HARDAYAL Technical Campus

Farah, Mathura

Student Handout

for

1st Yr, Odd Semester (2014-15)

School of Architecture

Roll No. **: -** .....

Student's Name: - .....

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U. P. TECHNICAL UNIVERSITY, LUCKNOW

Ordinances for

Bachelor of Architecture Programme

[Approved by Academic Council in its meeting dated 21st Feb. 2007]

(Effective from the Session – 2007-08)

1. ADMISSION

1.1. Admission to the first semester of the B.Arch. will be made as per the rules formulated by the 'Academic Council' of the U.P. Technical University, Lucknow.

1.2. No admissions will be made at any other stage in the subsequent semesters of the course, except in accordance with ordinance nos. 19 and 20.

1.3. The students may be admitted directly by the institutions, to the first semester of B.Arch., in accordance with the norms/rules/directions issued by the U.P. Technical University and the U.P. State Government from time to time, against the seats left vacant after counselling.

2. ELIGIBILITY

2.1 **(a)** No candidate, with less than 50% marks in aggregate, shall be admitted to the architecture course unless he/she has passed an examination at the end of new 10+2 scheme of Senior School Certificate Examination or equivalent with Mathematics as a subject of examination of the 10+2 level.

(b) The candidates possessing three year Diploma in Architecture (10+3) recognised by Central Govt./State Govt. provided the candidates passed the Diploma Examination with minimum 50% marks in aggregate.

The selection of the candidate must be through 'aptitude Test.'

2.2 No lateral admission to second year of B.Arch. course is permitted.

3. DURATION

3.1. The duration of the undergraduate programme leading to the award of Bachelor of Architecture (B.Arch.) shall be of five years with each academic year comprising of the two semester.

3.2. Teaching for each semester shall be held, atleast, for the minimum number of working days as prescribed b the U.P. Technical University, Lucknow.

3.3. A student failing twice in first year (I and II semester combined) and, ineligible for the carry over system (Ordinance 11) shall be not permitted to continue his/her any studies further.

Provided further that if a student wishes to continue third time in First year he/she may be allowed on the terms and conditions laid down by the University for such permission, but the maximum time allowed for completing the course will remain the same as in clause 3.4.

3.4. Each student shall be required to pass the full course within a maximum period of eight years from his/her admission to first year. If a candidate, at any stage, is found to be unable to complete his full course of five years in the stipulated period of eight years, he shall not be allowed to continue his course any further.

4. ATTENDANCE

4.1. Each student is normally required to attend all the lectures, tutorials and, the studio classes in every subject, as also the curricular and co-curricular activities. However, for each subject a minimum attendance of 75% will be necessary. The Principal/Director of the Institute may condone the absence, on medical reasons, further, upto a maximum 15% limit. No further relaxation in attendance will be admissible. Thus, a student must have atleast 60% attendance in every subject.

4.2. A student who fails to achieve the prescribed minimum attendance as per the provisions of article 4.1, in any subject, shall not be allowed to appear at the semester examinations and, shall be deemed to have been detained.

4.3. The attendance of student shall be reckoned from the date of his/her registration of the student in his class.

5. CURRICULUM :

The entire curriculum of five years will be divided into ten semesters and shall include lectures, tutorials, seminars, educational tours and final thesis, as detailed in

the 'Scheme of Teaching and Examinations'. The Seventh semester of B.Arch. programme shall be devoted to Practical Training in established and recognized professional organizations as approved, by the Principal/Head of Department of architecture of college where the student is enrolled, in accordance of the regulations/executive instructions issued by the University from time to time.

6. CHANGE OF BRANCH :

No student shall be allowed to change his/her branch to join the programme of B.Arch. at any stage after his/her admission to the first semester.

7. EXAMINATION :

7.1 A Student's performance will be evaluated for the 'SESSIONALS' through continuous assessment in the form of Class-Tests, Assignments, and Viva-Voce/Practical etc. A 'SEMESTER EXAMINATION' shall, also, be held at the end of each semester for all the subjects by means of written theory papers, practicals, viva-voce and the defence of thesis or by means of any combination of these methods.

7.2 The distribution of marks for the Sessional, Theory, Practical/ Viva-Voce, and Thesis etc. for the Semester Examination shall be as per the prescribed 'Scheme of Teaching and Examination.'

7.3 The maximum marks for each subject shall consist of marks allotted for 'Semester Examination' and 'Sessionals'work.

8. QUALIFYING STANDARDS

8.1 ***Sessionals:*** A student shall be required to obtain a minimum of 50% of the allotted maximum marks for the 'Sessionals' in each subject of every semester, as also for the Thesis of 10^{th} semester, to pass in the 'Sessionals' of the said subject of the concerned semester. The provision of grace marks as per ordinance no. 9 shall not be invoked to enable a student to pass in the 'Sessionals'.

8.2 ***Theory:*** A student shall be required to obtain a minimum of 45% of the allotted maximum marks for the 'Theory' of a subject to pass in that subject at the 'Semester Examination'. For such a subject where,'Viva-Voce/Practical' is also conducted in addition to theory examination, the computation of the pass marks (45% marks) shall take into account the combined marks of 'Theory and 'Practical/Viva-Voce' examination.

8.3 ***Practicals/Viva-Voce***: For the subjects in which only 'Practical/Viva-Voce' is conducted, a student shall be required to obtain a minimum of 50% of allotted maximum marks for the 'Practical/Viva-Voce' of the said subject to pass. Similarly, 50% of allotted maximum marks for the 'Practical/Viva-Voce' of the Thesis in 10^{th} semester will be required to pass the Thesis. The provision of garace marks as per ordinance no. 9 shall not be invoked to enable a student to pass in the 'Practical/Viva-Voce' of any subject, including the thesis at the 10^{th} semester.

8.4 ***Aggregate***: A student will be required to obtain a minimum of 50% marks in aggregate of the 'Sessionals', 'Theory', 'Practical/Viva-Voce' examination and 'General Proficiency' to pass the examination, in conjunction with the provisions of article no. 10.2.

9. GRACE MARKS

9.1 A student who does not satisfy, on his own, the qualifying standards prescribed in article no. 8.2 can be awarded **'Grace marks'** not exceeding a maximum limit of 10 marks, which may be distributed among any number of subjects covered under ordinance 8.2 and the practical training of VII Semester.

9.2 The provisions of article no. 9.1 will be applied, only, if the result of a student could improve as per article no. 10.5.

10. PROMOTION RULES

10.1 A Student not satisfying the requirement of qualifying standards, at any semester, as per the article no. 8.1, shall be detained from appearing at the Semester examination. Such a student will have to repeat the academic year, as a regular student, with the next batch of students.

10.2 The result of examinations for the 'Autumn Semester' and the 'Spring Semester' shall be combined to determine if a candidate can be promoted to next higher class of the five years course.

10.3 A student satisfying all the standards as provided in ordinance no. 8 shall be declared to have **'Passed'** the academic year and promoted to the next higher class.

10.4 A student not satisfying all the criteria of qualifying standards of ordinance no. 8 in conjunction with the provisions of article no. 10.2, but failing in not more than 04 subjects limited of a maximum of 400

examination marks of both the semesters of a class taken together shall be declared to have been 'Promoted with carry over papers' (PCP) and, will be governed by Ordinance no. 11. A student so declared as PCP will have to clear the carry over papers, as and when the examination of the concerned semester is held next.

10.5 A student not satisfying all the criteria of qualifying standards of ordinance no. 8 in conjunction with the provisions of article no. 10.2, and has invoked the provisions of ordinance no.9, shall be declared as **'PASS'** with Grace marks and shall be promoted to the next higher class.

10.6 The students who are not covered by provisions of article no. 10.1 to 10.5 shall be declared to have 'Failed'. Such students will be required to repeat both the semesters of the said class, either as a 'regular student' or as an 'ex-student', in accordance with the ordinance no.12

11. PROMOTION UNDER CARRY-OVER SYSTEM

11.1 A candidate covered under article no. 10.4 shall become eligible for provisional promotion to the next higher class of the course and, shall get chance to clear the said 'Carry over papers' in the next examination of the concerned semester, under a carry-over system.

11.2 A candidate shall not be promoted to third year or fourth year or fifth year if he/she fails to satisfy the requirements of clause 8.1, 8.2 and 8.3 in more that 4 subjects limited of a maximum of 400 examination marks cumulatively in previous years.

11.3 Marks obtained by a student to clear his/her carry over paper shall replace the original marks.

12. EX-STUDENTSHIP

12.1 A student opting to clear his/her examinations as an ex-student shall be required to inform the college, in writing, within 15 days of start of the next academic session.

12.2 An ex-student shall be required to appear at the 'Theory' and 'Practical/viva-voce' examination of all the subjects, of both the semesters, of the concerned class. However, the marks, for the

'Sessionals' of all the subjects and 'General Proficiency' in the earlier regular attempt, shall be retained as obtained by him.

12.3 If a student opts to repeat the academic year, as a regular student, the new marks awarded to him for 'Sessionals' and 'General Proficiency' will replace the old marks obtained by him in the earlier attempt.

13. RESULTS :

13.1 The examination result of a student for the 'Autumn semester' of his class shall be declared to indicate his performance and 'carry over papers', while the result of the 'Spring semester' will be declared separately, which will also indicate the status of his promotion to the next higher class in accordance with the ordinance no. 10.

13.2 For the award of merit scholarship, the result of the class as per article no. 10.2 shall be considered. It will exclude all such students who have been declared as Promoted with carry over papers/Pass with grace and provisionally promoted under article nos. 10.4 and 10.5.

13.3 The 'Final result' for the award of degree shall be prepared on the basis of the cumulative performance of a student by computing the marks with weightage to marks obtained by him in each semester, as noted in the following table-

Class	**Total Marks**	**Weightage**	
		In Percentage	**Numerical**
First Year	2000	10%	200
Second Year	2000	10%	200
Third Year	2000	20%	400
Fourth Year	2000	20%	400
Fifth Year	2000	40%	800
Grand Total			**2000**

14. AWARD OF DIVISION :

14.1 The division to a student shall be awarded on the basis of his/her 'Final result' at the end of the final semester, computed in accordance with article no 13.3.

14.2 A student will be said to have secured the **'First division' with 'Honours'** if he/she has obtained 75% or more marks in the 'Final result', provided he/she has passed all the classes, in first attempt, and without invoking the grace marks as per the ordinance no.9 **and the candidates at first two top positions amongst First Div. with Honours only will be awarded medals viz. Gold and Silver respectively in order of merit.**

14.3 A student will be said to have secured the **'First division'** if he/she has obtained 60% or more marks in the 'Final result'.

14.4 A student will be said to have secured the 'Second division' if he has passed the examination of all the classes and obtained the minimum qualifying marks as per ordinance no. 8 but has secured less than 60% marks in the 'Final result'.

15. AWARD OF GENERAL PROFICIENCY MARKS:

15.1 The marks for 'General Proficiency' will be awarded, by the Proctorial Board of the Institute, keeping in consideration the performance of a student in the co-curricular & extra curricular activities, general discipline in the following manner:

(i) Co- curricular & Extra-curricular activities (Games, Sports, Cultural and Literary activities etc.) 60%
[to be awarded by the Officer-Incharge, Extra- curricular activities]

(ii) Discipline (Inside and Outside Institution/College campus) 40%
[to be awarded by the Officer Incharge, Discipline]

15.2 There is no minimum qualifying marks for 'General Proficiency'. However, the marks awarded for 'General Proficiency' will be added for the purpose of declaring result of every semester.

16. PRACTICAL TRANING

16.1 Each student will be required to proceed on 'Practical training' for the VII semester after appearing at the VI semester examination. The Principal/Head of Department of Architecture of the concerned institute will approve the office of the 'Practical training' for the student.

16.2 The marks for Practical training will be awarded to each student in accordance with the Regulations and Guidelines issued separately by the U.P.Technical University.

17. THESIS EXAMINATION

17.1 The 'Thesis' of every student in the final semester will be evaluated, on thesis presentation by the student, through viva-voce examination by the panel of the jury, in accordance with the Regulations issued separately.

17.2 The jury shall include four external members and one internal member from the faculty, in addition to the chairman. Out of the four external jury members, at least three must be present to complete the proceedings of the jury.

17.3 A student who fails in the thesis evaluation will be allowed to resubmit the modified thesis after a minimum period of two months with due approval of the Principal/Head of the Department of the concerned Institution.

18. UNFAIR MEANS AT EXAMINATION

18.1 The cases of students using 'Unfair means' at the examinations shall be dealt with in accordance with the Rules of the University, and provisions of U.P.Public Examination (Prevention of Unfair means) Act, as enforced for the time being.

19. MIGRATION

Migration of student from one Institute to other will not be allowed unless it falls within the policy directives of the U.P.Government and the U.P.Technical University.

20. POWER TO AMEND THE ORDINANCES

The 'Academic Council' shall have the powers to relax, amend any or all the provisions of these Ordinances, subject to the approval of the 'Executive Council' of the University.

[Approved by Academic Council in its meeting dated 21st Feb. 2007]

(Effective from the session 2007-08)

U. P. TECHNICAL UNIVERSITY, LUCKNOW

Ordinances for

BACHELOR OF ARCHITECTURE PROGRAMMES

UTTAR PRADESH TECHNICAL UNIVERSITY, LUCKNOW

FACULTY OF ARCHITECTURE

BACHELOR OF ARCHITECTURE

SEMESTER - I

SCHEME OF TEACHING AND EXAMINATION

S. NO.	SUBJECT CODE	NAME OF THE SUBJECT	PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
			LECTURE	TUTORIAL	PRACTICAL / STUDIO	SESSIONAL ASSESMENT			ESE					
						CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	NAR - 101	ARCHITECTURAL DESIGN - I	1	0	5	30	70	**100**	75	25	**100**	**200**	6	6 HRS.
2	NAR - 102	CONSTRUCTION & MATERIALS - I	2	0	4	25	50	**75**	50	25	**75**	**150**	6	3 HRS.
3	NAR - 103	ARCHITECTURAL STRUCTURES - I	2	1	0	15	35	**50**	50	0	**50**	**100**	3	3 HRS.
4	NAR - 104	ARCHITECTURAL DRAWING - I	1	0	5	15	35	**50**	50	0	**50**	**100**	6	3 HRS.
5	NAR - 105	ARTS & GRAPHICS - I	1	0	2	15	35	**50**	50	0	**50**	**100**	3	3 HRS.
6	NAR - 106	SURVEYING & LEVELING	1	0	2	15	35	**50**	50	0	**50**	**100**	3	3 HRS.
7	NAR - 107	COMMUNICATION SKILLS&TECHNIQUES	1	1	0	15	35	**50**	50	0	**50**	**100**	2	3 HRS.
8	NAR - 108	COMPUTERS	1	1	0	15	35	**50**	0	0	**0**	**50**	2	
9	NAR - 109	SOCIOLOGY	1	1	0	10	15	**25**	25	0	**25**	**50**	2	3 HRS.
		TOTAL	**11**	**4**	**18**							**950**	**33**	
		GENERAL PROFICIENCY										**50**		
		GRAND TOTAL										**1000**	**33**	

B. ARCH. SEMESTER – I
NAR – 101, ARCHITECTURAL DESIGN - I

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	0	5	30	70	**100**	75	25	**100**	**200**	6	6 HRS.

OBJECTIVES

- Orientation of students to the profession of architecture.
- Introduction to basic design and the basic understanding of form and space in architecture.

Module-1	**Orientation to the Architecture Profession**	Role of an Architect in the built environment. Building process, Role of other professional in building. A general survey of the changes in habitat in history. Architects act, C.O.A., I.I.A., NASA.
Module-2	**Space and Architecture**	Understanding design as to create for a particular purpose and architectural design as to create space – exercise in terms of simple drawing and sketching of objects available in nature and surroundings. Form created through lines (columns) and planes (volumes), combination thereof.
Module-3	**Form and Transformations**	Additive, Dimensional, Subtractive - exercises primarily through 3-D models of simple geometrics.
Module-4	**Scale in Architecture**	Simple measurement exercises.
Module-5	**Order in Architecture**	Geometrical, Structural, Dimensional, Material, Spatial order - through observation of surroundings as well as simple exercises in 2-D and 3-D. Exercises in order and transformations of form and space.

REFERENCE BOOKS

1. Ching, Francis D. K. “Architecture : Form, Space and Order”, John Wiley and Sons Inc.
2. Lidwell, William, Holden, Kestina, Butler, Jill, “Universal Principles of Design”, Rockport – Publications, Massachussets.

B. ARCH. SEMESTER – I
NAR – 102, CONSTRUCTION & MATERIALS – I

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	0	4	25	50	**75**	50	25	**75**	**150**	6	3 HRS.

OBJECTIVES

- To familiarize the students with constituents, properties and uses of traditional building materials used in construction.
- To understand the use of these traditional building materials in simple building works.
- To develop skills in understanding the complexities & constrains of brick masonry and joinery in carpentry.
- To familiarize the student with the basic building construction practices on site.

SECTION – A, BUILDING MATERIALS AND SCIENCES

Module-1	**Clay & Clay Products**	Mud including stabilised earth, Burnt Brinks, Brick Tiles, Brick Ballast and Surkhi.
	Stone	Classification, Availability, Characteristics and Uses.
Module-2	**Lime**	Availability, Preparation and Uses
	Cement	Manufacture and Properties.
Module-3	**Sand &Surkhi**	Characteristics, Availability and Uses.
	Mortar	Mud, Lime, Cement.
Module-4	**Concrete**	Lime, Cement.

LIST OF ASSIGNMENTS (Markrt Surveys, Seminars & Report)

1. To study the availability, constituents, properties, manufacturing processes, storage, transportation and applications of above mentioned materials.
2. To visit brick kiln/ lime kiln/ cement factory etc. for better understanding and submit report.

WORKSHOP/CONSTRUCTION YARD PRACTICE & SITE EXPOSURE

Module-5	**Workshop/Construction Yard Practice**	Practicing in construction yard by making the examples of brick masonry works etc.
Module-6	**Site Exposure**	Exposure to building construction practices on site of various items of work from foundation to roof and finishes.

LIST OF ASSIGNMENTS

1. To study the various tools, equipments used in masonry works.
2. To construct examples of brick & stone masonry works in construction yard.
3. To survey construction work on site and submit report.

SECTION – B, BUILDING CONSTRUCTION TECHNOLOGY

Module-1	**Element of Building**	Terminology, Nomenclature of various parts of building from foundation to roof.
Module-2	**Brick Work**	Brick Terminology, Simple Bonds e.g. English bond & Flemish (single and double) bond in brick work for up to two brick thick walls.
Module-3	**Brick Work**	Details at quoins and junctions in English bond and Flemish bond for up to two brick thick walls.
Module-4	**Brick Work**	Details of piers (attached and detached), Buttresses, Lintel and Sill.
Module-5	**Stone Work**	Elementary Stone Masonry, Types of joints. Random, Course and Ashlar Stone Work.
Module-6	**Foundation**	Need, Design criteria, Foundation concrete, Details of simple spread foundations for load bearing walls of various thicknesses up to two brick thick.

CONSTRUCTION PLATES

1. To understand the terminology used in buildings, through face section.
2. To understand square stopped ends of said bonds in brick masonry.
3. To understand L, T and X Junctions of said bonds in brick masonry.
4. To understand of piers (attached and detached), Buttresses, Lintel and Sill.
5. To understand square stopped ends of Random, Course and Ashlar stone masonry.
6. To understand spread foundation for masonry load bearing walls.

APPROACH

- The students would be familiarized with vernacular terminology as prevalent in this part of the country.
- The emphasis will be construction details as applicable to Indian climatic conditions.
- Site visits and market surveys will be an integral part of sessional work.

REFERENCE BOOKS

1. McKay, W.B., "Building Construction Volume I, II, III and IV", Longmans, 1955.
3. Ching, Francis D. K. and Adams, Cassandra, "Building Construction Illustrated", Wiley and Sons, 2000.
4. The Construction of Buildings – Barry Volume I, II, III and IV
5. Chudley, Roy, "Construction Technology", Longman, 2005.
6. Building Construction_Mitchell (Elementary and Advanced)
7. Rangwala, S. C., "Building Construction", Charotar Publishing House, 2007
8. Building Construction-Bindra&Arora.
9. Punmia B. C., Jain A. J., and Jain A.J., Building Construction, Laxmi Publications, 2005.
10. Building Materials by SC Rangwala: Charotar Pub. House, Anand
11. M. Gambhir, NehaJamwal, Building Materials Products, Properties and Systems, Tata McGraw Hill
12. Publishers, New Delhi, 2011.
13. R.K.Gupta, Civil Engineering Materials and Construction Practices, Jain brothers, New Delhi, 2009.
14. National Building Code of India (Latest Edition), Bureau of Indian Standards.
15. Engineering Materials-Deshpande.
16. Engineering Material-Roy Chowdary
17. Designing with models – Criss. B. Mills.
18. Morris, M., "Architecture and the Miniature: Models", John Wiley and Sons, 2000.
19. Mills, Criss B., "Designing with Models: A Studio Guide to Making and Using Architectural Models", Thomson and Wadsworth, 2000.
20. Raghuwanshi, B.S., "A Course in Workshop Technology - Vol. I and II", Dhanpat Rai and Co, 2001.
21. Wenninger (Magrus.J.) Spherical Models, Cambridge University Press, 1979

B. ARCH. SEMESTER – I
NAR – 103, ARCHITECTURAL STRUCTURES - I

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	0	15	35	**50**	50	0	**50**	**100**	3	3 HRS.

OBJECTIVES:

- To understand the basic principles of structural mechanics so that it forms the basis for study of structural design.

Module-1	**Simple Stresses and Strains**	Elasticity, Stress, Strain, Types of stresses, Elastic limit, Hook's Law, Modulus of Elasticity, Stresses in Composite Bars. Primary or Linear Strain, Poison's ratio, Shear stress, Principal stresses and strains.
Module-2	**Centre of Gravity**	Definition, Methods of finding out centre of gravity of simple figures, Centre of parallel forces.
Module-3	**Moment of Inertia**	Definition, Important theorems, Calculation of moment of inertia by first principles and its application, Moment of inertia of composite sections.
Module-4	**Elements of Statics**	Simple beams bending, Section modulus, Direct and bending stress. Shear stress in section of beam, Shears centre.
Module-5	**Shear Force and Bending Moments**	Beams shearing force and bending moment, Moment of resistance. Shear force and Bending moment diagrams.

REFERENCE BOOKS

1. Nautiyal B. D., "Introduction to Structural Analysis", B.H.U.
2. Punmia P. C., "Strength of Materials & Mechanics of Structures".
3. Khurmi R. S., "Strength of Materials".
4. Senol Utku , "Elementary Structural Analysis".
5. Rama Armarutham S., "Strength of Materials".

B. ARCH. SEMESTER – I
NAR – 104, ARCHITECTURAL DRAWING - I

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	0	5	15	35	**50**	50	0	**50**	**100**	6	3 HRS.

OBJECTIVES

- To familiarize with drawing tools and accessories.
- To give a basic knowledge of good drafting and lettering techniques.
- To develop comprehension and visualization of geometrical forms.
- To familiarize with the concept of enlarging and reducing scales.

SECTION – A, ARCHITECTURAL DRAWING (MANUAL)

Module-1	**Free Hand Drawing and Lettering**	Free hand and mechanical lettering.
Module-2	**Basic Technical Drawing**	Concept and types of line, Division of lines and angles, Drawing polygons, Inscribing and circumscribing circles in polygons, Drawing geometrical curves helix, Conoid etc.
Module-3	**Orthographic Projections**	Definition, Meaning and concept, Planes of Projections, First angle projections, Projection of points, Lines and planes in different positions.
Module-4	**Orthographic Projections**	Projection of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in different positions. Sections of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in varying conditions of sectional plane.
Module-5	**Development of Surfaces**	Development of surfaces of cubes, prisms, cylinders, pyramids, cones and spheres.
Module-6	**Solid Geometry**	Construction of section, Intersection and interpenetration of solid.

REFERENCE BOOKS

1. IH. Morris, Geometrical Drawing for Art Students - Orient Longman, Madras, 2004.
2. Francis Ching, Architectural Graphics, Van Nostrand Rein Hold Company, New York, 1964.
3. N.D.Bhatt, Elementary Engineering Drawing (Plane and Solid Geometry), Charotar Publishing House, India
4. George K.Stegman, Harry J.Stegman, Architectural Drafting Printed in USA by AmericanTechnical Society, 1966.
5. C.Leslie Martin, Architectural Graphics, The Macmillan Company, New York, 1964

B. ARCH. SEMESTER – I
NAR – 105, ARTS AND GRAPHICS - I

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	0	2	15	35	**50**	50	0	**50**	**100**	3	3 HRS.

OBJECTIVES

- Introduction to art and appreciation of art and its philosophies.
- To familiarization with principles and theories and graphic and architectural composition
- Development of art and graphic skills.

Module-1	**Philosophy of Art**	Relevance of art of life - Art and artist, Art and society, Art and religion, Art and mysticism.
Module-2	**Appreciation of Art**	Painting, Sculpture.
Module-3	**Art in Architecture**	Psychological and emotional aspect of aesthetics.
Module-4	**Theory of Design**	Elements of Design - Line, Direction, Shape, Size and Form.

DRAWING PLATES

1. To develop free hand skills - Drawing lines, Joining points, Drawing curves,
2. To develop comprehension of scale,
3. To understand still life drawing - from Observation
4. To drawing nature - shrubs, trees, grass, plants, flowers, rocks, water.

REFERENCE BOOKS

1. Arnold Dana, “Art History – A Very Short Introduction” , Oxford University Press.
2. Stallabrass, Julian, “Contemporary Art – A Very Short Introduction” , Oxford University Press.

B. ARCH. SEMESTER – I
NAR – 106, SURVEYING & LEVELING

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	0	2	15	35	**50**	50	0	**50**	**100**	3	3 HRS.

OBJECTIVES

- To develop knowledge and skills related to surveying and levelling principles and practice.

Module-1	**Introduction**	Definition, classification, principles of surveying, Units of measurement, Scale, Signs convention.
Module-2	**Chain Survey**	Instruments used, Types of chain, Instruments for ranging, Setting out angles, Erecting perpendiculars, Selection of station, Methods of taking offset, Obstacles in chaining.
Module-3	**Plane Table Survey**	Plane table and accessories, Methods of plane table survey, Radiation, Intersection, Traversing and resection, Two point and three point problems and their solution.
Module-4	**Levelling**	Definition, Classification, Booking and reduction of levels, Profile & cross section leveling, Errors in leveling.
Module-5	**Theodolite**	Study of instruments, Definition of different terms, Temporary adjustments, Uses, Measuring horizontal and vertical angles, Method of repetition, Extension of lines.
Module-6	**Contouring**	Characteristics of contours, Direct and indirect methods of contouring, Interpolation, Uses of contours, Calculation of area & volume.
Module-7	**Compass Survey**	The prismatic compass, Surveyor compass and its construction and **u**ses, Reduced and whole circle bearing, Magnetic declination, Effect of local attraction.
Module-8	**Traverse Survey**	Introduction and different methods of traversing, Error of closure.
Module-9	**Total Station Survey**	Introduction, Working principle of total station and its use. Use of software for different applications.
Module-10	**Photogrammatery**	Definition, Principles and application of photogrammatery in surveying.

LIST OF ASSIGNMENTS (Field Exercises & Drawings)

1. To find out horizontal distance between two points and plotting the details on lateral side of chain line using chain, tape, ranging rod & cross staff etc.
2. Two point problem & three point problem.
3. Making L-section & Cross section of a profile.
4. Making grids on ground using theodolite & taking spot level &drawing contour lines.
5. Making a regular polygon in field and finding error of closure using different equipment.
6. Preparing topographical map of given area using total station.
7. Study various aerial images.

REFERENCE BOOKS

1. Surveying Volume I & II by Dr. B.C. Punmia
2. Surveying and Leveling (Part – 1) by Kanetkar TP and Kulkarni SV
3. Surveying Volume -1 by Dr. K.R.Arora.

B. ARCH. SEMESTER – I
NAR – 107, COMMUNICATION SKILLS & TECHNIQUES

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	0	15	35	**50**	50	0	**50**	**100**	2	3 HRS.

OBJECTIVES

- To development in students communicative, writing and presentation skills.
- To enable them to record, report analyzes, evaluate and understand architecture, both in its theoretical and practical form.

Module-1	**Revision**	Sentence, Phrase, Clause and parts of speech - Noun-gender, Number case, Pronoun-personal' reflexive, Emphatic, Demonstrative, Indefinite, Distributive, Reciprocal, Adjective, Article, Preposition, Conjunction and Interjection. Vocabulary, Word building and word formation, Phrases and idioms, Proverbs, Reading a dictionary, Using a thesaurus.
Module-2	**Composition and Comprehension**	Essay, Story and letter writing, Summarizing, Comprehension - unseen passages.
Module-3	**Technical Communication**	Objective, Process, Levels and Flow of communication, Communication networks, Visual aids, Group communications.
Module-4	**Effective Presentation Strategies**	Effective speaking, Types of speaking, Presentation with electronic aids.

REFERENCE BOOKS

1. Raman Meenakshi and Sharma Sangeeta, "Technical Communications – Principles and Practices", Oxford UniversityPress, New Delhi.

B. ARCH. SEMESTER – I
NAR – 108, COMPUTERS

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	0	15	35	**50**	0	0	**0**	**50**	2	-

OBJECTIVES

- Introduction to basic knowledge of computers - operating system, software and hardware.
- To familiarize with software associated with text formatting, spread-sheets and presentation.
- Development of effective presentation techniques.

Module-1 **Introduction**
Introduction to computers and hardware's, General idea about popular operating systems and software, Basics of Internet.

Module-2 **MS Office - MS Word**
Create a document that can be used by previous versions of word, Saving Options.
Create a document -
Open a new document and start typing, Start a document from a template, Delete a document, Add a heading, Adjust the spaces between lines or Paragraphs, Insert a page break, Insert a picture or clip art, Insert or create a table, Headers, Footers, and Page numbers, Create a table of contents, Apply themes to Word documents, Add a cover page.
Read documents in Word -
Read a document, Mark up a document, Find or look up words and phrases, Turn on or off - full screen reading view.

Module-3 **MS Office – MS Excel**
Getting Started with Excel -
Create a workbook, Enter data in a worksheet, Format a worksheet, Format numbers in a worksheet, Print a worksheet, Create an Excel table, Filter data by using an auto filter, Sort data by using an auto filter, Apply conditional formatting, Apply data validation, Create a formula, Use a function in a formula, Chart your data, Create a macro, Create a pivot table report, Activate and use an add-in
Keyboard shortcuts in Excel 2010 -
Keyboard access to the ribbon, CTRL combination shortcut keys, Function keys, Other useful shortcut keys.

Module-4 **MS Office – MS Power point**
Create a basic PowerPoint presentation -
Name and create a new presentation, Open a presentation, Save a presentation, Insert a new slide, Add, Rearrange and delete slides, Add text to a slide, Apply a template to your presentation, Apply a theme to add color and style to your presentation, Insert a picture or clip art and insert content or insert a screenshot, Add, Change, or Delete shapes, Create a smart art graphic, Add slide numbers, Page numbers, Date and time, Create a hyperlink, Deliver and distribute your presentation, View a slide show and View your speaker notes privately, while delivering a presentation on multiple monitors, Print out a presentation, Tips for creating an effective presentation.

REFERENCE BOOKS

1. "Microsoft Office – 2013".
2. Dr. Paolo Coletti, "Basic Computer Course Book", Free University of Bolzano Bozen.

B. ARCH. SEMESTER – I
NAR – 109, SOCIOLOGY

PERIODS			EVALUATION SCHEME						SUBJECT TOTAL	CREDITS	DURATION OF THEORY PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	1	0	10	15	**25**	25	0	**25**	**50**	2	3 HRS.

OBJECTIVES

- To expose the students to the relationship between man and environment.
- To familiarize the students with basic concepts, theories and issues of Sociology and its relevance to architecture

Module-1	**Introduction**	Story of Sociology, Sociology and Architecture, Basic concepts of society - Group, Community (Rural and Urban), Association, Institution.
Module-2	**Culture and Society**	Concept of culture, Cultural identity, Cultural diversity, Cultural change.
Module-3	**Process of Socialisation**	Types of society. Pre-Modern - Hunter's and Gathers, Pastoral agrarians and Traditional states. Modern. Third world / Traditional Society.
Module-4	**Social Demography**	Population growth, Population subsistence & Migration.
Module-5	**Social Institutions**	Family, Marriage, Religion.
Module-6	**Social Infrastructure**	Education, Health, Recreation.

REFERENCE BOOKS

1. An Introduction to Sociology by Vidya Bhushan and D.R. Suchdeva
2. Sociology: A Systematic Introduction by Harry M. Jhonson
3. Indian Society and Culture – Continuity & Change by Nadeem Husnain
4. Principles of Population Studies by Asha A. Bhende & Tara Kanitkar

Hardayal Technical Campus, Mathura

Academic Calendar

(Odd Semester) 2014-15

S. No.	Particulars	Dates
1	Registration	11-16 August 2014
2	Independence Day Holiday	15 August 2014
3	Janmashtami Holiday	18 August 2014
4	Commencement of Classes	19 August 2014
5	Display and submission of Attendance	13 September 2014
6	Last date of submission of the list-1 of Students having poor attendance to the Director	15 September 2014
7	Dispatch of Attendance of Students to Parents	18September 2014
8	Last Date of submission of question papers to the examination cell	20 September 2014
9	Class Test-1	22-25 September 2014
10	Last date to show evaluated answer scripts to the students	29 September 2014
11	Last date to submit the list-1 of weak students to the Director	30 September 2014
12	Last date of Submission of CT-1 Marks	30 September 2014
13	Gandhi Jayanti Holiday	2 October 2014
14	Dussehra Holiday	3 October 2014
15	Bakreed Holiday	6 October 2014
16	Dispatch of Progress Report of Students to Parents	11 October 2014
17	Fresher's Function	To Be Declared
18	Submission and Display of Attendance	18 October 2014
19	Last date of submission of the list-2 of Students having poor attendance to the Director	18 October 2014
20	Dispatch of Attendance of Students to Parents	20 October 2014
21	Deewali Holidays	23-25 October 2014
22	Last Date of submission of question papers to the examination cell	26 October 2014
23	Class Test-2	28 Oct- 1 Nov 2014
24	Mohrram Holiday	4 November 2014
25	Last date to show evaluated answer scripts to the students	6 November 2014
26	Last date of submission of list-2 of weak students to the Director	7 November 2014
27	Submission of CT- 2 Marks	8 November 2014
28	Dispatch of Progress Report of Students to Parents	11 November 2014
29	Sports Fest	To Be Declared
30	Cultural Activities	To Be Declared
31	Distribution of Typed Question Bank and Notes	20 November 2014
32	Course Completion	20 November 2014
33	Course Revision	21-25 November 2014
34	Display of Attendance	
35	Last Date of submission of question papers to the examination cell	24 November 2014
36	PUT/CT-3	26-29 November 2014
37	Last Date for Submission of Internal Marks	4 December 2014
38	End Semester Exams	As per UPTU Schedule
39	Practical Exams	As per UPTU Schedule
40	Semester Break	To be declared

Note: Any change may be made in calendar due to any reason.