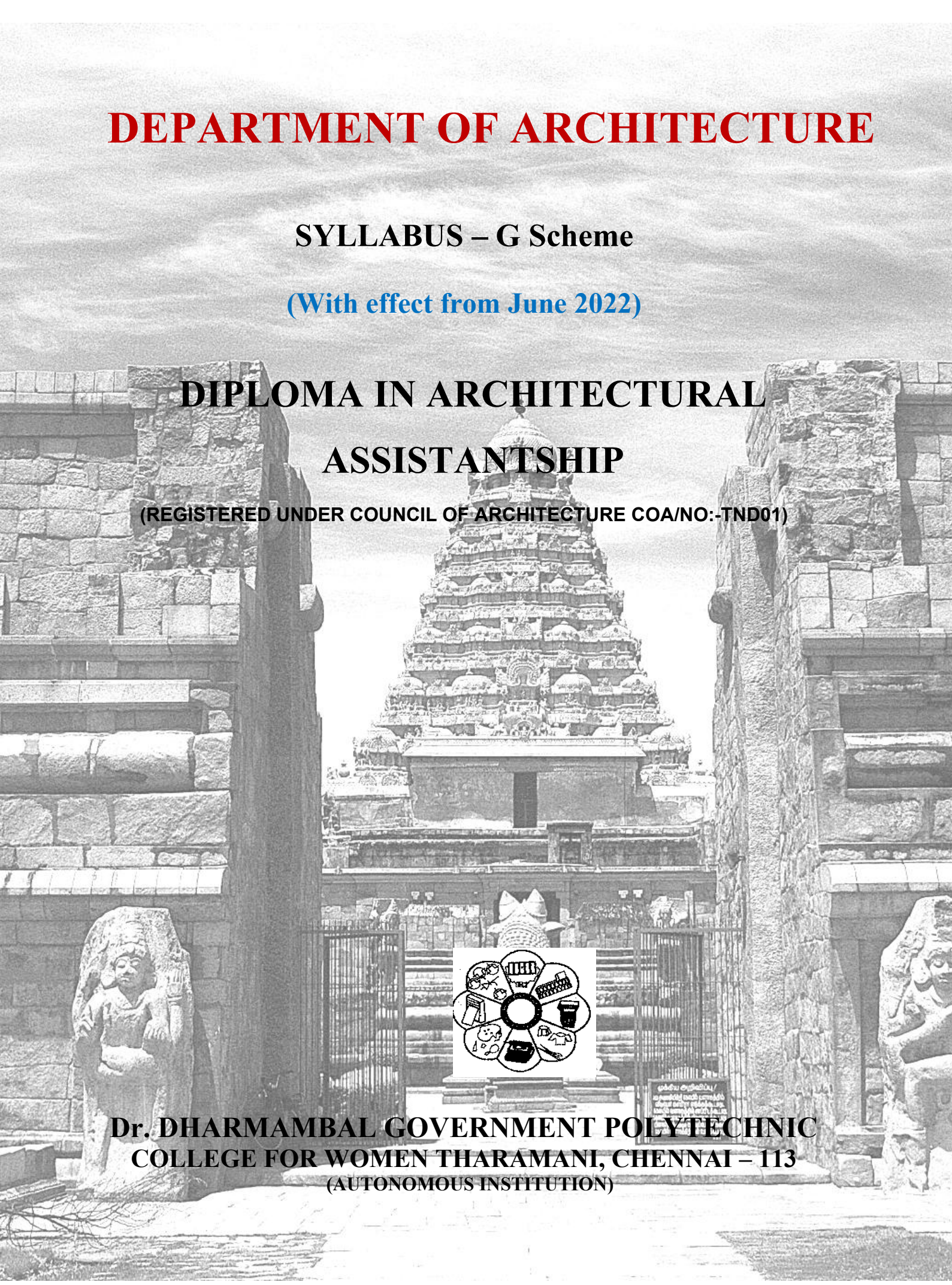
DEPARTMENT OF ARCHITECTURE

SYLLABUS – G Scheme

(With effect from June 2022)

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

(REGISTERED UNDER COUNCIL OF ARCHITECTURE COA/NO:-TND01)



Dr. DHARMAMBAL GOVERNMENT POLYTECHNIC
COLLEGE FOR WOMEN THARAMANI, CHENNAI – 113
(AUTONOMOUS INSTITUTION)

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

FACULTY OF ARCHITECTURE	
M.A.Karthick / CONVENER & HOD i/c Architectural Assistantship Department Dr. Dharmambal Govt. Polytechnic College for women, Tharamani, Chennai – 600 113	**Thiru M. Mullaivalavan / LECTURER** Architectural Assistantship Department Dr. Dharmambal Govt. Polytechnic College for women, Tharamani, Chennai – 600 113
Gayathri Pinakapani / LECTURER & CCM Architectural Assistantship Department Dr. Dharmambal Govt. Polytechnic College for women, Tharamani, Chennai – 600 113	**Tmt. N. Raghavi / LECTURER** Architectural Assistantship Department Dr. Dharmambal Govt. Polytechnic College for women, Tharamani, Chennai – 600 113

LIST OF EXPERT COMMITTEE EXTERNAL MEMBERS	
DWTFM held on 07-Jan-2022	**APEX BODY MEETING held on 30-Mar-2022**
Mrs. R Rajeswari., Assistant Professor, Department of Architecture, School of Architecture & Planning Campus, Anna university, Chennai – 600 025	**Dr. M. Elango.,**Assistant Professor, Department of Architecture, School of Architecture & Planning Campus, Anna university, Chennai – 600 025
Ar Shanthini M., Associate Professor, School of Environment Architecture & Design, SRM Institute of Science and Tech, Ramapuram, Chennai – 600 089	
Ar A Karunakara Pandiyan., Zionarch Architects No.1,1st floor, 2nd Main Rd Parasakthi Nagar, Camp Road, Selaiyur, East Tambaram, Chennai-73	**Ar. Swetha Madhusudanan.,** Professor & Dean, Dr. M.G.R Educational & Research, Institute University, Chennai
Ar Loganathan T., Logan's Architecture, 18, Anna Ave, Kasturba Nagar, Adyar, Chennai-20	
Dr G Beulah Gnana Ananthi ., Associate Professor, Department of Civil Engineering, Anna University, Chennai – 600 025	**Ar. Jegananthan JB.,** Habib complex, Rams Apts Swathi, No. 6, 6th floor, towers, Adyar, Bridge Raja Annamalai Puram, Chennai
Ar T M Raj Surya Aluminai ARK Shelter, No:30, 2nd Floor, 2nd Block, Maan Saarovar Raja Apartment, Arcot Road, Porur, Chennai – 600 116	

Dr. DHARMAMBAL GOVERNMENT POLYTECHNIC COLLEGE FOR WOMEN THARAMANI, CHENNAI-113. (AUTONOMOUS)

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP PROGRAMME – 3 ½ YEARS

(Registered under Council of Architecture – TND01)

(Implemented from 2022 – 2023) G – SCHEME

R U L E S & R E G U L A T I O N S

(For the batches of students admitted during 2022-2023 and subsequently)

INTRODUCTION:

Dr. Dharmambal Government Polytechnic College for Women, Chennai-113, was established in 1962. Along with other diploma courses diploma in architectural assistantship programme was established in the year 1667. The programme offers training in architectural assistantship to women of creative ability and natural sense of design. As designers grew the need for training students in the line was keenly felt, not only for the excellent employment opportunities but also as a measure of diversification. The objective is to train students to become able to assist in architecture/ interiors / landscape firms, government department connected with architecture and town planning and other private and public sectors dealing with architecture. Semester system is followed during the entire course of study.

During the academic year 2021 – 2022 onwards, the diploma in Architectural Assistantship programme is registered under council of architecture. (The COA Registration number: - TND01). Important Judgement of Apex Court on Role of Council (CoA) In Architectural Education are as follows.

The Hon'ble Supreme Court of India in Civil Appeal No.364 of 2005, vide order dated 08.11.2019, upheld the decision of the Hon'ble Bombay High Court in "Prince Shivaji case" that Council of Architecture is the final authority for Architectural Institutions in the country and held that "AICTE would not have any regulatory control over the concerned institution so far as architecture education is concerned"

Hon'ble Supreme Court held that so far as recognition of degrees and diplomas of architecture education is concerned, the 1972 Act shall prevail. AICTE will not be entitled to impose any regulatory measure in connection with the degrees and diplomas in the subject of architecture. Norms and Regulations set by CoA and other specified authorities under the 1972 Act would have to be followed by an institution imparting education for degrees and diplomas in architecture.

1. Description of the Course:

1.1 Sandwich (3½ years)

The Course for the Sandwich Diploma in Architecture shall extend over a period of three and half academic years, consisting of 7 semesters*. The Architecture department subjects are starting from First Year onwards.

During 7th semester the students need to undergo Industrial training for six months.

Industrial training examination will be conducted after completion of 7th semester.

*** Each Semester will have 16 weeks duration of study with 35 hrs.**

The Curriculum for 3½ years sandwich Diploma Programme in Architectural Assistantship have been revised and revised curriculum is applicable for the candidates admitted from 2022 – 2023 academic year onwards.

2 Condition for Admission:

Condition for admission to the Diploma courses shall be required to have passed in the S.S.L.C Examination of the Board of Secondary Education, Tamil Nadu.

(Or)

The Anglo Indian High School Examination with eligibility for Higher Secondary Course in Tamil Nadu.

(Or)

The Matriculation Examination of Tamil Nadu.

(Or)

Any other Examinations recognized as equivalent to the above by the Board of Secondary Education,Tamil Nadu.

Note: In addition, at the time of admission the candidate will have to satisfy certain minimum requirements, which may be prescribed from time to time.

3 Admission to Second year (Lateral Entry):

A pass in HSC (academic) or (vocational) courses mentioned in the Higher Secondary Schools in Tamil Nadu affiliated to the Tamil Nadu Higher Secondary Board with eligibility for University Courses of study or equivalent examination & Should have studied the following subjects.

A pass in 2 Years ITI with appropriate Trade or Equivalent examination.

Sl. No	Courses	H. Sc Academic	H. Sc Vocational		Industrial Training Institutes Courses
			Subjects Studied		
		Subjects Studied	Related Subjects	Vocational Subjects	
1.	All the Regular and Sandwich Diploma Courses	Physics and Chemistry as compulsory along with Mathematics / Biology	Maths / Physics / Chemistry	Related Vocational Subjects Theory & Practical	2 years course to be passed with appropriate Trade
2.	Sandwich Diploma Courses	On par with council of architecture norms			

- For the Diploma Courses related with Engineering / Architecture/ Technology, the related / equivalent subjects prescribed along with Practicals may also be taken for arriving the eligibility.
- Branch will be allotted according to merit through counseling by the respective Principal asper communal reservation.
- For admission to the Commercial Practice Diploma course, the candidates studied the related subjects will be given first preference.
- *Candidates who have studied Commerce Subjects are not eligible for Engineering Diploma Courses.*
- Cosmetology Diploma Course minimum requirement for eligibility to admit is Higher Secondary pass whereas S.S.L.C is not eligible.

4 Age Limit : No Age limit.

5 Medium of Instruction : English

6 BRANCHES OF STUDY :

S.no	BRANCHES	TYPE OF DIPLOMA PROGRAMME
1	Architectural Assistantship	Sandwich

7 Eligibility for the Award of Diploma:

No candidate shall be eligible for the award of Diploma unless he/she has undergone the prescribed course of study for a period of not less than 3 ½ academic years in any institution affiliated to the State Board of Technical Education and Training, Tamil Nadu, when joined in First Year and two years if joined under Lateral Entry scheme in the second year and passed the prescribed examination.

The minimum and maximum period for completion of Diploma Courses are as given below:

Diploma Course	Minimum Period	Maximum Period
Sandwich	3½ Years	6½ Years

This will come into effect from G Scheme onwards i.e. from the academic Year 2022-2023.

8 Subjects of Study and Curriculum outline:

The subjects of study shall be in accordance with the syllabus prescribed from time to time, both in theory and practical subjects.

The curriculum outline is attached in the respective pages.

9 Examinations:

Autonomous Examinations in all subjects of all the semesters under the scheme of examinations will be conducted at the end of each semester.

The internal assessment marks for all the subjects will be awarded on the basis of continuous internal assessment earned during the semester concerned. For each subject 25 marks are allotted for internal assessment. Autonomous Examinations are conducted for 75 marks.

The total marks for result are 75 + 25 = 100 Marks

10 Continuous Internal Assessment:

a. For Theory Subjects:

The Internal Assessment marks for a total of 25 marks, which are to be distributed as follows:

i) Subject Attendance 5 Marks

(Award of marks for subject attendance to each subject Theory/Practical will be as per the range given below)

80%	**-**	**83%**	**1 Mark**
84%	**-**	**87%**	**2 Marks**
88%	**-**	**91%**	**3 Marks**
92%	**-**	**95%**	**4 Marks**
96%	**-**	**100%**	**5 Marks**

ii) Test # 10 Marks

Two Tests: Test – I and Test – II each of 2 hours duration for a total of 50 marks are to be conducted.

Average of these two test marks will be taken and the

marks to be reduced to 5 Marks

Test – III is the Model Examination covering all the five

units and the marks obtained will be reduced to 5 Marks

TEST	UNITS	WHEN TO CONDUCT	MARKS	DURATION
Test I	Unit – I & II	End of 6th week	50	2 Hrs
Test II	Unit – III & IV	End of 12th week	50	2 Hrs
Test III	Model Examination: Covering all the 5 Units. (Autonomous Examination question paper - pattern).	End of 16th week	75	3 Hrs

 # From the Academic Year 2022 – 2023 onwards.

Question Paper Pattern for the Test - I and Test – II is as follows. The tests should be conducted by proper schedule. Retest marks should not be considered for internal assessment.

TEST MARK ALLOCATION

Without Choice:

Part A Type questions:	**3 Questions × 5 mark**	**15 Marks**
Part B Type questions:	**5 Questions × 7 marks**	**35 Marks**
	Total	**50 Marks**

iii) Assignment **10 Marks**

Assignments are in the form of sketches/ drawings/ collage works/ material collection/ model works/ chart works/ power point presentations/ Seminar / literature study/ site visits / Library hours / architectural competitions/ photography / any other creative works can also be considered for the assessments. The number of assignments may vary according to the subjects and the methodology.

All Test Papers, Assignment Papers / Notebooks and the seminar presentation written material after getting the signature with date from the students must be kept in safe custody in the department for verification and audit. It should be preserved for one semester after publication of Autonomous Exam results and produced to the flying squad and the inspection team at the time of inspection/verification.

B. <u>For Practical Subjects:</u>

The Internal Assessment mark for a total of 25 marks are to be distributed as follows:- (except Design studio & Thesis Subjects)

Attendance : 5 Marks (Award of marks same as theory subjects)

Semester works can be in the form of sheets / drawings/ models / records/ albums/ record note / sketch books/ filed works/ case study/ videos / photos/ literature study /in any other ***creative forms with reference to the subject concern*** : 20 marks

For Design studio & Thesis subjects 50 marks to be awarded for the internal and 100 marks to be awarded for the external

<u>Internal :- 50 Marks</u>

Attendance : 5 Marks (Award of marks same as theory subjects)

Design studio subjects shall include jury / panel of Architects from educational institutions / practice shall also be part of the intermediate reviews along with internal faculty and evaluate the design periodically. Design problems shall include the stage-by-stage process such as area calculations, literature study, Standards, case study/ net study, concepts, site analysis, bubble diagrams, analysis, schemes, plan, section, elevations, details, views and models as in the sequence of internal / external reviews.

Internal reviews – 25 marks

External Review 1 – 10 marks

External Review 2 – 10 marks

External :- 100 Marks

External examination shall include single space / multi-space design to analysis the students' creative ideas, drafting, details and presentation techniques to a period of 5 hours. The external examiner shall award marks in the following manner.

10 marks - concept / Single line drawing / bubble diagram

30 marks - detailed plan

10 marks - elevation / section

10 marks - sketches / furniture / detailing

15 marks – presentation skill / drafting skill

_____

Total 100 Practical

The sheets should be preserved for the next one year after publication of Autonomous Exam results and produced to the flying squad and the inspection team at the time of inspection/verification.

11. Communication Skill Practical, Computer Application Practical and Physical Education:

The Communication Skill Practical and Computer Application are included in the architecture curriculum Practical with more emphasis are being introduced in First Year. Much stress is given to increase the Communication skill and ICT skill of students.

As per the recommendation of MHRD and under Fit India Scheme, the Physical Education is introduced to encourage students to remain healthy and fit by including physical activities and sports.

12. Attendance:

Minimum attendance of 80% is prescribed for each courses of study (includes lecture hours, tutorial hours, assignment and test hours). Students falling to get 80% attendance will not be allowed to appear for the examination under any circumstances. However, a candidate who has secured attendance between 70% to 79% in the current semester due to medical reasons(hospitalization / accident / specific illness) or due to participation in College / District / State / National / International level sports events with prior permission from the

Principal shall be given exemption from the prescribed attendance requirements and he / she shall be permitted to appear for the current semester examinations, if her progress has been satisfactory and her conduct has been satisfactory.

Candidates who do not qualify to appear for final examinations of any semester from second to sixth for want of attendance and / or progress must get readmitted at the immediate available opportunity and redo that semester courses. Candidates who do not qualify to appear for the final examinations of first semester have to discontinue the programme.

13 Entrepreneurship and Startup:

In V Semester Entrepreneurship and Startup subject is mandatory and common subject for all the departments. The total marks for this subject is 75 marks.

TEST MARK ALLOCATION

Theory 35 Marks

Part A Type questions: 10 Questions × 2 marks 20 Marks

Part B Type questions: 3 Questions × 5 marks 15 Marks

(Either or Pattern)

Practical 30 Marks

Submission on Business Plan / Feasibility Report or Report on Unit IV & V 30 Marks

Viva Voce 10 Marks

Total 75 Marks

Internal Assessment Mark

Assignment (Unit I & II)	**- 10**
Seminar (Unit III)	**- 10**
Attendance	**- 05**
Total	**- 25**

14. INDUSTRIAL TRAINING (*Sandwich 3 ½ year - architectural assistantship*):

Industrial training for sandwich students (Architectural Assistantship) will be evaluated based on the conditions for the award of credit as given below:

a) The student should put in a minimum of 90% attendance per month. If the students fail to put in 90% attendance due to illness or any other reason, the students should produce a certificate for the period of short fall in terms of month after completing the course.

b) An evaluation form received from the architect at the end of each month with a rating of excellent to satisfactory is to be considered for the award of marks.

14.2 THESIS: -

The student shall do the thesis design project to fulfill the partial award of diploma by the state board of technical education and training, tamil nadu. The thesis design project shall conduct as independent work at diploma level during the sixth semesters. Thesis shall include jury / panel of Architects from educational institutions / practice shall also be part of the intermediate reviews along with internal faculty and evaluate the design periodically. Thesis concludes with a final review, where the project is evaluated both on its own terms and within the broader field of contemporary architectural discourse.

15 Scheme of Examination:

The Scheme of Examination for subjects are attached.

16 Criteria for Pass:

1. No candidate shall be eligible for the award of Diploma unless he/she has undergone the prescribed course of study successfully in an institution approved by AICTE / COA and affiliated to the State Board of Technical Education & Training, Tamil Nadu and pass all the subjects prescribed in the curriculum.

2. *2.1* A candidate shall be declared to have passed the examination in a subject if he / she secures not less than *40% in theory subjects* and *50% in practical subjects* out of the total prescribed maximum marks including both the Internal Assessment and the Autonomous Examinations marks put together, subject to the condition that he / she secures at least a minimum of 30 *marks out of 75 marks in the Autonomous End Theory / Drawing examinations and a minimum of 35 marks out of 75marks in the Autonomous End Practical Examinations.*

2.2 Design studio subjects & Thesis - A candidate shall be declared to have passed the examination in design studio subjects if he / she secures not less than *50% in practical subjects* out of the total prescribed maximum marks including both the Internal Assessment and the Autonomous Examinations marks put together, subject to the condition that he / she secures at least a minimum of 50 *marks out of 100 marks in the Autonomous End Practical Examinations.*

17. Classification of successful candidates:

Classification of candidates who will pass out the final examinations from April 2025 onwards (Joined first year in 2022 -2023) will be done as specified below.

First Class with Superlative Distinction:

A candidate will be declared to have passed in First Class with Superlative Distinction if he / she secures not less than 75% of the marks in all the subjects and passes all the semesters in the first appearance itself and passes all subjects within the stipulated period of study 2 / 3 / 3½ years [Full time / Full Time (Lateral Entry) / Sandwich] without any break in study.

First Class with Distinction:

A candidate will be declared to have passed in First Class with Distinction if he / she secures not less than 75% of the aggregate marks in all the semesters put together and passes all the semesters including the I and II semester in the first appearance itself and passes all subjects within the stipulated period of study 2 / 3 / 3½ years [Full time / Full Time (Lateral Entry) / Sandwich] without any break in study.

First Class:

A candidate will be declared to have passed in First Class if he / she secures not less than 60% of the aggregate marks in all the semesters put together and passes all the subjects within the stipulated period of study 2 / 3/ 3½ years [Full time / Full Time (Lateral Entry) / Sandwich] without any break in study.

Second Class:

All other successful candidates will be declared to have passed in Second Class who are all pass out in Autonomous End Examination from April 2025 / October 2025 onwards which is applicable for all regular and sandwich students.

18. Duration of a period in the Class Time Table:

The duration of each period of instruction is 1 hour and the total period of instruction hours excluding interval and lunch break in a day should be uniformly maintained as 7 hours corresponding to 7 periods of instruction (Theory & Practical).

19. Bridge Course for Lateral Entry Students:

A candidate shall be admitted through lateral entry admissions, should study the basic subjects of Architecture from First year as *bridge courses.* The following subjects AAG172 – Basic Design & AAG272 – Computer Application in Architecture - I in Semester III, AAG271 – Architecture Drawing – I & AAG273 – Building Construction & Detailing – I in Semester IV, and AAG103 - Theory of Architecture in Semester V, *shall offer in respective semesters and the same to be included for the calculation of marks.*

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CURRICULUM OUTLINE

SEMESTER	**I**	**ON CAMPUS STUDY****
SEMESTER	**II**	**ON CAMPUS STUDY**
SEMESTER	**III**	**ON CAMPUS STUDY**
SEMESTER	**IV**	**ON CAMPUS STUDY**
SEMESTER	**V**	**ON CAMPUS STUDY**
SEMESTER	**VI**	**ON CAMPUS STUDY**
SEMESTER	**VII**	**PROFESSIONAL TRAINING – OFF CAMPUS STUDY**

**** AS PER THE COUNCIL OF ARCHITECTURE GUIDELINES ARCHITECTURE PAPERS ARE INCLUDED FROM SEMESTER – I ONWARDS**

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SEMESTER - I

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	*BEG101	COMMUNICATIVE ENGLISH - I	6	-	-	THEORY
2	AAG101	APPLIED MATHEMATICS	6	-	-	THEORY
3	AAG102	APPLIED SCIENCE	6	-	-	THEORY
4	AAG103	THEORY OF ARCHITECTURE	3	-	-	THEORY
5	AAG171	ART STUDIO	-	5	-	PRACTICAL
6	AAG172	BASIC DESIGN	-	-	6	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
			21	5	6	
		TOTAL	**32 + 03 = 35 HOURS**			

SEMESTER – II

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	*BEG201	COMMUNICATIVE ENGLISH - II	5	-	-	THEORY
2	AAG201	BUILDING MATERIALS	3	-	-	THEORY
3	AAG202	HISTORY OF ARCHITECTURE - I	3	-	-	THEORY
4	AAG271	ARCHITECTURE DRAWING - I	1	4	-	PRACTICAL
5	AAG272	COMPUTER APPLICATION IN ARCHITECTURE - I	1	4	-	PRACTICAL
6	AAG273	BUILDING CONSTRUCTION & DETAILING - I	1	4	-	PRACTICAL
7	AAG274	ARCHITECTURE DESIGN STUDIO I	-	-	6	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
			14	12	6	
		TOTAL	**32+ 03 = 35 HOURS**			

* Subjects common with BEC

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SEMESTER - III

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	AAG301	CLIMATE & BUILT ENVIRONMENT	3	-	-	THEORY
2	AAG302	INTERIOR ARCHITECTURE	3	-	-	THEORY
3	AAG303	HISTORY OF ARCHITECTURE - II	3	-	-	THEORY
4	AAG371	ARCHITECTURE DRAWING - II	2	3	-	PRACTICAL
5	AAG372	COMPUTER APPLICATION IN ARCHITECTUER – II	2	3	-	PRACTICAL
6	AAG373	BUILDING CONSTRUCTION & DETAILING - II	2	3	-	PRACTICAL
7	AAG374	ARCHITECTURAL DESIGN STUDIO - II	-	-	8	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
		TOTAL	15	9	8	
			32+ 3 = 35 HOURS			

SEMESTER - IV

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	AAG401	APPLIED MECHANICS & STRENGTH OF MATERIALS	4	-	-	THEORY
2	AAG402	BUILDING SERVICES – I	3	-	-	THEORY
3	AAG403	HISTORY OF ARCHITECTURE - III	3	-	-	THEORY
4	AAG404	LANDSCAPE ARCHITECTURE	3	-	-	THEORY
5	AAG471	COMPUTER APPLICATION IN ARCHITECTURE - III	2	3	-	PRACTICAL
6	AAG472	BUILDING CONSTRUCTION & DETAILING – III	2	3	-	PRACTICAL
7	AAG473	INTERIOR DESIGN STUDIO	-	-	9	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
		TOTAL	17	6	9	
			32 + 3 = 35 HOURS			

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SEMESTER – V

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	AAG501	SITE PLANNING	4	-	-	THEORY
2	AAG502	BUILDING SERVICES - II	3	-	-	THEORY
3	AAG503	ENVIRONMENTAL SCIENCE	3	-	-	THEORY
4	AAG801-804	ELECTIVE - I	3	-	-	THEORY
5	AAG571	COMPUTER APPLICATION IN ARCHITECTURE - IV	2	3	-	PRACTICAL
6	AAG572	BUILDING CONSTRUCTION & DETAILING - IV	2	3	-	PRACTICAL
7	AAG573	LANDSCAPE DESIGN STUDIO	-	-	9	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
		TOTAL	17	6	9	
			32 + 3 = 35 HOURS			

SEMESTER - VI

SL NO	Subject Code	Subject Name	T	P	S	Remarks
1	AAG601	ESTIMATION & COSTING	5	-	-	THEORY
2	AAG602	OFFICE PRACTICE & PROJECT MANAGEMENT	3	-	-	THEORY
3	**BEG178	COMMUNICATION SKILL PRACTICAL	-	2	-	PRACTICAL
4	AAG871-873	ELECTIVE - II	-	3	-	PRACTICAL
5	AAG671	ENTREPRENEURSHIP AND STARTUPS	1	3		PRACTICAL
6	AAG672	THESIS		-	15	PRACTICAL
As per Dote Instruction Physical Education - 02 hours & 01 hrs Library						
		TOTAL	9	8	15	
			32 + 3 = 35 HOURS			

****Subjects common with BEC**

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SEMESTER VII

SL NO	Subject Code	Subject Name	Duration	Remarks
1	AAG771	PROFESSIONAL TRAINING	**(MAY – OCTOBER) 6 MONTHS**	PRACTICAL

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LIST OF ELECTIVES

Sl No	Subject code	Subject Name	T	P	S	Remarks
1	AAG801	SUSTAINABLE ARCHITECTURE	3	-	-	THEORY
2	AAG802	EPIGRAPHY	3	-	-	THEORY
3	AAG803	ARCHITECTURE CONSERVATION	3	-	-	THEORY
4	AAG804	THEORY OF DESIGN	3	-	-	THEORY
5	AAG871	PORTFOLIO DESIGN	-	3	-	PRACTICAL
6	AAG872	MATERIAL CONSERVATION	-	3	-	PRACTICAL
7	AAG873	PHOTOGRAPHY	-	3	-	PRACTICAL

T – THEORY
P – PRACTICAL
S – STUDIO

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SCHEME OF EXAMINATION - SEMESTER - I

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	*BEG101	COMMUNICATIVE ENGLISH - I	6	3	25	75	100	40
2	AAG101	APPLIED MATHEMATICS	6	3	25	75	100	40
3	AAG102	APPLIED SCIENCE	6	3	25	75	100	40
4	AAG103	THEORY OF ARCHITECTURE	3	3	25	75	100	50
5	AAG171	ART STUDIO	5	3	25	75	100	50
6	AAG172	BASIC DESIGN	6	3	25	75	100	50

SCHEME OF EXAMINATION - SEMESTER – II

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	*BEG 201	COMMUNICATIVE ENGLISH - II	5	3	25	75	100	40
2	AAG 201	BUILDING MATERIALS	3	3	25	75	100	40
3	AAG 202	HISTORY OF ARCHITECTURE - I	3	3	25	75	100	40
4	AAG 271	ARCHITECTURE DRAWING - I	5	3	25	75	100	50
5	AAG 272	COMPUTER APPLICATION IN ARCHITECTURE - I	5	3	25	75	100	50
6	AAG 273	BUILDING CONSTRUCTION & DETAILING - I	5	3	25	75	100	50
7	AAG 274	ARCHITECTURE DESIGN STUDIO I	6	5	50	100	150	75

* Subjects common with BEC

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SCHEME OF EXAMINATION - SEMESTER – III

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	AAG301	CLIMATE & BUILT ENVIRONMENT	3	3	25	75	100	40
2	AAG302	INTERIOR ARCHITECTURE	3	3	25	75	100	40
3	AAG303	HISTORY OF ARCHITECTURE - II	3	3	25	75	100	40
4	AAG371	ARCHITECTURE DRAWING - II	5	3	25	75	100	50
5	AAG372	COMPUTER APPLICATION IN ARCHITECTUER - II	5	3	25	75	100	50
6	AAG373	BUILDING CONSTRUCTION & DETAILING - II	5	3	25	75	100	50
7	AAG374	ARCHITECTURAL DESIGN STUDIO - II	8	5	50	100	150	75

SCHEME OF EXAMINATION - SEMESTER – IV

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	AAG401	APPLIED MECHANICS & STRENGTH OF MATERIALS	4	3	25	75	100	40
2	AAG402	BUILDING SERVICES - I	3	3	25	75	100	40
3	AAG403	HISTORY OF ARCHITECTURE - III	3	3	25	75	100	40
4	AAG404	LANDSCAPE ARCHITECTURE	3	3	25	75	100	40
5	AAG471	COMPUTER APPLICATION IN ARCHITECTURE - III	5	3	25	75	100	50
6	AAG472	BUILDING CONSTRUCTION & DETAILING - III	5	3	25	75	100	50
7	AAG473	INTERIOR DESIGN STUDIO	9	5	50	100	150	75

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

SCHEME OF EXAMINATION - SEMESTER – V

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	AAG501	SITE PLANNING	4	3	25	75	100	40
2	AAG502	BUILDING SERVICES - II	3	3	25	75	100	40
3	AAG503	ENVIRONMENTAL SCIENCE	3	3	25	75	100	40
4	AAG801-804	ELECTIVE - I	3	3	25	75	100	40/50
5	AAG571	COMPUTER APPLICATION IN ARCHITECTURE - IV	5	3	25	75	100	50
6	AAG572	BUILDING CONSTRUCTION & DETAILING - IV	5	3	25	75	100	50
7	AAG573	LANDSCAPE DESIGN STUDIO	9	5	50	100	150	75

SCHEME OF EXAMINATION - SEMESTER – VI

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	AAG601	ESTIMATION & COSTING	5	3	25	75	100	40
2	AAG602	OFFICE PRACTICE & PROJECT MANAGEMENT	3	3	25	75	100	40
3	**BEG178	COMMUNICATION SKILL PRACTICALS	2	3	25	75	100	40
4	AAG871-873	ELECTIVE - II	3	3	25	75	100	40/50
5	AAG671	ENTREPRENEURSHIP AND STARTUPS	4	3	25	75	100	50
6	AAG672	THESIS	15	3	50	100	150	75

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

SCHEME OF EXAMINATION SEMESTER VII

SL NO	Subject Code	Subject Name	Hrs /wk	Examination				
				Exam duration	Int marks	Exam marks	Max marks	Min marks for pass
1	AAG771	PROFESSIONAL TRAINING	-	3	25	75	100	50

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

I – SEMESTER

COMMUNICATIVE ENGLISH - I

Code No: BEG101

06 hours / week…. 16 weeks **96 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	**03 Hours**
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Enhance their communication skills in English by developing their listening, speaking, reading and writing skills. Develop their speaking skills with specific reference to prospective/actual clients, suppliers, business partners and colleagues. Enhance their reading particularly, rules and regulations, catalogues, architecture journals and textbooks. Develop their writing skills especially writing emails, proposals and reports.

UNIT I FUNCTIONAL GRAMMAR AND USAGE 20 Hrs

1. Parts of Speech.
2. Functional Units (Sentence Pattern)
3. Use of Main Auxiliary Verb
4. Application of Tense Form (Simple Present, Present Continuous, Present Perfect, Simple Past, Past Continuous, Past Perfect, Simple Future, Future Continuous only)
5. Framing Yes/No Questions
6. Framing Wh-Questions
7. Application of Active and Passive Voice
8. Use of Prepositions
9. Use of Articles

UNIT II VOCABULARY ENRICHMENT 20 Hrs

1. Word Conversation (selective 25 words)
2. Collocation – Noun with Verb, Adjective with Noun (Selective 25 Collocations)
3. Homophones (Selective 25 homophones)
4. One – Word Substitutions (Textual)
5. Idiomatic expressions for Daily Life (frequently used 25 expressions)
6. Frequently Used Phrasal Verb (Selective 25 Phrasal Verbs)

UNIT III SITUATIONAL ENGLISH 20 Hrs

1. Dialogue for Day to Day Situations
2. Short Messages for e- communication
3. Letter Writing for Academic Purpose (Leave Application, Requisition For Bonafide Certificate, Applying for TC)
4. Writing Essential
5. Comprehension

UNIT IV CREATIVE ENGLISH 20 Hrs

1. Review Writing (Book / Movie / TV Program)
2. Visual Description
3. Advertisement Writing Word Cloud
4. Transforming Verbal Passage into Graphics (pie chart/bar chart/line chart etc.)

UNIT V ENGLISH FOR SCHOLARLY PRESENTATION/ FLUENCY 16 Hrs

1. "A Snake in the Grass" by R K Narayan
2. "Dream Children" by Charles Lamb
3. "My Grandmother's House" by Kamala Das
4. "When I Have Fears" by John Keats.

REFERENCE:

Glossaries

https://www.engineering-dictionary.com/

https://techterms.com/definition/

http://dictionary.tamilcube.com/

https://www.lexilogos.com/english/tamil_dictionary.htm

Grammar

1. Just Enough English Grammar Illustrated, Gabriele Stobbe, McGraw-Hill Osborne Media, 2008
2. Visual Guide to Grammar and Punctuation, DK Publishing, 2017
3. English Grammar in Use, Raymond Murphy, Cambridge University Press, 2019
4. Intermediate English Grammar, Raymond Murphy, Cambridge University Press, Second Edition.
5. Essential English Grammar, Raymond Murphy, Cambridge University Press, New Edition.

Motivation

1. An Autobiography; Or, The Story of My Experiments with Truth, Mahatma Gandhi, Penguin Books, 2001
2. You Can Win, Shiv Khera, New Dawn Press, 2004
3. Chicken Soup for the Soul, Jack Canfield, Mark Victor Hansen, 2001

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

APPLIED MATHEMATICS

Code No: AAG101

06 hours / week…. 16 weeks **96 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	**03 Hours**
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Identifying practical problems to obtain solutions involving trigonometric and exponential functions. Studying the properties of lines and planes in space, along with sphere and providing a tool too. Understand 3D material. Understand functions of more than one variable, along with differentiation under integral sign. Solving differential equation of certain type. Analyzing data collection and interpretation of results using statistical tools.

UNIT I TRIGONOMETRY AND MENSURATION 16 hrs

Trigonometric (sine, cosine and tan functions) and exponential functions. De- Moiver's theorem. Area of plane figures. Computation of volume of solid figures.

UNIT II LIMITS AND DERIVATIVES 20 hrs

Definition of limits and derivatives, problems on limits and derivatives. Application of derivatives: rate of change, increasing & decreasing functions, tangents & normal, approximation, maxima and minima of a function.

UNIT III INTEGRALS 20 hrs

Definition of integration, basic properties of definite integrals and evaluvation of definite integrals. Application in finding the area under simple curves.

UNIT IV DIFFERENTIAL EQUATIONS 20 hrs

Definition, order and degree, definition of ordinary differential equations and partial differential equations, general and particular solution of a differential equation.

UNIT V VECTORS & THREE-DIMENSIONAL GEOMETRY 20 hrs

Vectors and scalars, magnitude and direction of a vector. Direction cosines & ratios of vectors. Types of vectors, components of a vector, addition and multiplication of vector by scalar, position of a point dividing a line segment in given ratio.

REFERENCES:

1. Bali N., Goyal M. and Watkins C., "Advanced Engineering Mathematics", Firewall Media (An imprint of Lakshmi Publications Pvt., Ltd.,), New Delhi, 7th Edition, 2009.
2. Ramana B.V., "Higher Engineering Mathematics", Tata McGraw Hill Co. Ltd., New Delhi, 11th Reprint, 2010.
3. Greenberg M.D., "Advanced Engineering Mathematics", Pearson Education, New Delhi, 2nd Edition, 5th Reprint, 2009.
4. Gupta S.C and Kapoor V.K., "Fundamentals of Mathematical Statistics", Sultan Chand & Sons, New Delhi, 9th Edition,1996.
5. Mathematics part I – Textbook for Class XII, NCERT Publication.
6. Mathematics part II –Textbook for Class XII, NCERT Publication.
7. Mathematics Exemplar Problem for Class XII, Published by NCERT.
8. Mathematics Lab Manual Class XII, Published by NCERT.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

APPLIED SCIENCE

Code No: AAG102

06 hours / week…. 16 weeks **96 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	**03 Hours**
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Various phenomena, principles and laws of Basic Science are used for industrial, engineering, architectural and technological applications. The overall growth of architectural engineering depends upon the development of physics and chemistry and their detail understanding.

Suggested Implementation Strategies: The syllabus can be completed by through regular classes, special classes using audio visual aids, tutorial classes and providing with writing materials. Laboratory classes also help students to understand the subject. Occasional industry and field visit may be useful.

PART – A (PHYSICS – 60 hrs)

UNIT I BASIC MECHANICS 10 hrs

Definition of Unit, fundamental and derived quantities and their units, different system of Units (CGS, MKS, FPS and SI), Illustrations.

Displacement, Speed, Velocity, Acceleration and their Units, Scalar and Vector Quantities. Recapitulation of Equation of motions (Deduction not necessary), simple problems.

Newton's Laws of motion: First law, explanation, definition of force, Concept of Inertia, types of inertia (inertia of rest and inertia of motion), Second law, explanation, measurement of force using Newton's second law, Momentum, impulse, Third law, explanation and its examples.

Circular motion, time period and angular velocity, relation between angular velocity and linear velocity

Work, power and energy, its concept, units , Potential and Kinetic energy, its mathematical relations, Principle of conservation of energy, its proof in case of a free falling body under gravity.

UNIT II GRAVITATION 10 hrs

Newton's law of gravitation, gravity, acceleration due to gravity, relation between 'G' and 'g', Numerical problems - Difference between mass and weight .

UNIT III PROPERTIES OF SOLID 10 hrs

Deforming force and restoring force. Elastic and plastic body- Stress and strain. Hooke's law - Young's modulus, Bulk modulus, Rigidity modulus and Poisson's ratio (definition and formula) and relation between them (no derivation).

UNIT IV PROPERTIES OF LIQUID 10 hrs

Thrust and Pressure, Density and Specific gravity, Laws of liquid pressure, Pascal's law. Upthrust on a solid immersed in a liquid, Principle of Archimedes and Law of floatation, Buoyancy.

UNIT V PROPERTIES OF GAS 10 hrs

Atmospheric pressure, its unit, Torricelli's experiment, Barometer, N.T.P.
Boyle's law - Concept of pump and Siphon.

UNIT VI LIGHT 10 hrs

Recapitulation of Reflection of light, reflection from spherical mirror, idea of real and virtual image, mirror formula, (mirror formula to be assumed), sign convention, nature, position and size of images for different positions of object.

Refraction of light, Refractive index, critical angle, total internal reflection, relation between critical angle and refractive index, Optical Fibre: application of principle of T. I. R., core, cladding and acceptance angle.

Refraction through prism, minimum deviation. Relation between R.I. and angle of minimum deviation.

Lens, refraction through lens, lens formula (to be assumed), sign convention, nature, position and size of images for different positions of object, power of a lens. (Numericals on above topics)

PART – B (CHEMISTRY - 36)

UNIT I UNITS AND MEASUREMENT **06 hrs**

Basic unit and Derived unit - Scientific notation - Accuracy and Precision

UNIT II BASIC CHEMISTRY **08 hrs**

Classification of elements - Mole concept - Reactions in solution - Molarity, Molality, Normality, Mole fraction - Idea of Oxidation and Reduction - Idea of Electrolysis.

UNIT III PROPERTIES OF MATTER **08 hrs**

Properties of gas, Boyle's Law. Properties of Liquid. Properties of Solid.

UNIT IV WATER **06 hrs**

Water Hardness, Types & impact on concrete design. PH value & its Impact

UNIT V BASIC ORGANIC CHEMISTRY **08 hrs**

Classification. IUPAC Nomenclature. Preparation& Properties of Methane, Ethene & Acetylene.

REFERENCES

a. Modern Approach to Chemistry (Volume I and Volume II) by Choudhury, Sharma and Bhuyan - Kalyani Publishers.
b. Engineering Chemistry by Jain & Jain - Dhanpatrai Publication, Delhi
c. Applied Physics I by Manpreet Singh, Dr Major Singh, Mrs. Hitashi Gupta - S.K. Kataria & Sons Publisher
d. Basic Applied Physics I by R.K. Gaur - Dhanpatrai Publication, Delhi

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

****Note: End Semester Examination should be of 50 marks for Part – A and 25 marks for Part – B**

THEORY OF ARCHITECTURE

Code No: AAG103

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	**03 Hours**
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To help the students grasp the fundamentals of architecture through various elements of architecture and ideologies of architects. To help the students learn about the basic elements of design such as the point, line, planes, volumes and masses, colour, texture etc. To establish the Role and Importance of Theory of Design as a broad, comprehensive activity to help students appreciate the difference between a responsible opinion and a well-reasoned judgment by looking at the design in depth and in a critical way.

UNIT – I INTRODUCTION AND ELEMENTS OF ARCHITECTURE 07 hrs

DEFINITION of Architecture, Architectural design - An analysis, Integration of aesthetic and function. ELEMENTS of Architecture backed by need and followed by fulfillment of need, primary elements of architecture – point, line, plane and volume

UNIT – II ARCHITECTURAL FORMS & SPACE 10 hrs

Form & space - Unity of opposites, Shapes, visual and emotional effects of geometric forms - The sphere, the cube, the pyramid, the cylinder and cone and their derivatives, Subtractive & additive forms – linear, radial, centralized, clustered, grid

Form defining space – horizontal elements, vertical elements - Space defining elements, openings in space-defining elements

UNIT – III COMPONENTS OF DESIGN AND PRINCIPLES OF COMPOSITION 10 hrs

COMPONENTS: Proportion, scale - Ordering principles - balance, rhythm, symmetry, datum, hierarchy, pattern and axis with building examples.
PRINCIPLES OF COMPOSITION: Unity, harmony and specific qualities of design to include dominance, punctuating effect, dramatic, and contrast with building examples.

UNIT – IV ORGANIZATION OF FORMS & SPACES 10 hrs

a) Spatial Relationships: i) Space within space, ii) Interlocking spaces,
iii)Adjacent spaces, iv) Space linked by a common space.

b) Spatial Organization: influencing factors and their types i) Centralized,
ii)Linear, iii) Radial, iv) Clustered, v) Grid

UNIT – V ARTICULATION AND CIRCULATION 11 hrs

ARTICULATION of Form: Types: i) Edges and corners, ii) Surfaces articulation Works of contemporary architects and their ideologies and philosophies using the forms and space – Louis Sullivan, Philip Johnson

CIRCULATION - Function of building circulation components of building circulation - The building approach, the building entrance, configuration of the path, path space relationship, form of circulation space with examples

REFERENCE

1. V.S.Pramar, Design Fundamentals in Architecture, Samaiya Publications Private Ltd., New Delhi, 1973.

2. Paul Alan Johnson - The Theory of Architecture - Concepts and themes, Van Nostrand Reinhold Co., New York, 1994.

3. Francis D.K.Ching, Architecture-Form, Space and Order, Van Nostrand Reinhold Company, New York, 1979.

4. Helm Marie Evans and Caria David Dunneshil, An initiation to design, Macmillan Publishing Co. Inc., New York

5. Paul Alan Johnson - The Theory of Architecture - Concepts and Themes - Van Vostrand Reinhold Co - 1994.

6. V.S. Pramar, Design Fundamental in Architecture - Somaiya Publications Pvt. Ltd. New Delhi, 1973.

7. Ernest Burden - Elements of Architectural Design - A visual resource, Van Nostrand Reinhold, 1994.

8. Sir Bannister Fletcher - A History of Architecture, Butterworths, London, 1987.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

ART STUDIO

Code No. AAG171

05 Hours / week …… 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

The Carpentry course is designed to provide students with marketable skills to perform a variety of specialized tasks within the broad field of the building trades. Identify and select the right type of wood for various applications. Acquire required in the knowledge and practical skills in wood cutting, joining and other allied operations. Acquire required in the trade knowledge and practical skills in engineering measurements.

Acquire experience in preventive and corrective maintenance of various cutting tools, machine tools and equipment. Finish various jobs within specified time and resource limits, with proper measurements and evaluate them by appropriate methods and tools.

OBJECTIVES

Visual Art is aimed at providing knowledge and understanding of various visual arts and its importance. It further aims at developing the freehand drawing and rendering skills in different medium and using it as tool of expressing ideas visually.

I – WOOD & CANE **20hrs**

WOOD & JOINERY - Working with wood & wood products to understand material parameters - Wood Joinery Details

CARPENTARY FINISHES - Application of veneer / laminates on different timber surfaces - Wood polishing, painting and other finishes

ORNAMENTAL DETAILING - Engraving & carving

CANE - Types of cane & its properties – joinery & its finishes - Colour & surface quality

II – PENCIL SKETCHING **25hrs**

Freehand Sketching Exercise to understand the Characteristic of Elements in Nature and Manmade forms - Sketching from memory- Exercise with Straight line, Curvilinear line, Planes, Volume and Texture to understand various forms in Nature and Manmade forms

Basic Knowledge of Scale, Proportion, Light and Shade - Enlarging and Reducing of drawing - Sketching of various Compositions with Natural and Geometrical Form - Rendering and sketching exercises with Pencil

III – COLOR RENDEING **25hrs**

Theory of color - Color and light - Classification of Color - Primary, Secondary & Tertiary color - Prang or Brewster Color wheel - Munsell Color Coding System - Color- Hue, Chrome and Values, Shades , Tones and Tints,- Color Schemes - Application of Color in Design

Color rendering with objects – coloring of various compositions with natural and geometric form – objects – imaginary drawings

IV – OUT DOOR PRACTICE **10hrs**

This session can be taken outside the campus – historic sites and modern sites where the range of sketching will be more

REFERENCE

1. Art of drawing (Trees, Head, Hands etc. Grumbacher Library book series)
2. Tokyo Musashino Academy of art – Introduction to Pencil drawing, Graphic Sha Publishing co., Ltd., Japan, 1991
3. Robbert S. Oliver, The Complete Skatch, VNR, New Delhi, 1989.
4. Alwyn Cranshaw, Learn to paint with Water colours, Acrylic Colours, Boats and Harbours, Sketch, Still life, landscapes, William Collins Sons and Co.Ltd.,London,1981.
5. Tokyo Musashino Academy of Art - Introduction to Pencil Drawing, Graphic - Shaw Publishing

Session marks

Internal : 25 marks

05 marks - Wood & Cane

05 marks - Pencil sketching

05 marks - Colour Rendering

05 marks - outdoor sketching

05 marks - Attendance

External : 75 marks

20 marks - Semester sheets in the form of record

15 marks - Wood & Cane

20 marks - Live Pencil sketching

20 marks - Live colour rendering

Total 100 practical

List of equipments available:

Vertical sketching Boards with Stand 20 nos
Drawing table 50 nos
Digital Tablet 10 nos

BASIC DESIGN

Code No: AAG172

6 hours / week…. 16 weeks **96 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

Objectives

Developing skills in manual presentation techniques, use of various media of presentation, Principles of 2-D & 3-D compositions, Principles of Design. The study of this subject is aimed to understand the Visual & aesthetic qualities of Art and relating these to Architectural Design situation. This subject forms the direct input to Design. Basic Design is the foundation of all Professional courses which deals directly or indirectly with Aesthetic.

GENERAL GUIDE LINES:

1. Course in Basic Design shall be conducted by giving small time assignments of the duration of 10 to 15 days each (total 8 to 10 Nos. in a semester)
2. Each assignment shall be aimed at teaching the principles of Aesthetics and Visual Design and its application in Architecture forms and spaces.
3. Goals and Objectives of each assignment shall be made clear to the students before starting the assignments.
4. There shall be transparency in process of evaluation and students shall be made aware about the visual merits and demerits of their work/submissions.
5. Each assignment shall have meaningful sequence with the previous assignments and the next assignment.

BASIC DESIGN ASSIGNMENTS MAY INCLUDE THE FOLLOWING TOPICS

PRINCIPLES OF VISUAL COMPOSITIONS

The assignment shall be aimed at understanding and using principles like Repetition, Rhythm, Radiation, Focal point, Symmetry, asymmetry, Background, Foreground, Sense of Direction, Harmony, Balance and Proportion.

ELEMENTS OF VISUAL COMPOSITION

Assignment shall be aimed at understanding role of the following basic elements of visual design existing in paintings, compositions, murals, sculptures, building and in a nature – Dots, Lines, Planes, Patterns, Shapes, Forms, Spaces, Colour, Texture, Levels, Light, Fenestration's.

STUDY OF TEXTURES AND TEXTURES SCHEMES

This assignment shall include explorations of various textures in the medium of materials collect from the building industry and natural materials used in Architectural Spaces.

STUDY OF OPENINGS FOR LIGHT, SHADOW, SHADES

This assignment shall be related to openings in the building, windows, roof, lighting and its impact on visual character of the space.

This assignment shall be aimed at creating abstract sculptures out of Mount Board, Box Board, Metal Foils and any other planer material and also exploring the adoptability of these sculptures to Architectural functions.

STUDY OF PAPER FORMS

This assignment shall include explorations of various folded paper forms and its possible use in Architectural Spaces.

STUDY OF SOLIDS AND VOIDS

This assignment shall include creation of abstract and semi abstract symbolic sculptural forms and spaces.

STUDY OF LINEAR FORMS

Students should be asked to create: Wire Sculptures, Mobile Sculptures, Atrium Sculptures, Space sculptures, Geodesic Domes etc. for outdoor and indoor Architectural spaces.

STUDY OF FLUID / PLASTIC FORMS

This assignment shall include use of clay, plaster or any other mouldable material and create plastic and free flowing Sculptural forms.

APPLICATION OF BASIC DESIGN IN ARCHITECTURE

This assignment shall be aimed at learning to adopt compositions, murals and sculptures for semi recreational and semi functional Architectural spaces Exhibition Spaces, Outdoor Dining Area, Entrance Gates of Exhibition, Floor patterns, Atrium or Courtyard with levels, Outdoor Recreational Spaces, Atrium Sculpture, Building Facades, Graphics on the Dead Walls, Murals in the Entrance Halls etc.

REFERENCE

1. Francis D.K.Ching - Architecture - Form Space and Order Van Nostrand Reinhold Co., (Canada), 1979.

2. John W.Mills - The Technique of Sculpture,B.T.Batsford Limited, New York - Reinhold Publishing Corporation, London,1966.

3. lda Fezei, Henny Moore, Hamlyn, London, New York, Sydney, Toronto, 1972.

4. C.Lawrence Bunchy - Acrylic for Sculpture and Design, 450,West 33rd Street,New York,N.Y.10001,1972.

5. Orbid Publishing Ltd., Know how the complete course in Dit and Home Improvements NO.22,Bed Fordbury,London,W.C.2,1981.

6. Maitland Graves, The Art of Colour and Design, McGraw Hill Book co., 1951 (2nd edition).

7. V.S. Paramar Design Fundamentals in Architecture, Somalya Publications (P) Ltd., New Delhi, 1973.

8. Robbert S. Oliver, The Complete Sketch, VNR, New Delhi, 1989.

9. Tokyo Musashino Academy of Art – Introduction to Pencil Drawing, Graphic Sha Publishing co., Ltd, Japan, 1991.

Session marks

Internal : 25 marks	10 marks -	Assignment - I
	10 marks -	Assignment - II
	05 marks -	Attendance
External : 75 marks	10 marks -	Semester model works
	10 marks -	Semester Paper works
	20 marks -	paper work
	35 marks -	model work

Total 100 practical

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

II – SEMESTER

BEG 201 COMMUNICATIVE ENGLISH- II

Code No: BEG201

05 hours / week…. 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	**03 Hours**
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Enhance their communication skills in English by developing their listening, speaking, reading and writing skills. Develop their speaking skills with specific reference to prospective/actual clients, suppliers, business partners and colleagues. Enhance their reading particularly, rules and regulations, catalogues, architecture journals and textbooks. Develop their writing skills especially writing emails, proposals and reports.

UNIT I Functional Grammar and Usage: (16 Hrs)

1. Application of Model Verbs
2. Negative Formation (No, Never, Nothing, Hardly, Seldom, No longer, None, Nowhere, Neither … nor)
3. Use of Subordinating Conjunctions
4. Use of Conditionals
5. Reported Speech (Dialogue to Indirect Speech)
6. Punctuation
7. Question Tag

UNIT II English for Enrichment: (16 Hrs)

1. The Language Game: Unscramble
2. Phrases (Noun Phrase, Verb Phrase, Prepositional Phrase, etc.,)
3. Cause and Effect
4. Writing Suitable Responses to the Given Questions
5. Giving Instructions
6. Words from American and British English

UNIT III Situational English (16 Hrs)

1. Email for Official Communication.
2. Social Media Language
3. Reacting to Situations
4. Correction of Sentences
5. Proverbs for Everyday Situations

UNIT IV Creative English (16 Hrs)

1. The Language Game : Word Puzzle Grid
2. Notice Writing for the Given Situations
3. Slogan Writing
4. Technical Words
5. Info Graphics Comprehension.

UNIT V English for Scholarly Presentation / Fluency (16 Hrs)

1. “The Lost Child” by Mulk Raj Anand
2. “My Vision for India” by Abdul Kalam
3. “The Lotus” by Toru Dutt
4. “The Flower” by Tennyson.

REFERENCES

Glossaries

https://www.engineering-dictionary.com/

https://techterms.com/definition/

http://dictionary.tamilcube.com/

https://www.lexilogos.com/english/tamil_dictionary.htm

Grammar

- Just Enough English Grammar Illustrated, Gabriele Stobbe, McGraw-Hill Osborne Media, 2008
- Visual Guide to Grammar and Punctuation, DK Publishing, 2017
- English Grammar in Use, Raymond Murphy, Cambridge University Press, 2019
- Intermediate English Grammar, Raymond Murphy, Cambridge University PressSecond Edition.
- Essential English Grammar, Raymond Murphy, Cambridge University Press, New• edition.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

BUILDING MATERIALS

Code No: AAG201

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding about different types of building materials. The subjects should also focus on basic manufacturing process, their physical & chemical composition of the material. It also helps to understand their properties, types and uses. Emphasis should be on developing understanding about making choice of appropriate building materials in a given situation.

UNIT I - STONE AND CLAY PRODUCTS **09 hrs**

STONE: Formation & Classification – Characteristics of good stone – General study about granite, lime stone, sand stone, marble, and kottah - their Characteristics and Uses.

CLAY PRODUCTS

BRICKS: General idea of Brick Manufacturing - Characteristics of Good Bricks – Classification of Bricks and their Uses – Different Sizes and Shapes of Bricks and their Uses.

TILES: General idea of Tile Manufacturing – Various Types of Tiles and their Uses.

UNIT II – LIME, CEMENT, MORTAR, CONCRETE: P.C.C & R.C.C. **10 hrs**

LIME: Source of Lime, Classification of Lime - Uses, Hydraulicity of Lime, Types of Hydraulic Lime and Uses.

CEMENT: Outline of Cement Manufacturing - Process and Stages - Types of Cement and Uses – Normal setting, Quick setting, Rapid hardening, Low heat cement, White and Colored Cements.

MORTAR: Various Types of Mortar with Lime, Cement, Composite and Mud, their Proportions and Uses.

CONCRETE: Proportion of Cement concrete - Ratio of Cement and Lime with other ingredients to form Concrete for various purposes - Composite Concrete - Water Cement ratio and strength of Concrete

REINFORCED CEMENT CONCRETE – Mixing, Laying and Curing

UNIT III – TIMBER & BAMBOO **10 hrs**

Classification & structure of trees, Defects in timber, Storage of timber, Uses of timber, Conversion & seasoning of timber, Defects and diseases, Decay of timber and treatment of timber. Market forms of timber, Industrial timber.

Bamboo anatomy, Properties, strength, processing, harvesting, and working of Bamboo tools. Treatments and preservation of Bamboo and uses of Bamboo. Straw as a building material-physical aspects - Basics, Fire, moisture, insects and pests proof.

UNIT IV - PROTECTIVE AND DECORATIVE FINISHES **09 hrs**

Painting: Paints-Base, Vehicle, Colour, Solvent, Drier and Fillers. Preparation of various Paints and their Uses - Ready mix Paints - Cement, White wash, Colour wash, Oil Bound Distempers, Enamel and Plastic Emulsion Paints- Defects in Painting.

Putty (solingum), Plaster Putty, Varnish, Lacquer, Epoxy Resin.

Finishes for Granite, Marble, Mosaic, Wooden and Vitreous Tile.

UNIT V - MISCELLANEOUS MATERIALS **10 hrs**

THERMAL AND ACOUSTIC MATERIALS – Thermocole, Cork, Glass Wool, Fiber boards and Patented Insulating Materials

PLASTICS – Classification and Uses, Plastic and its uses in Interior and Building Construction - PVC and Fiber Reinforced Plastics (FRP)

GLASS – Types of Glass and Uses

METALS: MS (Powdered Coated and Painted), Stainless Steel, Aluminum (Anodized and Powdered Coated) – Types and Uses

SESSIONAL

This may include the collection of different architectural sample building materials and making report of them.

REFERENCE BOOKS

1. A Text book of Civil Engineering Materials - Aggarwal & Arora
2. Building Materials - S.C. Rangwala
3. Materials of Construction - R.C. Smith
4. Building Materials - N.K.R. Moorthy
5. Materials of Construction - B.N. Das
6. Text book of Engineering Materials - S.L. Chawla

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

HISTORY OF ARCHITECTURE – I

Code No: AAG202

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Study of evolution of various styles of Art & Architecture as a response to climate, culture and socio-political conditions by taking examples from river valley civilizations. The emphasis will be on the development of the understanding of fundamental design principles (visual art principles) and resulting architectural expression appropriate to place and people.

NOTE: The teaching of Historical Architecture can have its emphasis upon Chronology, Building materials and Technology, Architectural styles and Architectural details. It is not essential to address the associated elements (the influences) and the context of particular styles. The various styles can be explained with selected examples, which can be expounded through schematic drawings of only Plans, concepts, Structural Principles and Architectural Styles

UNIT – I EGYPTIAN & WEST ASIA 11 hrs

EGYPTIAN **-** Factors influencing Architecture - Outline of Architectural Character Mass to Trabeate construction and general characteristics of Egyptian Architecture - Great Pyramid of Cheops, Gizeh, Great temple of Ammon, Karnak.

WEST ASIA **-** Babylonian and Persian cultures - Factors influencing architecture - Outline of architectural character - Ziggurat, Urnammu, - Palace at Persepolics.

UNIT – II GREECE & ROME 12 hrs

GREECE - Outline of architectural character - Orders in architecture - Doric, lonic, Corinthian: Parthenon, Athens: Theatre Epidaurous

ROME - Outline of architectural Character - Character Forum Romanum, Rome - Advances in Engineering – example - Pantheon, Rome

UNIT – III EARLY CHRISTIAN AND BYZANTINE 07 hrs

Evolution of church forms - Pendentives & Dome in Byzantine Architecture - Outline of Architectural character - Examples - St.Sophia, Constantinople, St. Vitale, Ravenna

UNIT – IV ROMANESQUE & GOTHIC 10 hrs

ROMANESQUE - Outline of architectural character in Italy, France and England – Examples: Abbay Aux Hommes

GOTHIC - Evolution of vaulting and development of structural systems - outline of Architectural character – Examples: Notre Dame, Paris

UNIT – V RENAISSANCE 08 hrs

The idea of rebirth and revival of art - Renaissance, High Renaissance and Baroque Periods - Features of a typical Renaissance Palace - Dome construction – Examples: St. Paul's, London. - Christopher Wren - St. Peter's Dome - ROME

REFERENCE

1. Sir Banister Fletcher, A History of Architecture, University of London, The Antholone Press,1986.
2. Pier Liugi Nervi, General Editor - History of World Architecture- Series, Harry N.Abrams, Inc.Pub.,New York,1972.
3. S.Lloyd and H.W.Muller, History of World Architecture-Series,Faber and Faber Ltd.,London,1986.
4. Spiro Kostof - A History of Architecture - Setting and Rituals, Oxford University Press,London,1985.
5. Gosta, E.Sandsform, Man the Builder, Mc.Graw Hill Book Company, New York, 1970.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

ARCHITECTURE DRAWING - I

Code No: AAG271

05 hours / week…. 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To understand drawing as a medium to visualize and communicate design ideas. To understand the concepts of Architectural Drawing with the introduction of drafting fundamentals. To understand the language of Architectural representations through Architectural Drawing systems. To introduce the basics of measured drawing.

UNIT I GEOMETRICAL DRAWING: INTRODUCTION TO DRAFTING 15 hrs

Introduction to fundamentals of drawing/ drafting: Construction of lines, line value, line types, lettering, dimensioning, representation, format for presentation, use of scales etc. Construction of lines and angles, construction of triangles, circles, tangents, curves and conic sections.

UNIT II PLANE GEOMETRY AND SOLID GEOMETRY 30 hrs

Construction and development of planar surface – square, rectangle, polygon etc. Introduction of multi- view projection – projection of points, lines and planes. Multi- view projection of solids – cube, prism, pyramids, cones, cylinders etc. Sections of solids, true shape of solids.

UNIT III ARCHITECTURAL DRAWING SYSTEMS 15 hrs

Communicating Architectural Design Ideas from Concept to Construction - Case studies of Architect's Sketches translated as Drawing systems – Types of Projection systems and Pictorial systems – Types of Pictorial systems such as Multi view, Para line and Perspective drawings.

UNIT IV MULTIVIEW AND PARALINE DRAWINGS 20 hrs

Principles of Orthographic views – Reading multi view drawings - Representing materials in Architectural Design and Construction drawings – Drafting of Building Components in Plans – Elevations – Sections through Case studies of Architects' drawings – Construction of Para line drawings – Isometric and Axonometric.

REQUIRED READINGS 1. Morris IH., “Geometrical Drawing for Art Students”, Orient Longman, Madras, 2004. 2. Francis D. K. Ching, “Architectural Graphics”, John Wiley and Sons, 2009. 3. Fraser Reekie, Reekie’s, “Architectural Drawing”, Edward Arnold, 1995

REFERENCES: 1. Leslie Martin C., “Architectural Graphics”, The Macmillan Company, New York, 1978

Session marks

Internal : 25 marks	10 marks -	Assignment
	10 marks -	Assignment
	05 marks -	Attendance
External : 75 marks	20 marks -	Semester sheets in the form of record
	15 marks -	Development of surfaces
	15 marks –	Projection of solids
	15 marks –	orthographic views
	10 marks -	isometric / axonometric

Total 100 practical

List of equipments available: Drawing table 50 nos

COMPUTER APPLICATION IN ARCHITECTURE - I

Code No: AAG272

05 Hours / week ….16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

To understand the Fundamentals of software to create a basic 2D and 3D drawing in AutoCAD. To enable student the techniques and teaches them to be proficient in the use of AutoCAD to make simple geometric forms, rendering, house plan and other presentation techniques involved. To understand the tool for the task, the best way to use that tool and how to create new tools to accomplish tasks more efficiently.

Unit 1: INTRODUCTION TO COMPUTERS **10 hrs**

Operating system - brief history - desktop - creates; manage short cuts -basic navigation in windows.

Components of a window - menus - work space - create, name, rename, cut, copy, paste and find files - Accessory applets - calculator – Microsoft word

Unit 2: INTRODUCTION **15hrs**

AutoCAD - Introduction - Create a new drawing file - Saving – Exploring the workspace – Dropdown menus – Basic commands – Zoom – crossing windows – Pan – Exploring the tool bars

Unit 3: SETTING UP THE PROPERTIES **15 hrs**

Working with units – exploring the options box – editing the dimension style manager to create new style – UCSICON – command prompt – F1 to F12 keys – draw tool bar – view tool bar – grip and grip editing

Unit 4: ADVANCED 2D DRAWING **15 hrs**

Working with layers – exploring editing commands – basic 2D objects – types of line – circle – polygons – draw commands – modify commands – editing command

Unit 5: PRESENTAION DRAWINGS **25 hrs**

Working with building plans – making presentation drawings – projecting elevation and section drawings from floor plans – paper space – model space – export and import.

REFERENCE

1. V.Rajaraman,Principles of Computer Programming - Prentice Hall of India.

2. Byron S.Gottfried, Theory and problems of Programming with C.Schaum's outline series,McGraw Hill Publishing Co.

3. Auto CAD reference mannual - Autodesk UNC, 1998.

4 Auto CAD architectural users guide - Autodesk Inc.,1998.

5. Sham Tickoo, Advance Technique in Auto CAD Re.14 - 1977.

6. Sham Tickoo,Understanding Auto CAD - 14 (Windows) - 1977.

Session marks

Internal : 25 marks	10 marks -	Assignment 1
	10 marks -	Assignment 2
	05 marks -	Attendance
External : 75 marks	35 marks -	Drafting
	20 marks –	Theory
	20 marks –	semester works in the form of Record

Total 100 (practical)

BUILDING CONSTRUCTION & DETAILING – I

Code No: AAG273

05 hours / week…. 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES:

To develop understanding about construction principles. The subjects should also focus on developing design abilities by applying basic principles of construction and choosing appropriate materials and techniques. Construction technology and appropriate materials for structural systems, roofing, enveloping and interior finishes shall be considered under this subject from simple examples to complex. The focus shall be on basic building materials and basic construction principles for foundation, masonry wall, doors & windows

NOTE: - 1) Units I to IV Theory to run concurrently with Unit V Detailing.

2) Designing is not required for Unit V. Construction details to be drawn to the given Specifications only.

UNIT I - MASONRY – STONE, BRICK & COMPOSITE **20 hrs**

STONE MASONRY: Definition – Technical terms – Dressing of Stones – Joints in Stone Masonry – Classification of Stone Masonry.

BRICK MASONRY: Technical terms – Types of Bricks – Bonds in Brick Work – TYPES OF BIRCK PIERS - Bonds in Pier – Tee junction – Squint junction

COMPOSITE MASONRY: Definition – Various combinations.

UNIT II - FOUNDATION **10 hrs**

Types of Soils – Types of Loads – Types of Foundation – Causes of Failure of Foundation and measures to prevent such failures – Timbering and Dewatering of Foundation Trenches – Pile Foundation – Types of Pile Foundations.

UNIT II - CEMENT CONCRET CONSTRUCTION (P.C.C. & R.C.C.) **10 hrs**

Definition of P.C.C. & R.C.C. – Water Proofing of Concrete – Reinforcement – Advantages of R.C.C. – Causes of Failure of R.C.C. Structures – Various Building Components in a Single Storied Building.

UNIT IV - TIMBER JOINTS, DOORS & WINDOWS. 10 hrs

TIMBER JOINTS: Technical terms – Classification of Joints.

DOORS & WINDOWS: Technical terms – Location of Doors – Size of Doors – Types of Doors & Windows – Fixtures and Fastenings for Doors and Windows

UNIT V - DETAILING 30 hrs

(Specification to be given for each detail. Design not required)

LIST OF PLATES:

FOUNDATION: Spread Footing – Combined Footing – Isolated Footing

MASONRY: Ashlars and Rubble Masonry

Types of Bonds in Brick Masonry - (Plan, Elevation, isometric views and Construction details).

DOORS and WINDOWS: Wooden Paneled Door – Flush Door – Glazed Door – Partly Paneled and Partly Glazed Door – Glazed Window. (Plan, Elevation, Section and Construction details).

REFERENCE BOOKS:

1. A Textbook of Building Construction. - Arrora & Bindra
2. Building Construction. - R.C. Mitchell
3. A Textbook of Building Construction. - S. Deshpande
4. Building Construction Vol. I, II, III. - W.B. Mckay
5. Building Construction - Richard Greenhaigh
6. Building Drawing - Shah & Kale
7. Building Drawing - Shah, Kale & Patki

Session marks

Internal : 25 marks	10 marks -	Assignment
	10 marks -	Assignment
	05 marks -	Attendance
External : 75 marks	20 marks -	Semester sheets in the form of record
	20 marks –	Details in sketches
	35 marks -	Drafting

Total 100 practical

List of equipments available: Drawing table 50 nos

ARCHITECTURE DESIGN STUDIO - I

Code No: AAG274

06 hours / Week …… 16 weeks **96 hours**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05
Internal	50	Maximum marks	100
External	100	Minimum marks	50

OBJECTIVES

Development of space visualization Application of materials to simple architectural forms. Application of the knowledge gained in other subjects and basic design to design of buildings of single/ simple activity.

Study of this subject shall conclude with emphasis on urban development, design problems of increasing structural and design complexity will be set with full opportunity, coordination, collection and analysis of data. Emphasis will be on preparation of design programme, preparation of drawings and detailing.

NOTE:

The problems involve simple space organisation starting with single space single use - small span Horizontal movement - single bay-passive energy type spaces. The study of space standards and anthropometrics related to each problem is stressed upon. Anthropometries as related to physically handicapped and elderly persons are required to be studied. Examples of exercises include

STUDIO PROBLEM – 1

SINGLE SPACE - Toilet for a Physically Handicapped Person - Hostel Room – Bedroom – Kitchen.

REFERENCE

1. E and O.E.Planning, Lliffe Books Ltd., London, 1973.

2. De.Chiara and Callender, Time-saver Standards for Building Types, McGraw Hill Co., New York, 1973.

3. Sid Del Mar Leach, Techniques of Interior Design Rendering and presentation, McGraw Hill Co., New York, 1973

Session marks

Internal : 50 marks	30 marks -	Studio Problem - I
	15 marks -	Time problem
	05 marks -	Attendance

External : 100 marks

20 marks -	concept / Single line drawing / bubble diagram
30 marks -	detailed plan
20 marks -	elevation / section
20 marks -	sketches / furniture / detailing
10 marks –	presentation skill / drafting skill

Total 150 Practical

Note: Design and drafting of any Single-space designs can be set for the board exam.

List of equipments available: Drawing table 50 nos

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

III – SEMESTER

CLIMATE AND BUILT ENVIRONMENT

Code No: AAG301

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding about different types of Climate Conditions and built environment. The subjects should also focus on climate factors in tropics, Air movement, sun movement, built form and green building concepts. It also helps to understand their properties, types and uses. Emphasis should be on developing, understanding about making choice of appropriate climate condition, shading devices, design elements and concepts of green building in a given situation.

UNIT I - CLIMATE AND HUMAN COMFORT **10 hrs**

Climate and Civilization. Factors that determine climate of a place- Components of climate- Climate classifications for building designers in tropics- Climate characteristics. Human bodyheat balance- Human body heat loss- Effects of climatic factors on human body heat loss- Effective temperature- Human thermal comfort- Use of C. Mahony's tables.

UNIT II - SOLAR SHADING DEVICES **08 hrs**

Movement of sun- Locating the position of sun- Sun path diagram- Overhead period- Solar shading- Shadow angles.

UNIT III - HEAT FLOW THROUGH BUILDING ENVELOPE CONCEPTS **08 hrs**

The transfer of heat through solids – Definitions – Conductivity, Resistivity, Specific heat, Conductance, Resistance and Thermal capacity – Surface resistance and air cavities – Air to air transmittance (U value) – Time lag and decrement – Types of envelops with focus on glass.

UNIT IV - AIR MOVEMENT DUE TO NATURAL AND BUILT FORMS **08 hrs**

The wind – The effects of topography on wind patterns – Air currents around the building – Air movement through the buildings – The use of fans – Thermally induced air currents – Stack effect, Venturi effect – Use of court yard.

UNIT V - CLIMATE AND DESIGN OF BUILDINGS **14 hrs**

Design strategies in warm humid climates, hot humid climates, hot and dry climates and cold climates – Climate responsive design exercises for various contexts.

Green building design – Rating system –LEED, GRIHA, BREEAM etc., CASE STUDIES – Any 3

TEXTBOOKS:

1. O.H. Koenigsberger and Others, Manual of Tropical Housing and Building – Part I Climate design, Orient Longman, Madras, India, 2010.
2. Bureau of Indian Standards IS 3792 (1987), Hand book on Functional requirements of buildings other than industrial buildings, (Part I – IV), Manakbhavan, 9, Bahadur Shah Zafar, Marg, New Delhi – 110 002.

REFERENCES:

1. Martin Evans Housing Climate and Comfort – Architectural Press, London. (1980).
2. B. Givoni Man, Climate and Architecture, Architectural Sciences Series – Applied Science Publishers Ltd., London (1981).
3. B. Givoni Passive and Low Energy Cooling of building, Van Nostrand Reinhold New York, USA. (1994).
4. Galloe, Salam and Sayigh A.M.M. "Architecture, Comfort and Energy", Elsevier Science Ltd., Oxford, U.K. (1998).
5. Climate Responsive Architecture- A Design Handbook for Energy Efficient Buildings, Arvind Krishnan, Szokolay et.al, Tata McGraw Hill, 2010.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

INTERIOR ARCHITECTURE

Code No: AAG302

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

The interior are becoming more integral part of architecture and considerable stress is being laid in interior design. Teacher while imparting instruction are expected to explain concept and principle introducing various building finishing materials. The course would be supplemented with literature and sample of materials. To study about the basics of interiors, furniture's, decorative finishes and its applications. To know the layout plans of Interiors.

UNIT – I INTRODUCTION & DESIGN THEORY OF INTERIORS 08 hrs

Form, space and order – elements of design – principle of design – application of elements and principles of design in interiors and their uses in interiors

UNIT II FUNCTION AND PLANNING 08 hrs

Integrating form and function – planning inter-relationship of functional spaces and interior elements – anthropometrical study – standard dimensions of furniture and accessories – circulation spaces

UNIT III – DETAILED DRAWING OF SIMPLE HOUSEHOLD FURNITURE 10 hrs

Floor and wall furniture – materials and specification – joinery ready to assemble modular units in interior design. Simple design of household furniture such as tables, chairs, sofa sets, cupboards, room dividers, built in fitments and detailed drawing of office table, Charis, sofa, wardrobe, cot.

UNIT IV – FINISHES, FURNISHING & ACCESSORIES 09 hrs

Various types of finishes for walls, floors and ceiling. Furnishing – drapery, blinds, upholstery and household linen accessories – artefacts, paintings, murals, sculptures, plants (naturals & artificial), lights, fans and other accessories, decorative accessories for kitchen an bed room

UNIT V – LAYOUT PLANNING (INCLUDING INTEGRATED SERVICES LAYOUTS) 13 hrs

Layout furniture for residential spaces – offices spaces – restaurant – show room. Drawing of elevations for the above spaces and on interior perspective for any one project

Integrated services – electrical layout false ceiling layout – air-condition ducting – security systems

TEXT BOOKS

1. "John F. Pile"-" Interior Design"
2. "Francis D.K. Ching"-" Interior Design Illustrated"
3. "Ahmed Khasu"-" Interior Design"
4. "Premavathy Seetharaman & Parveen Pannu"-" Interior Design & Decoration"
5. "M.Pratap Rao"-" Interior Design Principles & Practice"
6. "Joseph Dechiara , Julius Panero & Martin Zelnik"-"Time Saver Standards for Interior Design & Space Planning (Second Edition)"

REFERENCE

1. "Anna Hong Rutt"-"Home Furnishing"
2. "David Van Dommalan"-" Designing and Decorating Interiors"
3. "Barbara Brad ford Taylor"-" Easy steps to successful Decorating"
4. "Maitland Graves"-" Art of Colour and Design"
5. "Frances M Obst"-" Art of design in Home Living"
6. "Beitler & Lockhart"-"Design for you"
7. "Mary Gillatt" –"Colour your Home"
8. "IS 5533 – 1969 Dimensions of Spaces-Bureau of Indian Standards"
9. "National Building Code of India"
10. "Derek Phillips" "12 Human Lighting in Architectural Design"
11. "Julius Parcero"-"Dimension and Interior Space"

MAGAZINES:

1. Inside outside (Business India group)
2. Homes & Gardens
3. Indian Architect &Builders
4. Fountain Head
5. 80 Designs
6. Interiors Today.
7. Interior Design

WEBSITES https://nptel.ac.in https://ndl.iitkgp.ac.in
https://www.architecturaldigest.in/architecture-design/

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

HISTORY OF ARCHITECTURE – II

Code No: AAG303

03 hours / week…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Study of evolution of various styles of art and architecture as a response to climate, culture and socio-political conditions by taking examples from Indian architecture. The emphasis will be on the development of the understanding of fundamental design principles (visual art principles) and resulting architectural expression; appropriate to place and people.

NOTE: The teaching of Historical Architecture can have its emphasis upon Chronology, Building materials and Technology, Architectural styles and Architectural details. It is not essential to address the associated elements (the influences) and the context of particular styles. The various styles can be explained with selected examples, which can be expounded through schematic drawings of only Plans, concepts, Structural Principles and Architectural Styles.

For better understanding Dravidian architecture visits are required during the course time in this semester.

UNIT – 1 ANCIENT INDIA & BUDDHIST ARCHITECTURE 10 hrs

ANCIENT INDIA - Indus Valley Civilization - Culture and pattern of settlement. - Vedic village and the rudimentary forms of bamboo and wood, wooden construction under the Mauryan rule.

BUDDHIST ARCHITECTURE - Architectural Production during Ashoka's rule - Ashokan Pillar, Sarnath, Sanchi Stupa. Salient features of a Chaitya hall and Vihara, Rock cut architecture in the western and Eastern ghats - Karli, Takti Bhai, Gandhara.

UNIT – 2 - HINDU ARCHITECTURE 08 hrs

Evolution of Hindu Temple - Early shrines of the Gupta and Chalukyan periods - Durga Temple, Aihold - Papanatha and Virupaksha Temples at Pattadakal.

UNIT – 3 - DRAVIDIAN ARCHITECTURE 08 hrs

Dravidian architecture characters - Rock cut productions under Pallavas - Shore Temple, Mahaballipuram - Dravidian Order -Brihadeeswara Temple, Tanjore – gangaikonda chola puram temple, Airavatesvara Temple, dharasuram - Evolution and form of Gopuram - Complexity in temple plan due to complexity in Ritual - Minakshi Temple, Madurai

UNIT – 4 - INDO ARYAN STYLE 08 hrs

Salient features of an Indo Aryan temple architecture - Temple architecture of Gujarat, Orissa, Madhya Pradesh and Rajasthan - Lingaraja Temple, Bhuvaneswar and Sun Temple, Konarak- Architecture of step wells and their social importance

UNIT – 5 - INDO – ISLAMIC AND WORLD ISLAMIC ARCHITECTURE 14 hrs

Introduction to world Islamic architecture – Middle East, south East Asia, Pakistan and Bangladesh

Introduction to indo –Islamic architecture - Change from trabeate to vaulted and dome construction - Mix of Islamic and Indian elements and early provincial style

Typical characters of mosque, fort, gateway and tomb (Masjid, Quila, Darwazza, Mausoleum) Examples: Red fort, Delhi - Taj Mahal, Agra - Jami Masjid, Ahmedabad

REFERENCE

1. Percy Brown, Indian Architecture (Buddhist and Hindu Period), Taraporevala and Sons, Bombay, 1983.

2. Atish Grover,The Architecture of India (Buddhist and Hindu Period),Vikas Publishing Housing Pvt.Ltd.,New Delhi,1981.

3. A.Volwahsen, Living Architecture - India (Buddhist and Hindu), Oxford and IBM, London, 1969.

4. Christoper Tadgelli, The History of Architecture in India from the Dawn of Civilization to the end of Raj,Longman Group,U.K.Ltd.,London, 1990.

5. Carmen Kagal,Vistara: The Architecture of India, Published by Festival of India, 1986.

6. Electa Moniteur, Architecture in India,M/s.Electa France,Milan,1985.

7. George Mitchell, the Hindu Temple, BI Pub., Bombay, 1977.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

ARCHITECTURE DRAWING - II

Code No: AAG371

05 hours / week…. 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To involve students in a number of exercises that will help them develop the skill of representation in advance drawing techniques involving perspective and sciography. To involve students in a number of exercises that will help to understand the measured drawing method to document buildings of architectural interest using simple and advance techniques of representation.

UNIT I PERSPECTIVE METHODS **15 hrs**

Introduction to the concept of perspective drawing. One point and two point perspective of simple geometrical shapes like cube, prism, combination of shapes using picture plane method and measuring point method.

UNIT II PERSPECTIVE: BUILDING INTERIOR **20 hrs**

Construction of one & two perspective grids - Construction of one and two point perspective of building interiors. Understanding the basic human proportion and scale. Adding of human figures, planters, furniture etc. in an interior perspective scene. Basic applications of shade and shadows and rendering techniques.

UNIT III PERSPECTIVE: BUILDING EXTERIOR **20 hrs**

Principles of shade and shadow – construction of shadow of simple geometrical shapes – construction of sciography on building, shadows of architectural elements. Introduction to short cut perspective method. Construction of one & two point perspective of building exterior. Adding of human figures, trees etc., Application of light and shadow and rendering techniques of building materials.

UNIT V MEASURED DRAWING: BUILDING DOCUMENTATION **25 hrs**

Introduction to fundamentals of measured drawing, format for presentation methods - Techniques of measuring buildings and their details –Measured drawing of simple objects like furniture, ornamentation, measured drawing of building components like column, door, window, cornice, etc. isometric projections of simple construction details of the building components.

Complete documentation of a building of special interest in terms of building construction, architectural excellence or technology using photographs, tapes etc. Measured drawing of plans, elevations, sections, isometric projections of building details etc. using pen and ink rendering technique.

REQUIRED READINGS:

1. John M.Holmes, Applied Perspective, Sir Isaac, Piotman and Sons Ltd., London 1954.

2. Robert W.Gill, Basic Perspective, Thames and Hudson, London, 1974.

3. Leslie Martin C., Architectural Graphics, The Macmillan Company, New York, 1964.

4. Francis Ching, Architectural Graphics, Van Nostrand and Reinhold Company, NY 1975.

REFERENCES:

I. MEASURED DRAWING

1. Claude Batley, Indian Architecture, D.B.Taraporevale Sons and Co., Ltd., Bombay

2. William Kirby Lockard, Drawing as a Means to Architecture, Van Nostrand, Reinhold Company, New York.

3. George A Dinsmore, Analytical Graphics – D.Van Nostrand, Company Inc., Canada. II. PERSPECTIVE

4. Interiors: Perspective in Architectural Design Graphic - SMA Publishing Co. Ltd., Japan, 1967. III. SCIOGRAPHY

5. Ernest Norling, Perspective drawing, Walter Fostor Art Books, California, 1986.

6. Bernard Alkins - 147, Architectural Rendering, Walter Foster Art Books, 1986.

7. Rober W.Gill, Advanced Perspective, Thames and Hudson, London, 1974.

Session marks

Internal : 25 marks	08 marks -	Exterior perspective
	08 marks -	Interior perspective
	04 marks -	Measured Drawing
	05 marks -	Attendance
External : 75 marks	20 marks - Semester Paper works in the form of records	
	20 marks - Interior perspective	
	20 marks - Exterior perspective	
	15 marks – Measured drawing	

Total 100 practical

COMPUTER APPLICATION IN ARCHITECTURE – II

Code No: AAG372

05 Hours / week ….16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES 3D MODELING

To understand the Fundamentals of software to create a basic 2D and 3D drawing To enable student the techniques and teaches them to be proficient in the use of the software to create simple geometric forms, rendering, house plan and other presentation techniques involved. To understand the tool for the task in 3D making, the best way to use that tool and how to create new tools to accomplish tasks more efficiently.

1 INTRODUCTION : The history of SketchUp including some discussion on versions of SketchUp - SketchUp Pro - The SketchUp interface - Using the rectangle and the Push/Pull tool to create 3D shapes - Placing rectangles on a 3D surface - The function of each item on the main toolbar - Drawing arcs, combining the line and arc tool - Using the offset command - Experimenting with different display techniques - Examining some examples of SketchUp models from different disciplines.

2. PRELIMINARIES: Setting a metric drawing environment - INTERFACE - the rectangle tool - pen tool - Pan Tool - Interface 2 - A focus on the view commands. Display types, pages - We set out the function of each of the tools on the main SketchUp palette. We use the section cut tool to slice through a model.

3. DRAW : The draw commands - line, arc, polygon, freehand – Editing - The Edit drop down menu - Grouping objects - Selecting individual objects and grouping them together - Editing a group of objects - Using the rotate tool - Using the move tool to line groups up - Terrain modeling

4. 3D WAREHOUSE: Google SketchUp has links to a large set of 3D models which you can use in your own design work. Google encourage you to share your models with others and upload models into Google Earth - Texture mapping - Using the paint tool to apply textures to your models - Creating and using new texture maps

ATTACHING IMAGES TO MODELS - Attaching image files to frames in your model - Stretching and distorting images to fit the model - COMPONENTS - Turning groups of objects into components for use in other SketchUp models – DOWNLOADS - Downloading sample files required for the course

5. TUTORIALS **50 hrs**

Apart from the above exercise, basic drawings such as site plans, plans, interiors of spaces, case study from the subject architectural design studio and interior design to be incorporated with this software. All the exercise should be exported / drawn here and should be converting as 3D objects.

REFERENCE

sketchup.google.com/training/videos.htm
http://www.youtube.com/watch?v=gsfH_cyXa1o l

Session marks

Internal : 25 marks	10 marks -	Assignment 1
	10 marks -	Assignment 2
	05 marks -	Attendance
External : 75 marks	40 marks -	Drafting
	15 marks -	Components
	20 marks –	Semester works in the form of Record
	Total 100	(practical)

List of equipments available: Desktop computer 15 nos

BUILDING CONSTRUCTION & DETAILING - II

CODE NO: AAG373

05 hours / Week ……16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES:

To develop understanding about construction principles. The subjects should also focus on developing design abilities by applying basic principles of construction and choosing appropriate materials and techniques. Construction technology and appropriate materials for structural systems, roofing, enveloping and interior finishes shall be considered under this subject from simple examples to complex. The focus shall be on flooring materials, Roofs and covering, arches, lintels, DPC, Staircase and Temporary structures.

NOTE: - 1) Units I to IV Theory to run concurrently with Unit V Detailing.

2) Designing is not required for Unit V. Construction details to be drawn to the given Specifications only.

UNIT I - FLOORS & ROOFS **10 hrs**

GROUND FLOOR - General – All types of Flooring
UPPER FLOORS - General - Timber Flooring – R.C.C. Flooring – Ribbed Flooring

ROOFS & ROOF COVERINGS - General – Classification of Roofs – Pitched Roof – Technical terms – Types of Pitched Roof – Flat Roofs – Roof coverings for Pitched Roofs – madras terrace roof -

UNIT II - ARCHES & LINTELS, DAMP PROOFING **15 hrs**

ARCHES & LINTELS: General – Technical terms – Types of Arches – Materials used for Construction – Types of Lintels.

DAMP PROOFING: General – Defects of dampness – Causes of dampness –
Sources of dampness – Methods of Damp-Proofing – Materials used for Damp-Proofing – Selection of Material for D.P.C.

Damp-Proofing Treatment in Buildings (Foundations, Floors, Walls, Roofs, and Parapet Walls & Basement)

UNIT III - TEMPORARY STRUCTURES **05 Hrs**

General – Scaffolding – Types of Scaffolding – Shoring – Types of Shoring –Under-pinning-Methods of Under-pinning – Form work – Requirements of Form work – Materials for Form work – Construction of Form work for Columns, Beams and Floor Slabs – Centering for Arches

UNIT IV - STAIR **20 hrs**

STAIRS: Location of Stairs – Technical terms – Requirements of a good Stairs – Classification of Stairs – Stairs of different Materials.

UNIT V-DETAILING **30 hrs**

(Specifications to be given. Design not required)

LIST OF PLATES:

FLOORS Details Cement Concrete Floor, Timber Floor (Single Floor) & tiled floor

MADRAS TERRACE ROOF

Details of Lean -to-Roof with Mangalore Tiles

STAIRS: R.C.C. Staircase with Waist-Slab and Stringer-Beam – Open-Well Stair –Dog-legged Stair – Geometrical Stairs

REFERENCE

1. A text book of building construction – Arrora & Bindrra
2. Building construction – R.C.Mitchell
3. A Text book of Building Construction. - R.S. Deshpande
4. Building construction Vol – I, II, III
5. Building Construction - Richard Greenhaigh
6. Building Drawing - Shah & Kale
7. Building Drawing - Shah , Kale

Session marks

Internal : 25 marks	10 marks -	Assignment
	10 marks -	Assignment
	05 marks -	Attendance
External : 75 marks	20 marks -	Semester sheets in the form of record
	20 marks –	Details in sketches
	35 marks -	Drafting

Total 100 practical

List of equipments available: Drawing table 50 nos

ARCHITECTURE DESIGN STUDIO - II

Code No: AAG374

08 hours / Week …… 16 weeks **128 hours**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	50	Maximum marks	100
External	100	Minimum marks	50

OBJECTIVES

Development of space visualization Application of materials to simple architectural forms. Application of the knowledge gained in other subjects and basic design to design of buildings of single/ simple activity.

Study of this subject shall conclude with emphasis on urban development, design problems of increasing structural and design complexity will be set with full opportunity, coordination, collection and analysis of data. Emphasis will be on preparation of design programme, preparation of drawings and detailing.

NOTE:

The problems involve simple space organisation starting with Multi-space Multi- use - small span Horizontal movement - single bay-passive energy type spaces. The study of space standards and anthropometrics related to each problem is stressed upon. Anthropometries as related to physically handicapped and elderly persons are required to be studied. Examples of exercises include

STUDIO PROBLEM – 1

MULTI-SPACE - Design problem shall deal with planning for small groups of people and minor activities such as residence, snack bar, neighborhood market, fire station, petrol bunk, etc... and shall include data collection on climate, site conditions and user requirements.

REFERENCE

1. E and O.E.Planning, Lliffe Books Ltd., London, 1973.

2. De.Chiara and Callender, Time-saver Standards for Building Types, McGraw Hill Co., New York, 1973.

3. Sid Del Mar Leach, Techniques of Interior Design Rendering and presentation, McGraw Hill Co., New York, 1973

Session marks

Internal : 50 marks	30 marks -	Studio Problem - I
	15 marks -	Time problem
	05 marks -	Attendance

External : 100 marks

20 marks -	concept / Single line drawing / bubble diagram
35 marks -	detailed plan
15 marks -	elevation / section
15 marks -	sketches / furniture / detailing
15 marks –	presentation skill / drafting skill

Total 150 Practical

Note: Design and drafting of any Multi-space designs can be set for the board exam.

List of equipments available: Drawing table 50 nos

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

IV – SEMESTER

APPLIED MECHANICS AND STRENGTH OF MATERIALS

Code No: AAG401

04 hours / week…. 16 weeks **64 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	04 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To help students, understand the basic principles of forces, loads, elements, stress, sections, structural behaviour and requirements of buildings with emphasis laid more on expositions of principles involved rather than situational intricacies and computational rigour.

UNIT – 1 **14 hrs**

BASIC PRINCIPLES OF STATICS - Force – concept – types in respect of a) the planes in which they act, b) their concurrency, c) the nature of applications – concept of resultant and equilibrium under a system of forces – law of equilibrium of forces – resolution of forces – moment of a forces – principles of moments.

COPLANAR CONCURRENT FORCES AND NON – CONCURRENT FORCES - Concurrent forces – Resultant – Conditions of Equilibrium – Like AND Unlike Forces – Resultant – Support AND Support Reactions – Distributed Loads

SIMPLE STRESSES AND STRAINS - Definition of stress and strain – Hook's law – stress strain curve – young's modulus – Factor of safety – Simple Problems

ELASTIC CONSTANTS - Lateral strain – linear strain – Poisson's ratio – Volumetric strain – Modulus – relation between three modulii (Derivation not required)

UNIT – II **14 hrs**

GEOMETRICAL PROPERTIES OF SECTIONS - Centroid – neutral axis – Centroid of angle, Tee, Channel and I – sections – Moment of Inertia – Radius of Gyration – Parallel Axis theorem and Perpendicular Axis Theorem – moment of inertia for square, rectangle, circular and triangular sections – simple problems.

UNIT – III **14 hrs**

BEAMS AND BENDING - Types of beams – simply supported beam – cantilever beam – over hanging beam – point loads and U.D.L – reactions in beam – shear force and bending moment – SF diagram and BM diagram – simple problems

STRESSES IN BEAMS - Theory of simple bending – assumptions – position of neutral axis and the stress variations – moment of resistance – modulus of sections (no derivations required) – problems applying formula / equations.

UNIT – IV **12 hrs**

DEFLECTION OF BEAMS - Stiffness and strength of beams – deflection of uniform beams – simply supported with simple loads, UDL throughout the span and vertical concentrated loads at the center and UDL cantilevered with concentrated load at free end or point load at a distance from the fixed end – simple loads.

COLUMNS AND STRUTS

Short and long columns – end conditions – Euler's formula and Rankine's formula (no derivation required) application of formula – columns subjected to axial loads – problems – Eccentricity loads (principles only)

UNIT – V **10 hrs**

TRUSSES AND FRAMES

Perfect and imperfect frames – difference between a beam and truss – some common configuration of roof trusses – graphical analysis of roof truss – simply supported, cantilever trusses with dead loads.

RETAINING WALLS (study only)

Rankine's Theory of Earth Pressure – active pressure and passive pressure – stability of retaining wall – conditions for stability – Rebhan's construction for earth pressure with or without surcharge.

REFERENCE:

1. A text book of applied mechanics R S Khurmi
2. A text book of applied mechanics S ramamrutham
3. Elements of applied mechanics V Natrajan
4. Strength of materials R S Khurmi

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

BUILDING SERVICES - I

Code no: AAG402

03 hours..…. 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding in the services part in the building such as electrical, lighting, water supply, drainage and sanitation. To develop an understanding of basic modes of energy transfer. To understand the spatial and installation requirement for different services in building. To prepare layout for different services. To improve an understanding of the construction

UNIT I - ELECTRICAL SERVICES **12 hrs**

ELECTRICAL SUPPLY - General idea of Generation, Transportation and Distribution of Power – Conventional Architectural Symbols for Electrical installations - Substation Transformer, bus bar, supply to building. Main, Sub- Mains - Types of Fuses - Distribution Panel

WIRING SYSTEM: Types of Wiring - Wiring Material - Standard Wire Gauge – Types of Switches – Controls – Plugs –Two Pin & Three Pin Plugs – Junction Boxes – Exhaust Fan – Electrical Terms & Units – Electrical Layouts for Small Residences, Public Buildings and Standard ISI abbreviations. Supply and Distribution in Multi Storied Buildings – Electrical load – Meter room – Generation room – preparation of electrical layout for apartments and residence.

UNIT II - LIGHTING **09 hrs**

Types of lighting - Types of Lamps and their Characteristics- Level of Illumination for different functions (general)- Light fittings – Domestic, Industrial Fluorescent bulbs, Neon sign fittings – Mercury Vapor lamps, Energy Efficient lighting – PL lamps, Reflectors

UNIT III - WATER SUPPLY **09 hrs**

Sources of water supply and method of supply - Catchment areas, reservoirs, and their location - Water purification systems, control systems, supply for a neighborhood and town - Water supply for multi storied buildings and industrial projects – preparation of layout for apartment.

UNIT IV - DRAINAGE **08 hrs**

DRAINAGE - Site planning from drainage point of view - Storm water drains, details of construction, water entrances, gullies, open drains, gradients, ventilation of drains, rainfall maintenance – preparation of drainage layout for residential unit.

UNIT V - SANITATION **10 hrs**

SANITATION - Sewage and sewage treatment, buy products, gas plants - Connection of house sewers to municipal sewers, ventilation of sewers – Sewage disposal scheme for small projects and towns - Garbage disposal, incinerator, and dry disposal - Garbage disposal in multi –storied buildings, dry and wet treatment - Treatment of industrial refuse - Refuse and pollution problems – recycle and reuse

REFERENCES

1. G.M.Fair,J.C.Geyer and D.Okun,Water and Waste Water Engineering,Vol.II,John Wiley & Sons,Inc., New York,1968.

2. Manual of Water supply and Treatment, Second Editions,CPHEEO,Ministry of Works and Housing, New Delhi,1977.

3. Manual on Sewerage and Sewage Treatment,CPHEEO,Ministry of Works and Housing, New Delhi,1980.

4. S.C.Rangwala, Water Supply and Sanitary Engineering, Charotar Publishing House, Anand 388 601,1989.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

HISTORY OFARCHITECTURE – III

Code No: AAG403

03 Hours / week ….16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Study of evolution of various styles of art and architecture as a response to climate, culture and socio-political conditions by taking examples from Contemporary Architecture. The emphasis will be on the development of the understanding of fundamental design principles (visual art principles) and resulting architectural expression; appropriate to place and people.

CONTEMPORARY ARCHITECTURE

UNIT – I 19TH CENTURY EUROPE AND AMERICA 10 hrs

Introduction to contemporary architecture – industrial revolution – great exhibition – birth to modern architecture – school of taught. - New materials and technology
Purpose built buildings for new functions – crystal palace, London, by Joseph Paxton.
Wain Wright building. St. Louis. Missouri by alder and Louis Sullivan

UNIT – II EARLY 20TH CENTURY ARCHITECTURE 10 hrs

Rejection of previous styles and introduction of contemporary building styles.
Fagus shoe factory by Walter Gropius
Johnson wax factory, falling water by F.L. Wright
Seagram building by Mies Van De Rohe
Ronchamp chapel, Villa Savoye by le Corbusier

UNIT – III MID 20TH CENTUREY ARCHITECTURE 09 hrs

New methods of construction – Shell and Folded Plate Roofs – Engineering developments – Developments of Regional styles.
Palazzetto del sports, Rome Olympic stadium by P. Lugi Nervi
Sydney opera house by John Utzon
St. Mary's cathedral by Kenzo Tange
Parliamentary complex, Colombo by Geoffrey

UNIT – IV 2OTH CENTURY ARCHITECTURE – INDIA 09 hrs

PRE INDEPENDENCE
Indo Saracenic Architecture
Rashtrapathi Bhavan, Delhi by Edwin Lutyens
Senate house, Madras University by Chislom

UNIT – V 10 hrs

POST INDEPENDENCE
Chandigarh master plan, High court building by le Corbusier
Works of Louis – Is - Khan
Kanchenjunga apartments Bombay by Charles Coreea
Laurie baker
B V doshi - Sangath

REFERENCE:

1. Sir Banister Fletcher. History of Architecture. 20th Edition.
2. Percy Brown. Islamic Architecture.
3. St. Lloyd / H. W. Mhller, History of Architecture series, Faber & Faber Ltd, London 1986.
4. Encyclopedia of world architecture, by henri stierlin Vol. I and II
5. Modern architecture of design, bill riseboro
6. Architecture as space bruno zevi
7. Mac Milan encyclopedia of architecture 4 volumes
8. R.nath,history of mughal architecture – abhinav publications, new delhi
9. Peter Collins, changing ideals in modern architecture
10. Bill rise bero modern architecture and design

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

LANDSCAPE ARCHITECTURE

Code No: AAG404

03 Hours / week ….16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Understanding the built-environment. Understanding the ecosystem and traditional landscape design. Describe introduction to landscape architecture. Understand site survey and analysis. Gain knowledge of soft landscape. Understand hard landscape. Understand indoor landscape.

UNIT I EASTERN TRADITIONS AND ISLAMIC LANDSCAPES 10 hrs

Early traditions and beliefs about landscape and environment in east. Ancient Indian traditions – Vedic, Jainism, Buddhism and later Hindu movements. Symbolic meanings and sacred value of natural landscapes - gardens of China – Pre Buddhist-Japanese landscapes — Japanese gardens. - concept of Paradise as a garden –Samarkhand and Mughul India – Tomb and pleasure garden – Moghul concepts of site planning. Western expression of Islamic Garden – Spain Alhambra and General life, Granada.

UNIT II RENNAISSANCE AND THE EVOLUTION OF NEW THOUGHTS 08 hrs

Development of the enclosed garden in the Middle ages. Renaissance – Italy, France and England, Romanticism. Influences and linkages across cultures. Study of the western landscapes.

UNIT III THE EVOLUTION OF THE MODERN LANDSCAPE 10 hrs

Industrialization and urbanization – impacts and development of the concept of public open spaces, open space development in new towns, parks movement. Open space development and its urban design and planning context, Early industrial towns and the garden city movement. Public park as a major component of urban landscape, the works of F.L.Ohmstead, and other pioneers. Open space development and Close conceptual relationship between Town planning, urban design and landscape architecture.

ELEMENTS IN URBAN LANDSCAPE

Design of public parks, roads, green ways, parkways, promenade and plaza. Public art. Plant selection criteria, furnishings and lighting of public space, maintenance and management of public spaces and parks,

UNIT IV LANDSCAPE ECOLOGY & PLANNING 10 hrs

Introduction to landscape ecology – formation of various landforms – landforms and landscape process – pattern and structure of landscapes– concepts of patch, corridor and matrix - landscape dynamics and function – topological and chorological process within landscape - concept of landscape metrics – understanding dynamic interaction between landscape structure and function – ecological services of landscape.

LANDSCAPE PLANNING - Relationship between man and nature – analytical aspect of landscape - the natural and cultural setting - evolution of landscape planning –concepts and projects of McHarg, Carl Steinite, Warren Manning, Augus Hills, Phil Lewis – Izank Zonneveld, Ervin Zube - landscape planning models

UNIT V HARD LANDSCAPES & OUTDOOR FURNITURE 10 hrs

Design and detail of hard landscapes – Roads, paving, barriers, edge conditions – functions, types, criteria for selection, design aspects, details.

Criteria for the selection of materials and specifications for the street furniture in various environments. Design of signage and simple outdoor structures like pavilions, gazebos etc. Use of waste materials in landscape, recycling and reuse of materials, their impact on landscape design. Preparation of working drawings for hard landscaping and services.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

COMPUTER APPLICATION IN ARCHITECTURE - III

Code No: AAG471

05 Hours / week ….16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

To understand the Fundamentals of software to create a basic presentation. To enable student the techniques and teaches them to be proficient in the use of the software to make simple rendering, posters. Broachers and other presentation techniques involved. To understand the tool for the task, the best way to use that tool and how to create new tools to accomplish tasks more efficiently.

1. INTRODUCTION TO PHOTOSHOP

Introduction Photoshop – exploring the drop down menus – exploring the work space – exploring the tool bar – exploring the layer window – importing the EPS format – importing the Auto CAD dwg format – workshop

2. PRESENTATION

Working with presentation drawings – rendering the elevation drawing – rendering landscape drawings – exporting the drawing – saving them in JEPG format – attach the files to internet.

3. TUTORIALS 50 hrs

Apart from the above exercise, basic drawings such as site plans, plans, interiors of spaces, case study sheets, final project presentation sheets, concept sheets, etc. from the subject architectural design studio may be incorporated with this software. All the exercise should be exported / drawn here and should be converting as presentation drawings to make a port folio.

REFERENCE

photoshoptutorials.ws

www.hillarymorgan.com

www.video-tutes.com/packages/PSDesign1.php

http://www.graphicsdistrict.com

http://www.spike.com/video-clips/zsjzdx/photoshop-video-tutorials-free-photoshop-tutorials-video-tutorials-for-photoshop-photoshop-tutorial

Session marks

Internal : 25 marks	10 marks -	Assignment 1
	10 marks -	Assignment 2
	05 marks -	Attendance
External : 75 marks	40 marks -	Drafting
	15 marks –	Composition
	20 marks –	Semester sheets in the form of Records

Total 100 (practical)

List of equipments available: Desktop computer 15 nos

BUILDING CONSTRUCTION & DETAILING - III

CODE NO: AAG472

05 hours / Week ……16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding about construction principles. The subjects should also focus on developing design abilities by applying basic principles of construction and choosing appropriate materials and techniques.

Construction technology and appropriate materials for structural systems, roofing, enveloping and interior finishes shall be considered under this subject from simple examples to complex. The focus shall be on masonry walls, RCC and steel Structures, Flat slab and dome construction, and structural detailing.

NOTE: **-** 1) Units I to IV Theory to run concurrently with Unit V Detailing.

2) Designing is not required for Unit V. Construction details to be drawn to the given Specifications only.

UNIT I – MASONRY **10 hrs**

Masonry – load Bearing Wall – Partitions – Retaining Walls – cavity wall construction – reinforced brick work.

UNIT II – R.C.C AND STEEL WORKS **10 Hrs**

R.C.C and FRAMED STRUCTURES: pre – cast concrete construction– joints in concrete work. Details of vertical, horizontal construction joints and expansion joints in walls, slabs, columns and beams.

Knowledge of various types of roof trusses and their selection for commercial and industrial buildings – rolling shutters – collapsible gate – metal doors and windows.

UNIT III - MISCELLANCE STRUCTURES **20 hrs**

BAMBOO – Design and Construction Techniques of Foundations – Basic rules, design details, Base courses – Basic rules, design details. Design of walls, openings, floors and roofing- Thatch, grass, bamboo, reed. Design Exercises of buildings using bamboo for building components, structural application of bamboo – Arched, Barrel vaults, weave structures.

STRAW BALES - Design and Construction Techniques Load bearing, Post and Beam systems, Foundations systems, Roofing options. Doors, Window details – stacking and plastering. Design Exercises : using straw bales for building components.

Types of shell roof structures – domes – folded plates (description of the structures only) – low cost construction using mud, soil, cement blocks, pre cast stone blocks.

UNIT IV - DETAILING **40 hrs**
(Specifications to be given. Design not required)

LIST OF PLATES:

MASONRY: timber partition, glazed partition, partly glazed and partly solid partition.

Details of cavity wall construction.

BAMBOO - STRAW BALES

Details of rolling shutter and collapsible gate.

Steel roof trusses for 9 meter span and details of steel roof truss with A.C. sheet roof covers

REFERENCE

1. A text book of building construction	–	Arrora & Bindrra
2. Building construction	–	R.C.Mitchell
3. A Text book of Building Construction.	-	R.S. Deshpande
4. Building construction Vol – I, II, III	-	Mckay
5. Building Construction	-	Richard Greenhaigh
6. Building Drawing	-	Shah & Kale
7. Building Drawing	-	Shah , Kale & Patki

Session marks

Internal : 25 marks	10 marks -	Test / Assignment
	10 marks -	Assignment
	05 marks -	Attendance
External : 75 marks	20 marks -	Semester sheets in the form of record
	20 marks –	Details in sketches
	35 marks -	Drafting

Total 100 practical

List of equipment's available: drawing table 50 nos

INTERIOR DESIGN STUDIO

Code No. AAG473

09 hours / Week …… 16 weeks **144 hours**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	05 Hours
Internal	50	Maximum marks	100
External	100	Minimum marks	50

OBJECTIVES

Providing the learner with the proper exposure to enhance critical thinking. Developing the intellectual and theoretical backgrounds of through the study of ancient, modern and contemporary history of Interiors, Furniture, and Styles. Providing the knowledge of human factors and human behavior in the interior environment. To develop the attitudes and values of professional responsibility and effectiveness. Providing the students with the basic fundamentals in interior design, the theories of design and design sustainability

Development of space visualization Application of materials to simple architectural forms. Application of the knowledge gained in other subjects and basic design to design of buildings of Multi Functional / Group Activity.

Study of this subject shall conclude with emphasis on urban development, design problems of increasing structural and design complexity will be set with full opportunity, coordination, collection and analysis of data. Emphasis will be on preparation of design programme, preparation of drawings and detailing

NOTE:
Understanding of interior elements and visual connectivity. Multi level planning in small scale, small span, horizontal movement and simple vertical movement, data collection, case studies, analysis and presentation of studies
Data collection with respect to design and detailing for physically handicapped persons - Concepts and presentation of design with scales models
Examples of exercises include

DESIGN THEORY OF INTERIORS - Importance of Interior Design Environment – Elements of design – Principles of design –Elements and Application of Principles of design in Interiors and their uses in Interior Design - FUNCTION AND PLANNING.

ACTIVITIES AND FUNCTION - Functional contents of an Interior Environment – Planning inter-relationship of Functional Spaces and Interior Elements – Anthropometrical study – Dimension Standards of Interior Elements - Furniture, Activity and Circulation

STUDIO PROBLEM – 1

Multi storied building: Apartment design

STUDIO PROBLEM – 2

Exhibition hall

COMPUTER LAB STUDIO

Introduction to computer aided drafting system, concepts of real dimensions, colors, symbols, repeatability modification, layers - Exercises related to design projects above - Floor and Wall Furniture – Materials – Specification – Joinery and finishes. Ready to assemble modular units in Interior design. Simple design of household furniture such as Tables, Chairs, Sofa Sets, Cupboards, Room dividers, built in Fitments and Detailed Drawing of two types in each for Residence.

REFERENCE BOOKS:

1. Home Furnishing - Anna Hong Rutt
2. Designing and Decorating Interiors - David Van Dommalan
3. Easy steps to successful Decorating - Barbara Bradford Taylor
4. Art of Colour and Design - Maitland Graves
5. Art of design in Home Living - Frances M Obst
6. Design for you - Beitler & Lockhart
7. Colour your Home - Mary Gilliatt
8. IS 5533 – 1969 Dimensions of Spaces - Bureau of Indian Standards

For Human Activities

9. National Building Code of India
10. Lighting in Architectural Design - Derek Phillips
11. Architectural Graphic Standards - Ramsey & sleeper
12. Human Dimension and Interior Space - Julius Parcero
13. Interior Design - John F. Pile
14. Interior Design Illustrated - Francis D.K. Ching
15. Interior Design - Ahmed Khasu

Session marks

Internal : 50 marks	30 marks -	STUDIO PROBLEM 1
	15 marks -	STUDIO PROBLEM 2
	05 marks -	Attendance
External : 100 marks		
	20 marks -	concept / Single line drawing / bubble diagram
	35 marks -	detailed plan with furniture layout
	15 marks -	elevation / section
	15 marks -	sketches / standards / detailing
	15 marks –	presentation skill / drafting skill

Total 150 Practical

Note: Design and drafting of any single space INTERIORS or multi-space INTERIORS can be set for the board exam.

List of equipments available: Drawing table 50 nos

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

V – SEMESTER

SITE PLANNING

Code No. AAG501

04 hours / Week …… 16 weeks **64 hours**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

Objectives

The course is intended to provide a solid basis in all aspects of site planning, from analysis to the actual preparation of site plans for hypothetical building or public programs. The course serves as both initial preparation for public sector careers in the evaluation of site plan submittals and as an introduction to more intensive study in urban design and real estate development in subsequent PSU courses. The entire course is presented through a filter of green design and sustainability.

Unit 1: **15 hrs**

Definition of plot, site, land and region, units of measurements, reconnaissance and need for surveying. Chain survey and Triangulation – Instruments used, method of survey and plotting into survey drawing, plain table, Compass and Theodolite Surveys, method, instruments used and application. Computation of area by geometrical figures and other methods.

Unit: 2: **12 hrs**

Marking plans, layout plans and centerline plans – Importance, procedure for making these drawings and dimensioning. Setting out the plan on site – Procedure and Precautions.

Unit: 3 **12 hrs**

Importance of site analysis; On site and off site factors; Analysis of natural, cultural and aesthetic factors – topography, hydrology, soils, vegetation, climate, surface drainage, accessibility, size and shape, infrastructures available -sources of water supply and means of disposal system, visual aspects; Preparation of site analysis diagram.

Unit: 4 **13 hrs**

Site selection criteria for housing development, commercial and institutional projects. Context of the site. Introduction to existing master plans landuse for cities, development control Rules. Preparation of maps of matrix analysis & composite analysis. Study of contours, slope analysis, grading process, grading criteria, functional and aesthetic considerations.

Unit: 5 **12 hrs**

Organization of vehicular and pedestrian circulation, types of roads, hierarchy of roads, networks, road widths and parking, regulations. Turning radii & street intersections Study of microclimate; vegetation, landforms and water as modifiers of microclimate.

REFERENCES

1. B.C.Punmia, Ashok K. Jain, Ashok Kr. Jain, Arun Kr. Jain, "Surveying", Vol.I, Firewall Media, 2005.
2. P.B.Shahani, "Text of surveying", Vol. I, Oxford and IBH Publishing Co, 1980
3. Joseph De.Chiarra and Lee Coppleman, " Urban Planning Design Criteria", Van Nostrand Reinhold Co., 1982
4. Storm Steven, "Site engineering for landscape Architects", John wiley & Sons Inc, 2004.
5. Second Master Plan – Development Regulations – CMDA, 2008

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

BUILDING SERVICES - II

Code no: AAG502

03 hours..…. 16 weeks **45 hours**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding in the services part in the building such as mechanical, HVAC, acoustics, and fire safety. To develop an understanding of basic modes of energy transfer. To gain understanding of spatial & installation requirements for services and to prepare layout for them. To improve an understanding of the construction processes involved.

UNIT I MECHANICAL SERVICES 10 hrs

MECHANICAL SERVICES - Lifts – Location — Components – Types of Lifts – Sizes – Lift Well - Escalators – types – standards – uses – conveyers

Preparing the provision in construction and sections through lift-well and escalators

UNIT II HVAC (HEATING, VENTILATION & AIR CONDITIONING) 08 hrs

VENTILATION – Natural and Mechanical Ventilation, Conditions of Comfort, Principle of Refrigeration. Comfort conditions, temperature control, humidity control, air filtration - Mechanical ventilation in buildings - Fans, blowers and air filters.

HEATING - Heating of spaces – local and central heating - Heating equipments - Comfort conditions, temperature control, humidity control, air filtration

UNIT III HVAC (AIR CONDITIONING) AND SECURITY SYSTEMS 10 hrs

AIR CONDITIONING – refrigeration and air cycle - Various systems of air conditioning - Unit, split, Package, Direct Expansion, Chilled water System - Scope – Layout of Ducts –, Fan Coil System – Window A.C Unit – split Unit, Blowers & Diffusers, Cooling Towers – air conditioning layout, fittings and fixtures

SECURITY SYSTEMS - Introduction – need for safety and security systems – security systems – access control and perimeter protection – CCTV cameras - intruder alarms – Types - Dome cameras - Wall cameras - Hidden cameras - components of CCTV cameras –uses in residential buildings. Introduction to building automation - Functions of Building Management Systems – system includes - Benefits of BMS

UNIT IV FIRE HAZARDS, FIRE SAFETY & DESIGN REGULATIONS 10 hrs

FIRE HAZARDS, SAFETY & DESIGN REGULATIONS - Fire, causes of fire and spread of fire - Fire fighting, protection and fire resistance - Firefighting equipment and different methods of fighting fire - Code of safety, fire regulations - Combustibility of materials – Fire escape routes and elements – planning and design

Wet risers, dry risers, sprinklers, smoke detectors, fire dampers, fire - doors, water and curtains etc - NBC

UNIT V - ACOUSTICS 10 hrs

Acoustics of Buildings – Characteristics of Audible Sound – Principles of Acoustics – Acoustic Defects – Sound Absorption Materials - Acoustics Treatment of Buildings such as Cinema Theatre, Concert Halls, Cold storage units, Conference Hall, Seminar and Lecture Hall - Sound Insulation of Buildings – Sound Insulation and Sound Absorption – Practical consideration of Noise Control and Sound Insulation of Buildings. Preparation of layout for the above rooms

SESSIONAL

• Preparing water supply, drainage and sanitation design layout and details for a residence and apartment block.

• Preparing acoustics treatment for recording studio, auditorium, lecturer hall.

• Conducting market study and collecting informative brochures and specifications on various products available.

REFERENCE

1. Fire Safety in Building – London – Thomas Adam & Charles Black, London.
2. Designing for Fire Safety – E.G. Bucher & A.C. Parhall – John Wiley & sons.
3. Fire & Human Behaviors – David Gunter – John Wiley & sons.
4. National Building Code of India, 1983

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

ENVIRONMENTAL SCIENCE

Code No: AAG503

03 Hours / week ….16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

Develop an understanding of ecological, chemical, waste management, energy resource, environmental media (air, water, soil) and health and safety concepts. Develop an understanding of the natural asserts and components of environmental media and man's impact upon their quality. Develop an understanding of land-based renewable resources including forests, rangeland, farmland, outdoor recreation, and wildlife.

Develop an understanding of on-site versus off-site environmental impacts and the use of risk assessment as an indicator of environmental impacts. Evaluate economic, political and social concepts impacting sustainable development and use of natural resources. Evaluate the impact of the removal of mineral and energy resources. Become conversant in the terminology used in the industry.

UNIT – I ECOSYSTEMS **10 hrs**

Concept of Ecosystem. - Structure and function of an ecosystem. - Procedures, consumers and decomposers. - Energy flow in the ecosystem. - Ecologicalsuccession. - Food chains, food webs and ecological pyramids.

Introduction, types, characteristic features, structure and function of the following ecosystem - Forest ecosystem - Grassland ecosystem - Desert ecosystem – Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

UNIT – II
THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES **08 hrs**

Definition, Scope and importance - Need for public awareness.

FIELD WORK: Visit to a local area to document environmental asserts- river/ forest / grassland / marsh / mountain.

Visit to a local polluted site - Study of common flora and fauna - Study of simple ecosystem-pond, marsh, etc.

UNIT – III BIODIVERSITY AND ITS CONSERVATION 10 hrs

Introduction - Definition: Genetic, species and ecosystem diversity. -Biogeographical classification of India. - Value of biodiversity: Biodiversity at global, National and local levels. - Hot spots of biodiversity. - Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts. - Endangered and endemic species of India. - Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT – IV RENEWABLE AND NON-RENWABLE RESOURCES 10 hrs

Natural resources and associated problems - Forest resources: Use and overexploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal peoples. - Water resources: Use and over-utilization of surface and ground water, dams-benefits and problems. - Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.

Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies. - Land resources: Land as a resource, land degradation, man included landslides, soil erosion and desertification.

Role of an individual in conservation of natural resources.

UNIT – V ENVIRONMENTAL POLLUTION 10 hrs

Definition - Causes, effects and control measures of: - Air pollution – Water pollution - Soil pollution - Marine pollution - Noise pollution - Thermal pollution - Nuclear Pollution - Soil waste Management: Causes, effects and control measures of urban and industrial wastes. - Role of an individual in prevention of pollution. - Pollution - case studies

DISASTER MANAGEMENT: Floods, earthquake, cyclone and landslides.

GREEN CHEMISTRY: Definition – Goals of Green Chemistry (Basic ideas)

RECYCLING – Definition – Examples – Advantages of Recycling (Basic ideas).

REFERENCE

1. Hawkins.R.E, Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R).

2. Heywood, V.H & Watson, R.T. 1995. Global Biodiversity Assesment. Cambridge Univ. Press 1140p.

3. McKinney, M.L & Schoch, R.M. 1996. Environmental Science System & Solutions, Web enhanced edition. 639p.

4. Trivedi R.K., Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards, Vol. I and II, Enviro Media (R).

5. Miller T.G. Jr., Environmental Sciences, Wadsworth Publishing Co. (TB)

6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	
	Total 100	

ELECTIVE THEORY

Sl No	Subject code	Subject Name	T	P	S	Remarks
1	AAG801	SUSTAINABLE ARCHITECTURE	3	-	-	THEORY
2	AAG802	EPIGRAPHY	3	-	-	THEORY
3	AAG803	ARCHITECTURE CONSERVATION	3	-	-	THEORY
4	AAG804	THEORY OF DESIGN	3	-	-	THEORY

COMPUTER APPLICATION IN ARCHITECTURE - IV

Code No. AAG571

05 hours / Week …… 16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

To understand the Fundamentals of software to create a basic 2D and 3D drawing To enable student the techniques and teaches them to be proficient in the use of the software to create simple geometric forms, rendering, house plan and other presentation techniques involved. To understand the tool for the task in 3D making, the best way to use that tool and how to create new tools to accomplish tasks more efficiently.

1. INTRODUCTION TO REVIT ARCHITECTURE

Introduction – exploring the drop down menus – exploring the work space – exploring the tool bar – exploring the layer window – importing the Auto CAD dwg format – workshop

2. PRESENTATION

All the design sheets of each student to be scanned and preparing 3D with the help of Revit architecture software. Hyper linking to the internet explorer.

3. TUTORIALS **50 hrs**

Apart from the above exercise, basic drawings such as site plans, plans, interiors of spaces, case study sheets, final project presentation sheets, concept sheets, etc.from the subject architectural design studio may be incorporated with this software. All the exercise should be exported / drawn here and should be converting as presentation drawings to make a port folio.

REFERENCE

http://usa.autodesk.com/revit-architecture/

http://www.youtube.com/watch?v=A8qYyhdxUqE

http://www.youtube.com/watch?v=vhz4uyXKsmQ

Session marks

Internal : 25 marks	10 marks -	Assignment 1
	10 marks -	Assignment 2
	05 marks -	Attendance
External : 75 marks	40 marks -	Drafting
	15 marks –	Composition
	20 marks –	Semester sheets in the form of Records

Total 100 (practical)

List of equipments available: Desktop computer 15 nos

BUILDING CONSTRUCTION & DETAILING - IV

CODE NO: AAG572

05 hours / Week ……16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding about construction principles. The subjects should also focus on developing design abilities by applying basic principles of construction and choosing appropriate materials and techniques.

Construction technology and appropriate materials for structural systems, roofing, enveloping and interior finishes shall be considered under this subject from simple examples to complex. The focus shall be on masonry walls, RCC and steel Structures, Flat slab and dome construction, and structural detailing.

NOTE: - 1) Units I to IV Theory to run concurrently with Unit V Detailing.

2) Designing is not required for the Units. Construction details to be drawn to the given Specifications only.

Unit – I - STRUCTURAL DETALING (R C C AND STEEL) 30 hrs

Given the dimensions and design particulars, detailed drawings with curtailment provisions and different view to a suitable scale should be prepared)

R C C Single reinforced beam - One way slab - Two way slab simply supported in all directions
Cantilever slab - Column and column footing (square, rectangular and circular)
STEEL

Detailed connection between Rafter and tie - Detailed connection between rafter and strut

Detailed connections between tie and strut - Detailing of ridge connection.

Sheet work :- Prepare structural drawings related to the above topics to understand the structural detailing with the help of drafting / CAD

UNIT II ADVANCED CONSTRUCTION TECHNIQUES AND MATERIALS 25 hrs

Advanced concrete building components and construction techniques. To include folded plates, shell structures, vaults, domes. Their composition, construction and finishing.

Insulated concrete forms (ICF). Recent trends in roofing materials like corrugated GI Sheets, pre-coated metal sheets. Composite walls, pneumatic structures, tensile structures, corrugated hyparshells, single layer reticulated shells, tension hybrid membranes, sustainable steel (preco beams, cellular beams, composite slim floor beam).

Sheet works/models:- Drawings/ sketches/ models of the principles. Understanding of detailed drawings/ published work. Site visits with documentation in the form of sketches/ drawings/ photos.

UNIT III ADVANCED CONSTRUCTION TECHNIQUES AND MATERIALS 25 hrs

Design and detailing exercise involving advanced construction techniques and materials outlined in the previous unit. The emphasis would be on innovative ways to use their principles in an appropriate typology involving a simple scale project.

Sheet works/models:- Design and construction details in the form of sketches and models

REFERENCE

1. A text book of building construction	–	Arrora & Bindrra
2. Building construction	–	R.C.Mitchell
3. A Text book of Building Construction.	-	R.S. Deshpande
4. Building construction Vol – I, II, III	-	Mckay
5. Building Construction	-	Richard Greenhaigh
6. Building Drawing	-	Shah & Kale
7. Building Drawing	-	Shah , Kale & Patki

Session marks

Internal : 25 marks	10 marks -	Test / Assignment
	10 marks -	Assignment
	05 marks -	Attendance
External : 75 marks	20 marks -	Semester sheets in the form of record
	20 marks –	Details in sketches
	35 marks -	Drafting

Total 100 practical

List of equipment's available: drawing table 50 nos

LANDSCAPE DESIGN STUDIO

Code No: AAG573
09 Hours / week ….16 weeks **144 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	5 Hours
Internal	50	Maximum marks	100
External	100	Minimum marks	50

Providing the learner with the proper exposure to enhance critical thinking. Developing the intellectual and theoretical backgrounds of through the study of ancient, modern and contemporary history of Landscape, elements, and Styles. Providing the knowledge of human factors and human behavior in the landscape environment. To develop the attitudes and values of professional responsibility and effectiveness. Providing the students with the basic fundamentals in Landscape design, the theories of design and design sustainability

Development of space visualization Application of materials to simple architectural forms. Application of the knowledge gained in other subjects and basic design to design of open spaces Multi Functional / Group Activity.

Study of this subject shall conclude with emphasis on urban development, design problems of increasing sustainability, ecology, conservation and design complexity will be set with full opportunity, coordination, collection and analysis of data. Emphasis will be on preparation of design programme / documentation / conservation, preparation of drawings and detailing.

STUDIO PROBLEM – 1

RESIDENTIAL LANDSCAPE / OPEN SPACE

The subject may include any of the topics - Preparation of site analysis diagram, synthesis & zoning, documentation, videos, Data collection, Restoration, Conservation – to understand Native species, work includes planting of one individual plant for minimum of 60 days / Landscape elements and Field work in groups.

REFERENCE

1. Kevin Lyunch - Site Planning - MIT Press, Cambridge, MA-1967.

2. B.C. Punmia - Surveying Vol.I - Standard Book House,New Delhi -1983.

3. P.B.Shahani - Text of surveying Vol.I Oxford and IBH Publishing Co - 1980.

4. Joseph De.Chiarra and Lee Coppleman - Planning Design Criteria - Van Nostrand Reinhold Co.,New York - 1968.

5. Surveying and leveling by n.n.basak

Session marks

Internal : 50 marks	20 marks -	Design Sheets
	10 marks –	Detailing
	15 marks -	Plant Analysis
	05 marks -	Attendance
External : 100 marks	20 marks -	Field work & design process
	20 marks –	Individual planting & report
	25 marks –	Demonstration on plant, Elements & materials
	35 marks -	Drafting / written

Total 150 practical

List of equipments available

1. Brush Cutter (petrol) = 01 no
2. Garden rakes = 03 nos
3. Trovel fort = 03 nos
4. Cultivator = 03 nos
5. weeder flat = 03 nos
6. Hedge Shear = 03 nos
7. Secateur = 03 nos
8. Wheel Barrow 80 capacity = 03 nos

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

VI – SEMESTER

ESTIMATION AND COSTING

Code No: AAG601

05 Hours / week ….16 weeks **80 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

This course has courses Quantity Surveying as prerequisites and as such its main objective is to develop in the student the art and skill whereby a monetary value can be placed on the volume of work previously measured. To develop an awareness of those factors that affects the cost of construction work and to analyze the influences that effect change in these factors. To encourage the habit of systematically recording all those statistics which are the stock in trade of the good estimator.

Unit – 1 INTRODUCTION **18 hrs**

Estimation – definition of estimation – approximate estimate – detailed estimate – revised estimate – supplementary estimate – sub estimate – annual maintenance estimate – repair estimate – complete estimate

STAGES OF DETAILED ESTIMATE

Taking of quantities – system – trade system – group system – advantages of group system – methods – long wall and short wall method – center line method – preparation of data – abstract estimate – lump sum provision and contingencies – quantity surveyor – duties – essential qualities.

MEASUREMENS AND MATERIALS RQUIREMENTS

Units of measurements for works and materials – degree of accuracy in measurements – deduction for openings in masonry, plastering and white washing area – painting coefficient – out turn of works working out of materials requirements – cement – sand – bricks – aggregates etc based on thumb rules for different works.

Unit – II DETAILED ESTIMATE **22 hrs**

Detailed estimate for building using trade system taking off quantities for all items of works in the following types of buildings,

Single room building with flat roof

Residential building with 2 or 3 rooms with R.C.C roof

Interior space of a shop

Units – III APPROXIMATE ESTIMATE S **10 hrs**

Approximate estimates – type – plinth area, method – cubical content method- service method – typical, method – typical bay method – simple problems on preliminary estimate of a building project

Area of irregular figures – end ordinate rule – mid ordinate rule – average ordinate rule – trapezoidal rule – Simpson's rule - problems

Volumes of irregular solids – end area rule – mid are a rule – mean area rule – trapezoidal rule – pyramidal rule – problems on embankments and cuttings cross sectional areas – level sections – two sections

Unit – IV DATA **15 hrs**

Data – theory – main and sub data – observed data – lead statement – schedule of rates – standard data book – sundries – lump sum provisions – preparation of data using stand ad data and schedule of rates.

Brick and stone masonry – cement, lime surikhi mortar – lime concrete and cement concrete – flooring works and weathering course – R.C works for slabs , sunshade beam and column – partition wall – form works for beams and slab – centering and shuttering – plastering, pointing and painting – A.C sheet roofing – apron and revetment works in canals.

Unit – V SPECIFICATION AND REPORT WRITTING **15 hrs**

Specifications – necessity – types of specifications – essential requirements of specifications – specifications for various item of works related to buildings – steps involved in standard specifications

Report writing – points to be considered while writing a report – writing typical reports for works such as

Building – residential / hospital / school - Laying a village road - Construction of a bride - Water supply system for a village

REFERENCE

1. IS code of practice IS 1200
2. Civil estimating, costing and valuation
3. Estimating and costing rangwala
4. Quantity surveying and valuation N.A shaw, kannan publishers
5. Estimating and costing L N dutta
6. Estimating and costing Bridie
7. Estimating and costing vazhirani and chandola.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

OFFICE PRACTICE AND PROJECT MANAGEMENT

Code No: AAG602

3 Hours / week ….16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To develop understanding about architectural act, fees structure, tender and documents, report writing and handling of office equipments like Printer, Photo copier etc. To develop an understanding of project management for completion of the building woks. To improve an understanding of the equipments involved in architecture firms.

Unit – I ARCHITECTURAL ACT 1972 09 hrs

Salient features of Architectural act 1972 – Rules and Regulations – Roles of Architects - Architectural competitions – letter writing – Report writing – IIA – role of IIA - COA

Unit – II TENDER AND TENDER DOCUMENTS 10 hrs

Tenders – definitions – types of tender – tender form – conditions of tender – EMD (earnest money deposit) – security deposit – opening of tender – security and acceptance of tender – work order – Arbitration – umpire

Unit – III CONTRACT 10 hrs

Contracts – definition – Types of contract – Conditions of contract – administration of contract – Terms – group insurance – Employees state insurance (ESI) – Provident fund (PF) – Work men's compensation – Muster roll – field book

Unit – IV PROJECT MANAGEMENT 10 hrs

Project management – Definitions – CPM – PERT charts – Earliest possible time – Time lag – Slag – Gang chart – Bar chart – Simple problems

Unit – V LAB PRACTICE 09 hrs

Tracing - Sketching – Xeroxing – Scaling – Computer Printing and Plotting – MS office

REFERENCES

1. S.P. Mukhopadyay, “Project Management for architects and Civil Engineers”, IIT, Kharagpur 1974.

2. Jerome D. Wiest and Ferdinand K. Levy, “A Managementuide to PERT/CPM”, prentice hall of Indian pub. Ltd. New Delhi 1982.

3. SR.A. Burgess and G. White, “ Building production and project management”, the construction press, London 1979.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

COMMUNICATION SKILL PRACTICAL

Code No: BEG178

02 Hours / week ….16 weeks **32 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

UNIT I (10Hrs)

Listening Skill

1. Listening to Speeches by Great Speakers/ TV News (Assessment Through note taking)
2. Listening to Short Stories (Assessment by Vocabulary Check)
3. Listening to Indian / British / American English (Assessment by Cloze)

UNIT II (6Hrs)

Reading Skill

1. Stress & Intonation
2. Tongue Twisters / Tongue Modulators Frequently
3. Mispronounced Words
4. Reading Newspaper – (Skimming & Scanning)

UNIT III (10Hrs)

Speaking Skill

1. Polite Expressions (Greeting, Requesting, Thanking, Apologizing, Opinions, Suggestions) Introducing Yourself/ Friends/ Family
2. Recite - quotes of Leaders / Scholars / Scientists
3. Face to Face Conversation
4. Just a Minute (JAM) : A talk on any topic

UNIT IV **(6Hrs)**

Writing Skill

1. Thought Fillers
2. Completing an Incomplete Story
3. How to prepare PPT
4. Non-Verbal Communication
5. Product/Process Description

PRACTICAL EXAMINATIONS

Note:

1. The students should be given proper practice in all the exercises. All the exercises should be completed before the examinations.

2. The students should maintain a record notebook. The record note book should be submitted during the Board Practical Examinations.

3. The external examiner should verify the availability of the facility for the batch strength before the commencement of Practical Examination.

4. PART D should be conducted first for all the students. Part A, Part B and Part C can be conducted by both examiners by dividing the students into two groups.

Part A- Listening (No. of Exercises: 3, Duration: 45 min.)

Question No.1: The examiner shall play either the audio of the speech of a great speaker or that of TV news running from 3 to 5 min. The audio can be played twice. The candidates may be given 10 minutes to take notes as directed in the question paper.

Question No.2: A short story selected by the external examiner shall be played only once without transcript. The objective of this exercise is to test the Listening ability of the candidate and therefore questions should be framed accordingly in the pattern of question and answer. The time to complete this exercise is 5 minutes.

Question No.3: Any one of the audios (British English, American English or Indian English) may be selected by the external examiner and the same shall be played only once. Maximum of 5 questions for filling in the blanks may be given and the candidates may be provided

maximum of 10 minutes to answer the questions. This part shall be completed within 45 minutes including the time used for playing listening audios.

Part – B – Reading (No. of Exercises 3, Duration: 45 min.)

Each batch may be divided into two. Both examiners may engage all the students.

Question No. 1: Readout the tongue twister.

Question No. 2: A passage from newspaper can be given for reading.

Question No. 3: Pronounce the words correctly. Part B shall be completed within 45 minutes.

Part – C – Speaking (No. of Exercises: 4, Duration: 45 min)

Divide the students to make it convenient for conversations in English by a pair. Both examiners can handle.

Question No.1: Polite expressions for the context provided.

Question No. 2: Self-introduction for the interview.

Question No.3: Any five quotes can be recited from the given list of quotes of Leaders, Scholars and Scientists.

Question No. 4: The candidates have to speak as directed by the concerned examiner.

Question No. 5: The candidates have to speak for a minute on a particular topic given by the concerned examiner. All the questions are mandatory. Part C shall be completed within 45 minutes.

Part - D – Writing (No. of Exercises: 3, Duration: 45 min.)

All students should appear for this part.

Question No.1: Five questions with blanks shall be asked based on a list of 25 frequently used thought fillers already trained during lab classes.

Question No. 2: shall consist of an unknown incomplete story providing scope for further development and application of imagination. (Minimum 3 lines for completion with suitable title and moral)

Question No. 3: Questions can be taken from a list of fifteen important questions covering the core areas of non-verbal communication. (Five out of eight questions to be answered)

Question No. 4: Either Product or Process description based on list of 12 frequently thought during lab classes.

Students shall be provided maximum of 30 minutes to complete Part-D.

DETAILED ALLOCATION OF MARKS

Description		**Marks**
A	Listening	20
B	Reading	10
C	Speaking	20
D	Writing	25
	Total	**75**

Guidelines for Conduct of Practical Classes and Writing Record Note: There are 15 experiments in total equally distributed to each skill as follows:

Sl. No	**Name of the exercise**	**Minimum Exercises to be Practiced / written in Record Note**
Listening Skill		
1	Listening to Speeches by Great Speakers/ TV News	Each One exercise
2	Listening to Short Stories	Minimum of two exercises
3	Listening to Indian / British / American English	Minimum of two exercises

Reading Skill		
4	Reading Tongue Twisters	A list of 25 tongue twisters
5	Reading English Newspapers	Minimum 2 passages from any English Newspaper
6	Frequently mispronounced words	List of 25 words
Speaking Skill		
7	Making Polite Expressions	Polite expressions - Greeting, Requesting, Thanking, Apologizing, Opinions, Suggestions
8	Introducing oneself / friends/family	Minimum two exercises for introducing oneself and introducing others
9	Reciting quotes	Quotes of Leaders/Scholars/Scientists (List of 25 quotes)
10	Face to face conversation	Minimum two exercises
11	Just a Minute (JAM)	Any general topic (Taught in the classroom)
Writing Skill		
12	Use of Thought Fillers	A list of 25 frequently used thought fillers
13	Completing an Incomplete Story	Minimum of two exercises. (conclusion – minimum 3 lines, title & moral)
14	Non-Verbal Communication	A list of 10 questions and answers relating to non-verbal communication.
15	Product/Process Description	Either a Product or Process to be described

Notes:

1. Each experiment shall be awarded 20 marks and the total marks secured in all experiments shall be averaged to 20marks.

2. Attendance mark shall be calculated for 5 marks as per the given norms.

3. Total internal mark is 25 (Record 20 marks + Attendance 5 marks)

4. Observation note is not applicable for this practical.

5. Listening Skill Exercises:

For each exercise under Listening Skill, minimum exercise should be provided for practice and should be recorded in the record note (as per the tabular column) Open sources available online on the sites such as

www.youtube.com,

www.letstalk.co.in,

http://www.bbc.co.uk/learningenglish/english/features/6-minute-english

https://esl-lab.com/

Can be utilized for sessions on improving listening skill

Note:

Since there is no observation note for English Communication Practical, the worksheets practiced by the students should be preserved along with the Record Note.

ELECTIVE - II

Sl No	Subject code	Subject Name	T	P	S	Remarks
5	AAG871	PORTFOLIO DESIGN	-	3	-	PRACTICAL
6	AAG872	MATERIAL CONSERVATION	-	3	-	PRACTICAL
7	AAG873	PHOTOGRAPHY	-	3	-	PRACTICAL

ENTREPRENEURSHIP AND STARTUPS

Code No: AAG671

4 Hours / week ….16 weeks **64 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

At the completion of the study, the students will be able ● To excite the students about entrepreneurship. ● Acquiring Entrepreneurial spirit and resourcefulness. ● Understanding the concept and process of entrepreneurship. ● Acquiring entrepreneurial quality, competency and motivation. ● Learning the process and skills of creation and management of entrepreneurial venture. ● Familiarization with various uses of human resource for earning dignified means of living. ● Know its contribution in and role in the growth and development of individual and the nation. ● Understand the formation of E-cell. ● Survey and analyze the market to understand customer needs. ● Understand the importance of generation of ideas and product selection. ● Learn the preparation of project feasibility report. ● Understand the importance of sales and turnover. ● Familiarization of various financial and non-financial schemes. ● Aware the concept of incubation and starts ups.

ENTREPRENERUSHIP AND STARTUPS 10 hrs

ENTREPRENEURSHIP – INTRODUCTION AND PROCESS ● Concept, Functions and Importance ● Myths about Entrepreneurship ● Pros and Cons of Entrepreneurship ● Process of Entrepreneurship ● Benefits of Entrepreneur ● Competencies and Characteristics ● Ethical Entrepreneurship ● Entrepreneurial Values and Attitudes ● Motivation ● Creativity ● Innovation ● Entrepreneurs - as problem solvers ● Mindset of an employee and an entrepreneur ● Business Failure – causes and remedies • Role of Networking in entrepreneurship

BUSINESS IDEA AND BANKING (10hrs)

• Types of Business: Manufacturing, Trading and Services • Stakeholders: Sellers, Vendors and Consumers • E- Commerce Business Models • Types of Resources - Human, Capital and

Entrepreneurial tools • Goals of Business and Goal Setting • Patent, copyright and Intellectual Property Rights • Negotiations - Importance and methods • Customer Relations and Vendor Management • Size and Capital based classification of business enterprises • Role of Financial Institutions Role of Government policy • Entrepreneurial support systems • Incentive schemes for State Government • Incentive schemes for Central Government

STARTUPS, E-CELL AND SUCCESS STORIES (10hrs)

● Concept of Incubation centre's ● Activities of DIC, financial institutions and other relevance institutions ● Success stories of Indian and global business legends ● Field Visit to MSME's ● Various sources of Information ● Learn to earn ● Startup and its stages ● Role of Technology – E-commerce and social media ● Role of E-Cell ● E-Cell to Entrepreneurship

ARCHITECTURAL PROFESSIONAL STRATEGIES (10hrs)

• Achieving Sustained design excellence. • Coordination of consultants. • Exposure to technological developments. • Specialization in design. • Keeping stakeholders updated about developments in the firm, its work and achievements. • Developing and using a network of contacts. • Identification of the potential of site for any building. • Investing time and money in innovation. • Creating a professional online presence. • Vision about changing design trends.

ARCHITECTURAL BUSINESS STRATEGIES (10 hrs)

• Business and administrative dimensions of architects' firms. • Flexibility to shift direction. • Enhancement of commercial value of the building. • Responsiveness to the client's needs and requirements.

• Regular strategic review and planning. • Identification of shifts in the client requirements. • Revisit decisions taken from time to time. • Effective presentation and accepting feedback from clients. • Changing frustrations into a desire to create solutions. • Diversifying and offering new consultancy services

14 HRS - REVISION - FIELD VISIT - REPORT

REFERENCE BOOKS:

1. "Dr. G.K. Varshney", "Fundamentals of Entrepreneurship", "Sahitya Bhawan Publications, Agra – 282002."

2. "Dr. G.K. Varshney", "Business Regulatory Framework", "Sahitya Bhawan Publications, Agra – 282002".

3. “Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd,”-“ Entrepreneurship”, “McGraw Hill (India) Private Limited, Noida – 201301”.

4. “M.Scarborough, R.Cornwell,”-“ Essentials of Entrepreneurship and small business management”,” Pearson Education India, Noida – 201301.”

5. “Charantimath Poornima M”. “Entrepreneurship Development and Small Business Enterprises”, “Pearson Education, Noida – 201301”.

6. “Trott”, “Innovation Management and New Product Development”, “Pearson Education, Noida – 201301.”

7. “M N Arora”, “A Textbook of Cost and Management Accounting”, “Vikas Publishing House Pvt. Ltd., New Delhi-110044”.

8. “Prasanna Chandra”, “Financial Management”, “Tata McGraw Hill education private limited, New Delhi.”

9. “I. V. Trivedi, Renu Jatana”,” Indian Banking System”-“ RBSA Publishers, Rajasthan.”
10. “Simon Daniel”, “HOW TO START A BUSINESS IN INDIA”-“BUUKS,” Chennai – 600018.”

11. “Ramani Sarada”, “The Business Plan Write-Up Simplified - A practitioner’s guide to writing the Business Plan”, “Notion Press Media Pvt. Ltd., Chennai 600095.”

BOARD EXAMINATION INTERNAL MARK ALLOCATION

Assignment (Theory portion) * - 10

Seminar Presentation - 10

Attendance - 5 Total - 25

Note: * Two assignments should be submitted. The same must be evaluated and converted to 10 marks.

Guidelines for assignment: First assignment – Unit I Second assignment – Unit II Guidelines for Seminar Presentation-Unit III Each assignment should have five three marks questions and two five marks questions.

BOARD EXAMINATION Note:

1. The students should be taught all units and proper exposure and field visit also arranged. All the portions should be completed before examinations.

2. The students should maintain theory assignment and seminar presentation. The assignment and seminar presentation should be submitted during the Board Practical Examinations.

3. The question paper consists of theory and practical portions. All students should write the answers for theory questions (40 Marks) and practical portions (60 Marks) should be completed for board examinations.

4. All exercises should be given in the question paper and students are allowed to select by lot. If required the dimensions of the exercises may be varied for every batch. No fixed time allotted for each portion and students have liberty to do the examination for 3 hours.

5. For Written Examination: theory question and answer: 45 Marks Ten questions will be asked for 3 marks each. Five questions from each unit 1 & 2. (10 X 3 = 30). 169 Three questions will be asked for 5 marks each. One question from each unit 1, 2 & 3 (3 X 5 = 15)

6. For Practical Examination: The business plan/Feasibility report or Report on Unit 4 & 5 should be submitted during the board practical examinations. The same have to be evaluated for the report submission (40 marks).

DETAILED ALLOCATION OF MARKS

Part A

Written Examination - Theory Question and answer (10 questions x 3 marks:30 marks & (3 questions x 5 marks: 15 marks) 45

Part B Practical Examination – Submission on Business Plan/Feasibility Report or Report on Unit 4 & 5 40 Part

C Viva voce 15 Total 100

THESIS

Code No. AAG672

15 hrs / Week …… 16 Weeks **240 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	50	Maximum marks	100
External	100	Minimum marks	50

The aim of this course is to articulate and develop a focused argument for a particular approach to a question. The thesis design project is conducted as independent work at diploma level during the final semesters, and thus attempts to test this approach in a project where intellectual ideas and design objectives merge. Thesis concludes with a final review, where the project is evaluated both on its own terms and within the broader field of contemporary architectural discourse.

This course provides a forum for discussion on a broad range of social, political, technical and aesthetic interests and issues related to design, which prepares students to develop research interests for their thesis. Based upon readings, analysis of architectural projects and presentations given by the Architect and the faculty of the College of Architecture, the course seeks to expand the student's understanding of site, program, service, and research.

First, the course will introduce methodologies and strategies used in architectural research. Second, it will expose students to case studies/former theses related to research areas Third, it will guide students in the development of a thesis proposal. Finally, it will help craft a program and/or schedule for the thesis proposal.

The course will involve discussions, lectures, and presentations. Each student is expected to participate in, and at times, lead discussions, develop a thesis proposal, and make a presentation. Out of these presentations and discussions, a detailed research plan for their thesis project should emerge. Students will be expected to demonstrate the strategies and methodologies thus exhibiting a full understanding of the context that their project inhabits and validating the notion that their work is an original and unique statement. Students will learn to understand and utilize myriad research tools via assigned readings, discussion, and submitted assignments. Exercises will both contribute directly to the Thesis as well as address the nature of inquiry in the field of Architecture.

REQUIRED READING

1. Linda Grant and David Wang, “Architectural Research Methods”, John Wiley Sons, 2002

REFERENCES

1. Donald Appleyard, “The Conservation of European Cities”, M.I.T. Press, Massachusetts, 1979.

2. Richard Kintermann and Robert, “Small Site Planning for Cluster Housing”, Van Nastrand Reinhold Company, Jondon/New York 1977.

3. Miller T.G. Jr., “Environmental Sciences”, Wadsworth Publishing Co., 1994

4. Geoffrey And Susan Jellico, “The Landscape of Man”, Thames And Hudson, 1987.

5. Arvind Krishnan & Others, “ Climate Responsive Architecture”, A Design Handbook for Energy Efficient Buildings, TATA McGraw Hill Publishing Company Limited, New Delhi, 2007

Session marks

Internal : 50 marks	15 marks -	Review 1
	30 marks -	Review 2
	05 marks -	Attendance

External : 100 marks

15 marks -	literature study, case study/net study, standards
10 marks -	site analysis, area statement, bubble diagrams
30 marks -	site plan, detailed floor plans with furniture arrangements
20 marks -	sections, elevations, details, views/model, report
10 marks –	writing on Project description
15 marks –	demonstration and viva-voce

Total 150 Practical

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

VII – SEMESTER

ROFESSIONAL PRACTICE

Code No: AAG771

6 Months – (from MAY to OCTOBER)

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

PROFESSIONAL EXPERIENCE - During the First Term the students have to undergo practical training out-side the institute, in such Architectural officers / organizations as will give them the necessary opportunity to improve and consolidate her Architectural knowledge.

During her practical training she is expected to work in accordance with the discipline of the organization and will make progress which will be carefully watched by the institution and the student will have to satisfy her employer as well as the institution.

The student will give a report of his experience giving the type of experience she had gained. Logbooks will have to be maintained by the students and counter–signed by the Principal of the firm as also the year master who will also co-ordinate training in the office as also educational objectives.

The student will give monthly report in the given format from the office, at the first week of every month. The internal marks will be awarded based on the student's performance and skills.

Performa for professional experience –

Name of the student (Academic year)

Surname / Father's Name / Student's First Name

(Name of office / Organization with address)

(i) Date of joining

(ii) Date of leaving

Employer's report: Brief details of the experience gained by the student stating the nature of work done.

Employer's opinion about students training any suggestion.

Signature
Lecturer in- charge

Signature
The Employer

DR. DHARMAMBAL GOVERNMENT POLYTECHNIC COLLEGE FOR WOMEN, THARAMANI, CHENNAI – 600 113

(AUTONOMOUS – ACCREDITED – ISO 9001 – 2008 CERTIFIED INSTITUTION)

DEPARTMENT OF ARCHITECTURE

SANDWICH COURSE IN ARCHITECTURAL ASSISTANTSHIP – 3 ½ YEARS DIPLOMA

FORM FOR TRAINING EVALUATION

Name Of The Trainee	**Evaluation Period**	**Name of the organization where the student underwent training**
	From To	

1. Nature of work allotted to the trainee:
2. Total no of days the trainee was present during the month:
3. Total no of days of absences during the month:
4. Rating of the trainees performance
   (Please tick the relevant column)

Sl		Excellent	Very good	Good	Satisfactory	Poor
a	General attitude towards job					
b	punctuality					
c	Capability to group concept					
d	Clarity in expression					
e	Sincerity and commitment					
f	Desire to learn new concepts					
g	Skill in drafting					
h	Interpersonal relationship					

Signature of Architect with seal

Vive Voce shall be taken at the end of the training period. The students are required to present log book and the photo copy of the works she done. It should be counter signed by the chief architect of the office. The examiners at Viva Voce shall examine the students on the submitted record.

Session marks

Internal : 25 marks	10 marks -	Review 1 (spell – I - 3months report)
	10 marks -	Review 2 (spell – I - 3months report)
	05 marks -	Attendance

External : 75 marks	25 marks	- demonstration of six months works involved in the office.
	20 marks	- writing about the skills learned from the office
	20 marks	- questions on knowledge related to detailing, materials and other technology
	15 marks	- six month reports

Total 100

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

LIST OF ELECTIVES

SUSTAINABLE ARCHITECTURE

Code No. AAG801

03 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To inform the need to use alternative sources of energy in view of the depleting resources and climate change. • To familiarise the students with simple and passive design considerations • To inform about the importance of day lighting and natural ventilation in building design • To make the students aware of the future trends in creating sustainable built environment.

Unit – I BASICS DEFINITIONS 08 hrs

Site and land use planning - Vernacular Architecture (natural building and eco design) and Environmental Design (green architecture, landscape, and urban design) - Introduction/Disclaimer - Sustainable Development Theory - Sustainable Architecture – Waste reduction and recycling - Indoor ecology

Unit – II SUSTAINABILITY 10 hrs

BACKGROUND - What is Sustainable Development - Various Viewpoints - Economic dimensions of sustainability - Environmental dimensions of sustainability - Social dimensions of sustainability - Sustainable Construction - Definitions - Principles - Criteria - Indicators - Conceptual Frameworks

Unit – III ENVIRONMENTAL SUSTAINABLITY 10 hrs

Environmental Architecture - Five principles of an environmental architecture - Energy Efficiency - Ecologically Benign Materials - Environmental Form - Good Design Ecological Building – Ecology - Economy - Ecological Building
Green Building - Sustainable Design - Principles of Sustainable Design

Unit – IV ENVIRONMENTAL ISSUES 10 hrs

ISSUES - Site - Sustainable Urban Design - Principles - Landform/Microclimate - Site Design Infrastructure - Efficiency
Sustainable Transportation - Sustainable Cities and Green Development
Energy - Energy Efficiency - Renewable Energy
Water - Water conservation methods
Materials - Embodied Energy - Prefabrication

Waste- Waste Management Strategies - Waste hierarchy - Sustainable development - Prevention - Reduction - On-site reuse - On-site recovery - Off-site reuse - Off-site recovery - Landfill
Community - Sustainable Communities

Unit – V INDOOR ENVIRONMENT 10 hrs

Indoor air quality - Visual quality Acoustic quality - Noise control Controllability of systems Planning Process - Design Process - Operation & Maintenance - Assessment Methodologies - Assessment Principles

Biodiversity Criteria Preservation - Three forms of biodiversity - ecosystems - Natural environment to protect - Grassland - Shrub land - Forest - Wetland - Water stream - Mangrove Marsh - Impact of urban development - Impact mitigation - Avoidance – Reduction - Compensation (on site or off site)

REQUIRED READING:

1. Manual on Solar Passive Architecture, IIT Mumbai and Mines New Delhi, 1999
2. Arvind Krishnan & Others, " Climate Responsive Architecture", A Design Handbook for Energy Efficient Buildings, TATA McGraw Hill Publishing Company Limited, New Delhi, 2001
3. Majumdar M, "Energy-efficient Building in India", TERI Press, 2000.
4. Givoni .B, "Passive and Low Energy Cooling of Buildings", Van Nostrand Reinhold, New York, 1994

REFERENCES:

1. Fuller Moore, "Environmental Control Systems", McGraw Hill INC, New Delhi - 1993
2. Sophia and Stefan Behling, Solpower, "The Evolution of Solar Architecture", Prestel, New York, 1996
3. Patrick Waterfield, "The Energy Efficient Home: A Complete Guide", Crowood press ltd, 2011.
4. Dean Hawkes, "Energy Efficient Buildings: Architecture, Engineering and Environment", W.W. Norton & Company, 2002
5. David Johnson, Scott Gibson, "Green from the Ground Up: Sustainable, Healthy and Energy efficient home construction", Taunton Press, 2008

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

EPIGRAPHY

Code No. AAG802

03 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

This course is designed to address epigraphy as an idea that enhances quality of life, as an effective planning strategy to conserve the heritage and culture. To understand the early settlement, anthropology, social and cultural aspect, building technology, building types, temples and wars etc.

Unit 1 10 hrs

Introduction about Epigraphy – importance – Indian and TamilNadu context - Archaeological Survey of India (ASI) – Role of ASI – Department of archeology, Tamilandu - recent excavation in tamil nadu – introduction to Keezhadi excavation – outline about Sangam era

Unit 2 10 hrs

Languages – Different materials - Different time line – 3rd Century BC to 18th Century BC – Alphabets – Numbers

Unit 3 10 hrs

Epigraphical Glossary - Important key words in inscriptions – Pre history – Mauriyan dynasty – Edicts of Ashoka - Ashokan inscriptions Pallava dynasty – important temples - Pallavas inscriptions – sample - Mandagapattu inscription of Mahendravarman I

Unit 4 10 hrs

Cholas dynasty – Important temples – Major cities - Cholas Inscriptions - sample - Brihadeswara temple inscription of Rajaraja Chola - Uttiramerur inscription of Parantaka I

Unit 5 08 hrs

CASE STUDY - Local visit to the temples around kancheepuram , chennai, Mandagapattu, Maamandur, Jain monuments in Thiruvanamallai etc…

REFERENCES:

1. Cholar samuthayam , Department of archeology, Tamilandu
2. sanga ilakeyathi oruyeluthu orumozhi by dr. devam
3. chitramozhi by dr. Sevandhilingam
4. pallvar varalaru by rajamanikanar
5. epigraphical glossary by Subramanian, Department of archeology, Tamilandu

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

ARCHITECTURE CONSERVATION

Code No. AAG803

03 hours / Week …… 16 weeks 48 hrs

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	03 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

This course is designed to address Conservation as an idea that enhances quality of life, as an effective planning strategy, a criticism of universal modernism and a way to address issues of memory and identity. An overview of current status of conservation in India is also provided To expose students to the multidisciplinary and interdisciplinary nature of conservation, so as to ensure students develop skills required to function as responsible professionals. This will equip students to develop models of sustainable integrated conservation addressing the complexities of historic buildings, heritage cities and cultural landscapes in India. The course recognizes that integrated and holistic approaches are vital for inclusion of heritage into mainstream development processes.

UNIT I INTRODUCTION TO CONSERVATION 08 hrs

Understanding Heritage. Types of Heritage. Heritage conservation- Need, Debate and purpose.

Defining Conservation, Preservation and Adaptive reuse. Distinction between Architectural and Urban Conservation. International agencies like ICCROM , UNESCO and their role in Conservation.

UNIT II CONSERVATION IN INDIA 10 hrs

Museum conservation – monument conservation and the role of Archeological Survey of India – role of INTACH – Central and state government policies and legislations – inventories and projects- select case studies of sites such as Hampi, Golconda, Mahabalipuram - craft Issues of conservation

UNIT III CONSERVATION PRACTICE 10 hrs

Listing of monuments- documentation of historic structures- assessing architectural character – historic structure report- guidelines for preservation, rehabilitation and adaptive re-use of historic structures- Case studies of Palaces in Rajasthan, Chettinad and Swamimalai dwellings, seismic retrofit and disabled access/ services additions to historic buildings- heritage site management.

UNIT IV URBAN CONSERVATION **10 hrs**

Over view of urban history of India and Tamil Nadu- understanding the character and issues of historic cities – select case studies of towns like Srirangaram, Kumbakonam and Kanchipuram - historic districts and heritage precincts.

UNIT V CONSERVATION PLANNING **10 hrs**

Conservation as a planning tool- financial incentives and planning tools such as Transferable Development Right(TDR)-urban conservation and heritage tourism-case studies of sites like for Cochin, Pondichery French town.- conservation project management.

REFERENCE

1.The conservation of Historic Buildings/B.M. Fieldon
2.Peter J Larkham, Conservation and the City, 1996, Routledge, London & New York.
3.Graeme Aplin, Heritage Identification, Conservation and Management, 2002, Oxford University Press.

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

THEORY OF DESIGN

Code No. AAG804

03 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

OBJECTIVES

To understand design and the role of the designer in changing society. To familiarize the students with methodologies, theories and models of the design process. To inform students about the term creativity and introduce techniques which will enable creative thinking. To inform the approaches that generate ideas for architectural design and the importance of the participatory approach to design.

UNIT I INTRODUCTION TO DESIGN **08 hrs**

Definition and understanding of design- design in history - changing role of designer on society different classifications of design according to scale, process, mode of production, etc.

UNIT II DESIGN METHODOLOGY MOVEMENT **10 hrs**

Context for the rise of the design methodology movement- theories of the first generation and the second generation design methodologists- various models of the design process- focus on the design problem: ideas of escalation/regression and wicked problem.

UNIT III CREATIVE THINKING **10 hrs**

Understanding the term creativity- theories on thinking: left brain/ right brain, convergent and divergent thinking, lateral and vertical thinking- design spectrum from the logical to chance - blocks in creative thinking- various techniques to generate creativity

UNIT IV ARCHITECTURAL CREATIVITY **10 hrs**

Design puzzles and traps - approaches to generate ideas for architectural design - types of concepts- personal philosophies and strategies of individual designers - channels to creativity in architecture

UNIT V DESIGN AND PEOPLE **10 hrs**

Concept of pattern language- participatory approach to design - design as process

Session marks

Internal : 25 marks	10 marks -	Test
	05 marks -	Assignment
	05 marks -	Seminar
	05 marks -	Attendance
External : 75 marks	Theory	

Total 100

PORTFOLIO DESIGN

Code No. AAG871

3 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

To understand the Fundamentals of software to create a basic static web page. To enable student the techniques and teaches them to be proficient in the use of the software to make simple html page, web page for college, shops and other presentation techniques involved.

To understand the tool for the task, the best way to use that tool and how to create new tools to accomplish tasks more efficiently.

1. INTRODUCTION TO DREAMWEAVER CS

Introduction – exploring the drop down menus – exploring the work space – exploring the tool bar – exploring the layer window – importing – exporting – workshop

2. PRESENTATION

All the sheet works of each student to be scanned and preparing a portfolio with the help of Dreamweaver. Hyper linking to the internet explorer.

3. TUTORIALS 30 hrs

Apart from the above exercise, basic drawings such as site plans, plans, interiors of spaces, case study sheets, final project presentation sheets, concept sheets, etc..from the subject architectural design studio may be incorporated with this software. All the exercise should be exported / drawn here and should be converting as presentation drawings to make a port folio.

REFERENCE

http://www.youtube.com/watch?v=d9KDMgGM5jk

http://www.entheosweb.com/website_design/css_styles_tutorial.asp

Session marks

Internal : 25 marks	10 marks -	Portfolio Design
	10 marks -	Presentation
	05 marks -	Attendance
External : 75 marks	20 marks -	record
	10 marks -	Presentation
	45 marks -	Design and hyperlink

Total 100 practical

MATERIAL CONSERVATION

Code No. AAG872

3 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	40

INTRODUCTION **10 hrs**

Introduction to Conservation and Restoration of Paper - Importance of material conservation – Paper - Deterioration processes of organic materials in bindings - External factors: Temperature – Humidity-Light- Mechanical damage (handling, wear and tear) - Internal factors: Natural deterioration process of organic materials - Chemical interaction between materials

CONSERVATION TECHNIQUES **10 hrs**

Proposing different treatment options and estimating times - "Fit for purpose", different approaches to conservation treatments related to different contexts - Documentation record and what to record (data sheets/images before, during and after conservation) - In situ repairs - Full conservation treatment of bound item (hypothetical full treatment)

1. Dry cleaning 2. Checking foliation 3. Dismantling
4. Washing 5. Deacidification 6. Re-sizing
7. Re-constitution of the book block
8. Sewing (preparation of the sewing material and sewing frame)
9. New spine lining 10. New end bands like originals
11. Treatment of the cover 12. Re-application of original cover

PREVENTION AND MINIMAL CONSERVATION METHODS **10 hrs**

Biocides and decontamination - Deacidification - Climate control - Temperature - Humidity Light • Shelving, flat file drawers and other storage units - • Storage Containers - Drop back spine box

Phase box - Book shoe - Four flap folder - • Housing of fragments and mounting of single sheets

• Option on how to treat pamphlet, single sheet collections and miscellaneous - • Handling procedures for rare and delicate books - • Digitization and how to minimize risk from handling documents: Minimizing damage during photographic processes - State of the art digitization, - Affordable alternatives

TUTORIAL: **18 hrs**

Analyzing and documenting book bindings (working with books from the local archives)
Digitization of archival material

BOOK REPARATION AND CONSERVATION – TOOLS, MATERIALS & EQUIPMENTS

Sl. No.	TOOLS	
1	Bone folder	Different types
2	Paper knifes	2 sizes (clothes and paper)
3	Scissors	Small – Medium - Large
4	Awls	
5	Rulers	
6	Tape	
7	Spring dividers	Different Sizes
8	Tweezers	Straight & Curved
9	Scalpels & cutting blades	(Surgical can be used)
10	Microspatula	Different types
11	Lifting knifes	
12	Erasers	Dirt sponge – Vital eraser – Gum eraser
13	Threads	(18, 25, 30's) & needles (3 & 5 size ; curb needle)
14	Adhesives	PVA type glue
15	Domestic tapes	
16	Brushes	Different types – thin, flat, big circular brushes – roller – dry
17	Tacking iron	
18	Binder Boards	(40 pts thick) 10 , 20, 40 , 60 , 80 points can also used
19	Papers	Different colours
20	For cloth materials	Starch, Arylic and Chemical
21	Fiber paper / Japanese tissues	Thin, Coarse and Heavy
22	Textile lining	
23	Blotters	
24	Mylar	3mm and 5 mm tk
25	Craft paper	

26	Heat	Set Tissue
27	Wax paper and spun polyster	
28	Thick paper	10 point board and 20 point
29	Cutting mats	
30	Paper trimmer / board shear	
31	Colibri machine	
32	Casing press	wood
33	Standing press	metal
34	Vertical plow	

REFERENCE

1. Conservation of Cultural Heritage by Hanna M. Szczepanowska
2. Conservation Treatment Methodology by Barbara Appelbaum
3. Handbook of material culture by Christopher Tilley
4. Materiality and Popular Culture : The Popular Life of Things by Anna Malinowska

Session marks

Internal : 25 marks	10 marks -	documentation 1
	10 marks -	documentation 2
	05 marks -	Attendance
External : 75 marks	20 marks -	Record
	30 marks –	demonstration
	25 marks -	written

Total 100 practical

PHOTOGRAPHY

Code No. AAG873

3 hours / Week …… 16 weeks **48 hrs**

SESSIONAL MARKS		EXAMINATION SCHEME	
		Duration	3 Hours
Internal	25	Maximum marks	75
External	75	Minimum marks	50

OBJECTIVES

To understand the Fundamentals and usage of different types of camera. To enable student the techniques and teaches them to be proficient in the use of the photography to document buildings and other objects.

1.INTRODUCTION **08 hrs**

Basics of photography – Principles – functions - camera structure – Types of Film camera Description of color and B/W films- Film speed - Film loading and unloading- Indoor and outdoor lighting techniques. Background selection - Flash and its features.

Camera parts & functions - Shutter speed, - Aperture – depth of field – Lens selection- wide angle, telephoto, zoom lens, prime lens- Tripod usage - ISO how it affect exposure function - Depth of the field - Creative uses – manual mode- Auto mode- Types of angles and frames.

Types of Digital Camera and its features – Memory Chip card - Creative shots – Settings in the Digital Camera - Handling methods – White balance - Maintenance of camera.

2.PRESENTATION **15 hrs**

Resizing the images – B/W to Color conversion – Color changes in images, dress coding, backgrounds - Customized back ground effects and its usages – Filter effects, paint image, collage photo- Tips for creative work – Types of albums – Formation of attractive sizes – Digital album designing - Designing of visiting card – Designing of Handout -visual exhibits

3.TUTIORIALS **25 hrs**

Documentation of heritage Buildings, natural asserts, portraits and wild photography

REFERENCES

1. Understanding Exposure: How to Shoot Great Photographs with a Film or Digital Camera (Paperback)
   by Bryan Peterson

2. National Geographic Photography Field Guide: Secrets to Making Great Pictures (Paperback)
   by Peter K. Burian

3. Understanding Exposure, Fourth Edition: How to Shoot Great Photographs with Any Camera (Kindle Edition)
   by Bryan Peterson
4. The Adobe Photoshop Lightroom CC Book for Digital Photographers (Voices That Matter)
   by Scott Kel

5. The Digital Photography Book, Part 5: Photo Recipes (Paperback)
   by Scott Kelby
6. Long Exposure Photography - Photography Compact (Kindle Edition)
   by Markus Kapferer

7. Improve Your Landscape Photography (Kindle Edition)
   by Jim Harmer

Session marks

Internal : 25 marks	10 marks -	Assignment 1
	10 marks -	Assignment 2
	05 marks -	Attendance
External : 75 marks	10 marks -	Documentation
	10 marks –	album design
	10 marks –	story board
	45 marks -	indoor and outdoor photography

Total 100 practical

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

SUBJECT EQUIVALENCY

DEPARTMENT OF ARCHITECTURE

DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP
(REGISTERED UNDER COUNCIL OF ARCHITECTURE COA/NO:-TND01)

SUBJECT EQUIVALENCY

Sl. no	SUBJECT NAME	R 2008	R 2011	R 2015	R 2017	R 2022
1.	HISTORY OF ARCHITECTURE - I	AA 232	AA 302	AA 302	AAE201	AAG202
2.	FREE HAND SKETCHING & RENDERING	AA 285	AA 373	AA 373	AAE271	---
3.	ARCHITECTURE WORKSHOP	---	---	---	AAE272	----
4.	BASIC DESIGN	AA 281	AA 375	AA 375	AAE273	AAG172
5.	BUILDING MATERIALS	AA 231	AA 301	AA 301	AAE301	AAG201
6.	CLIMATE & BUILT ENVIRONMENT	---	---	---	AAE302	AAG301
7.	THEORY OF ARCHITECTURE	---	AA 303	AA 303	AAE303	AAG103
8.	HISTORY OF ARCHITECTURE - II	---	AA 512	AA 512	AAE304	AAG303
9.	COMMUNICATION SKILL PRACTICAL	---	BE 183	BE 183	BEE183	BEG178
10	COMPUTER APPLICATION IN ARCHITECTURE – I	AA286	AA 374	AA 374	AAE371	AAG 272
11	BUILDING CONSTRUCTION & DETAILING – I	AA 282	AA 371	AA 371	AAE 372	AAG 273
12	ARCHITECTURAL DESIGN STUDIO	---	---	---	AA E373	---
13	APPLIED MECHANICS & STRENGTH OF MATERIALS	AA 233	AA 511	AA 511	AAE401	AAG401
14	BUILDING SERVICES - I	---	AA 513	AA 513	AAE402	AAG402
15	HISTORY OF ARCHITECTURE - III	AA 332	AA 603	AA 603	AAE403	AAG403
16	COMMUNICATION ENGLISH - IV	---	---	---	AAE471	---
17	COMPUTER APPLICATION IN ARCHITECTURE – II	---	AA 574	AA 574	AAE472	AAG373
18	BUILDING CONSTRUCTION & DETAILING – II	AA 382	AA 571	AA 571	AAE473	AAG373
19	INTERIOR DESIGN STUDIO	---	---	---	AAE474	AAG473

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SUBJECT EQUIVALENCY

Sl. no	SUBJECT NAME	R 2008	R 2011	R 2015	R 2017	R 2022
20.	SITE PLANNING	---	---	---	AAE501	AAG501
21.	BUILDING SERVICES - II	AA 333	AA 604	AA 604	AAE502	AAG502
22.	ENVIRONMENTAL SCIENCE	---	AA 607	AA 607	AAE503	AAG503
23.	COMPUTER APPLICATION IN ARCHITECTURE – III	---	AA 773	AA 773	AAE571	AAG471
24.	BUILDING CONSTRUCTION & DETAILING – III	AA 386	AA 671	AA 671	AAE 572	AAG472
25.	LANDSCAPE DESIGN STUDIO	---	---	---	AA E573	AAG573
26.	ESTIMATION AND COSTING	AA 335	AA 601	AA 601	AAE601	AAG801
27.	OFFICE PRACTISE AND PROJECT MANAGEMENT	AA 338	AA 602	AA 602	AAE602	AAG802
28.	THESIS	AA388	AA 771	AA 771	AAE672	AAG772
29.	PROFESSIONAL TRAINING	---	---	---	AAE771	AAG771
30.	SUSTAINABLE ARCHITECTURE	AA 435	AA 605	AA 605	AAE801	AAG801
31.	EPIGRAPHY	---	---	---	AAE802	AAG802
32.	ARCHITECTURE CONSERVATION	---	---	---	AAE803	AAG803
33.	THEORY OF DESIGN	---	---	---	AAE804	AAG804
34.	COMPUTER APPLICATION IN ARCHITECTURE – IV	---	AA 774	AA 774	AAE871	AAG571
35.	MATERIAL CONSERVATION	---	---	---	AAE872	AAG872
36.	PHOTOGRAPHY	---	---	---	AAE873	AAG873

DEPARTMENT OF ARCHITECTURE

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SUBJECT EQUIVALENCY

Sl. no	SUBJECT NAME	R 2008	R 2011	R 2015	R 2017	R 2022
37.	ARCHITECTURAL DRAWING – I	---	AA 372	AA 372	---	---
38.	PROFESSIONAL PRACTICE – I (NOVEMBER – APRIL)	AA 501	AA 471	AA 471	---	---
39.	ARCHITECTURAL DRAWING - II	AA 283	AA 572	AA 572	---	AAG371
40.	INTERIOR DESIGN & DETAILING	AA 384	AA 573	AA 573	---	---
41.	ARCHITECTURAL DESIGN STUDIO - I	AA 284	AA 575	AA 575	---	----
42.	CLIMATOLOGY	---	AA 606	AA 606	---	----
43.	LANDSCAPE DESIGN AND DETAILING	AA 436	AA 672	AA 672	---	----
44.	ARCHITECTURAL DESIGN STUDIO – II	AA 385	AA 673	AA 673	---	---
45.	ARCHITECTURAL DESIGN STUDIO – III (PROJECT WORK)	AA388	AA 771	AA 771	---	---
46.	PROFESSIONAL TRAINING – II (MAY – OCTOBER)	AA 502	AA 772	AA 772	---	---
47.	PORTFOLIO DESIGN	---	AA 775	AA775	---	AAG871
48.	COMMUNICATION ENGLISH - I	---	---	---	BEE101	BEG101
49.	APPLIED MATHEMATICS	---	---	---	---	AAG101
50.	APPLIED SCIENCE	---	---	---	---	AAG102
51.	ART STUDIO	---	---	---	---	AAG171
52.	BEE201 COMMUNICATION ENGLISH - II	---	---	---	BEE201	BEE201
53.	ARCHITECTUER DRAWING I	---	---	---	---	AAG271

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SUBJECT EQUIVALENCY

Sl. no	SUBJECT NAME	R 2008	R 2011	R 2015	R 2017	R 2022
54.	ARCHITECTURE DESIGN STUDIO I	---	---	---	---	AAG274
55.	ARCHITECTURAL DESIGN STUDIO - II	---	---	---	---	AAG374
56.	INTERIOR ARCHITECTURE	---	---	---	---	AAG302
57.	LANDSCAPE ARCHITECTURE	---	---	---	---	AAG404
58.	BUILDING CONSTRUCTION & DETAILING - IV	---	---	---	---	AAG572
59.	ENTREPRENERUSHIP AND STARTUPS	---	---	---	---	AAG771

**** R – Regulation**

QUESTION PAPER PATTERN

QUESTION PAPER PATTERN

COURSE CODE: TIME:

COURSE NAME: MAX MARKS:

PART – A (5X3=15)

Answer any FIVE Questions:

1.
2.
3.
4.
5.
6.
7.
8.

PART – B (5X12=60)

Answer all questions choosing any one sub division from each question.

9. A

OR

B

10. A

OR

B

11. A

OR

B

12. A

OR

B

INSTRUCTION TO QUESTION PAPER SETTERS

1. Question No 1 to 5 should be chosen from each unit. (Part A) and Question No 6, 7& 8 can be from any three units not exceeding two questions from each unit.

2. Question No 9 to 13 should be chosen from each unit using *either* .... or pattern with any of the following combination (Pattern 1 to 4) or pattern 5. The weight age of marks should be mentioned clearly. (Part B).

Combination of Questions in Part – B

Pattern 1	A		Or	B	
Pattern 2	A		Or	B	1.
					2.
Pattern3	A	1.	Or	B	
		2.			
Pattern 4	A	1.	Or	B	1.
		2.			2.

Pattern 5 Choose any two out of three

1.

2.

3.

Question paper setters are instructed to follow any one of the above mentioned patterns depending upon the nature of subjects in Part B.

Council of Architecture Guidelines

COMPARISON OF SYLLABUS