

ARID 407Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# WORKSHOP-IV

ARID 408 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

# ARID 501

Periods/week:12Sessional Marks:125Portfolio 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 take 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

ARID 502Periods/week:6Sessional Marks:100Portfolio 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-V

ARID 503 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  $[12.5 \times 4 = 50]$ 

ARID 504 Periods/week: 4 Sessional Marks: 100 URBAN DESIGN -V

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 urben 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)

ARID 505Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# HISTORY OF ARCHITECTURE -V

ARID 506

Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $18^{th}$  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  $[12.5 \times 4 = 50]$ 

# ESTIMATING AND COSTING -V

ARID 506 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  $[12.5 \times 4 = 50]$ 

# BUILDING BYE LAW AND OFFICE MANAGEMENT -V

# ARID 508

Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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, Filling 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  $[12.5 \times 4 = 50]$
### SEMESTER VI

#### ARCHITECTURAL DESIGN - VI

# ARID 601

Periods/week:12Sessional Marks:125Portfolio 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

#### ARID 602

Periods/week:6Sessional Marks:100Portfolio 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

ARID 603 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  $[12.5 \times 4 = 50]$ 

**GREEN ARCHITECTURE -VI** 

ARID 604 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)

ARID 605 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  $[12.5 \times 4 = 50]$ 

		GRAPHICS -VI
ARID 606		
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 Pastels 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

#### ARID 607

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

# INTENT

The  $6^{th}$  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  $20^{th}$  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  $[12.5 \times 4 = 50]$ 

# SPECIFICATION -VI

ARID 608Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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 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.

### ARCHITECTURAL DESIGN -VII

# ARID 701

Periods/week:	12
Sessional Marks:	200
Portfolio Marks:	200

# INTENT

The intention of this particular course is to make students apply their knowledge and develop design skills for complex interior design situations that require the expertise inputs from an interior designer

# CONTENT

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

Time problem of 6-12 hours

Design of a services oriented interior (call center, mnc office 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 interior services

#### ARID 702

# **BUILDING CONSTRUCTION -VII**

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

#### INTENT

To make the students learn about detailed interior construction technology and its application, advance interior materials and specialized interior construction details.

# CONTENT

Modern materials used in interiors. Specifications of materials used in interiors Furniture layout and detail False ceiling layout and detail Flooring layout and detail Partition details and design Paneling design and details Staircase design and details Shop front design and details Electrical layout Interior accessories planters signage, display boards etc Specifications of interior materials Paints, types, characteristics, mode of application.

# 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**

ARID 703 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.

### PROFESSIONAL PRACTICE-VII

#### ARID 704

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

# INTERIOR DESIGN

#### ARID 705

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.

#### INTERIOR LIGHTING DESIGN

ARID 706 Periods/week: 2 Sessional Marks: 50 Theory Exam. Marks: 50 Duration of exam: 2hrs INTENT This course addresses the basic issues related to CONTENTS

### 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  $[12.5 \times 4 = 50]$ 

# INTERIOR TYPOLOGY STUDIES

ARID 707Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

#### INTENT

This course addresses the basic issues related to

#### CONTENTS

NOTE

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

# FURNITURE DESIGN

ARID 708Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

# INTENT

#### **CONTENTS**

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  $[12.5 \times 4 = 50]$ 

# HISTORY OF INTERIORS

ARID 709Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

#### INTENT

### CONTENTS

NOTE

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

#### INDIAN ARCHITECTURE

ARID 710Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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.

### INTERIOR MAINTENANCE

ARID 711Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

### INTENT

To appreciate issues related to maintenance of interiors.

CONTENT AND TOPICS Maintenance of different materials Maintenance of interior services Maintenance of different interior finishes

# NOTE

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

# ENERGY CONSCIOUS ARCHITECTURE

#### **ARID** 712

Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

# INTERIOR MATERIALS

AR- 713Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

#### INTENT

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

#### CONTENT

#### NOTE

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

## THESIS

AR- 801	
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/interior 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 an interior design including its setting in a specific environment and its technical aspects.

After on 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.

COLOR IN INTERIORS

ARID 802Period/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

# INTENT

To familiarize the students with basic issues of use and application of colors in interiors with all the different parameters that apply to different situations and conditions.

CONTENT Paints and their applications Color and light Color and pattern Color schemes Case studies Exercises

# 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  $[12.5 \times 4 = 50]$ 

ARID 803 Periods/week: 2 Sessional Marks: 50 Theory Exam. Marks: 50 Duration of exam: 2hrs

# INTENT

To familiarize the students with basic issues of use and application of colors in interiors with all the different parameters that apply to different situations and conditions.

#### CONTENTS

#### 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  $[12.5 \times 4 = 50]$ 

#### CONSTRUCTION MANAGEMENT

ARID 804Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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.

#### INTERIOR ACCESSORIES

# 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

- a) Introduction to construction management aims and objectives
  b) Introduction to available management tools and techniques.
  c) Role or architect in construction management both art Design and execution stages.
- 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  $[12.5 \times 4 = 50]$ 

# MULTISTORIED BUILDINGS

ARID 805Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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  $[12.5 \times 4 = 50]$ 

LOW COST INTERIORS

# ARID 806

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

#### INTENT

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

# CONTENT

Need for low cost interiors Analysis of space norms for low cost buildings. Reducing costs by effective usage of services Cost analysis of low cost interiors 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.

#### ART AND ARCHITECTURE

ARID 807Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration of exam:2hrs

# INTENT

To inculcate a sensitivity towards the relationship of art and architecture

# CONTENTS

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 neighbourhood, 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.

# ARCHITECTURAL JOURNALISM

ARID 808Periods/week:2Sessional Marks:50Theory Exam. Marks:50Duration 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.