SHIVAJI UNIVERSITY, KOLHAPUR

SYLLABUS

Examination in the Faculty of Engineering and Technology

For the

Degree of "Bachelor of Architecture"

B.ARCH
FIVE YEAR DEGREE COURSE

As recommended by council of Architecture, New Delhi under Architects /Act 1972

Introduced from the Academic year
2008-2009

(Subject of the Modification that will be made from time to time)

Shivaji University, Kolhapur
Five year Bachelor of Architecture Course
Introduction

This syllabus is prepared with a view to establish a good overall base for Architecture as a profession. The student is also introduced to other technologies with which he will come in contact during his future career. He specially learns structural engineering which is inseparable from architecture , in such a way that he can design smaller structures on his own and can have intelligent teamwork with the structural engineer, so that there is joint evolution of the final product. He is also given basic knowledge in subject like interior design, land-scape architecture, urban and rural planning and valuation. This will enable him to develop specialization in any of these subjects. The syllabus is based on guide-lines as prescribed by council of Architecture.

An overall review of the syllabus should be taken every five to ten years, so as to have scope for revision and updating of syllabus in light of experience and to be in tune with the changing values and technology.

The institution should specially arrange visit to work under construction at different stages and to completed building, during which the students should be trained to observe construction operation with open eyes and have dialogue with the occupants of the building about total reaction to design quality in the completed buildings and submit the report.

The institution may under-take a very few selected Projects for designing of architectural building and architectural research and involve the senior students and the teaching staff during the design process. Casual supervision and preparation of sample bills as part of study can be done.

The student with aid of the teaching staff is expected to study relevant ISI standards concurrently with the subject.

It must be remembered that this complete course forms a base only and that architectural with all its branches and specialized subject is a continuing education throughout the Architects career.

The institution may take more periods, if they feel so in the interest of the students. The institutions may change the number of period from one subject to the other at its discretion, within the limits laid down by the Council of Architecture; lecture and studio period may also be interchanged.

Several books on relevant subjects have been recommended for reading. It should be noted that the list is not complete in itself nor that all the books are to be studied. The students can browse through these and other books and study relevant portions in details Books are also available dealing in details on each type of building. The institution is recommended to keep such books in there library which the student can refer while solving problems in Architectural Design for particular type of building.

1) Architectural design workshop and expert lectures on various topics should arranged by the institute for all classes.

2) Study tours of minimum 7- maximum 15 days (excluding journey) should be arranged to relevant historical site and new built from to explain the advance bldg. tech and materials.
3) Teaching faculty should attain the QIP, workshops, and seminars once a year to acquire advance and expertise knowledge. The institute should bear the charges for the same.
4) Institute should sponsor the staff faculty member for P.G. & P.H.D. Programs to upgrade the institute.
5) Institute should encourage the faculty and students for writing research papers, articles and books to be published in national / international journal.
6) Institute should encourage the faculty and students to organise social awareness programmers like aids, pollutions, disaster managements etc.
7) Institute should arrange for exhibition of the sessional work done for the academic year by the students and staff which will create the relationship between the institute and society for better development and awareness of Architecture.
8) Clause of class improvement at final year level.

Sl No.	Cadre	Qualification	Work Experience	Qualification & Experience for candidates from practice
1	Lecture	First class Bachelor's Degree in Architecture OR i) Bachelor's Degree in Architecture ii) First class Master's Degree in Architecture	No Minimum Requirement	
2	Assistance Professor	1) First class Bachelor's Degree in Architecture & 2) Master Degree in Architecture OR i) Bachelor's Degree in Architecture ii)First class Master's Degree in Architecture OR i) First class Bachelor's Degree in Architecture & ii) Ph.D. in Architecture.	5 Years experience in Teaching Practice / Research at the level of Lecturer or equivalent	Candidates from Practice with Bachelors Degree in Architecture & Master Degree In Architecture having first class at either of the level & having five years of professional experience shall also be eligible
3	Professor	i) First class Bachelor's Degree in Architecture & 2) Master Degree in Architecture iii) Ph.D. in Architecture or published research works in referred journals / significant professional work which can be considered equivalent to Ph.D. OR i) Bachelor's Degree in Architecture	10 years experience in Teaching / Practice / Research out of which 5 years must be at the level of Assistant Professor or equivalent in case the candidate is not Ph.D. OR 13 years experience in Teaching / Practice / Research out of which 5 years must be at the level of Assistant Professor or equivalent in case the candidate is not Ph.D.	Candidate from Practice with Bachelor's Degree in Architecture & Master Degree in Architecture having first class at either of the level & having done professional work which is significant & can be recognized equivalent to Ph.D. in Architecture & with 13 years of

		ii)First class Master's Degree in Architecture & iii) Ph.D. in Architecture or published research works in referred journals / significant professional work which can be considered equivalent to Ph.D. OR i) First class Bachelor's Degree in Architecture & ii) Ph.D. in Architecture.		professional experience out of which five years should be at a senior level.
4.	Professor (Design Chair)	Bachelor's Degree in Architecture		Each institution shall have at least one person subject to a maximum of 10 % of the post of Professor , appointed on this Chair who has 20 years of professional experience & having done exceptional professional work. Such appointment shall be for a tenure of 3 years.
5.	Director / Principal	i) First class Bachelor's Degree in Architecture & ii) Master Degree in Architecture iii) Ph.D. in Architecture or published research works in referred journals / significant professional work which can be considered equivalent to Ph.D. OR i) Bachelor's Degree in Architecture ii)First class Master's Degree in Architecture & iii)Ph.D. in Architecture or published research works in referred journals / significant professional work which can be considered equivalent to Ph.D. OR i) First class Bachelor's Degree in Architecture & ii) Ph.D. in Architecture. In addition to (i), (ii), (iii) the candidate should be eminent person in the field.	15 years experience in Teaching / Practice / Research out of which 5 years must be at the level of Assistant Professor or equivalent in case the candidate is not Ph.D. OR 18 years experience in Teaching / Practice / Research out of which 5 years must be at the level of Assistant Professor or equivalent in case the candidate is not Ph.D. Desirable: Administration experience in a responsible position.	Candidate from Practice with Bachelor's Degree in Architecture & Master Degree in Architecture having first class at either of the level & having done professional work which is significant & can be recognized equivalent to Ph.D. in Architecture & with 18 years of professional experience out of which five years should be at a senior level. Desirable: Administration experience in a responsible position.

Physical Facilities

The Institution of Architecture should be located in a building to have a floor area of about 15 sq.m.m. per student . The building should include class rooms & at least 5 studios, adequate space for faculty members , library , workshop, materials museum , laboratories , exhibition / conference room , office accommodation & common area for students & staff. The space requirements per student for architectural education whether in the Institution or in the Hostel are apt. to be more than for most other types of professional courses like engineering & medicine because of the large space required for preparation of drawing . This factor should be borne in mind in the design of Hostels & Studios.

Facilities may also be provided for extra – curricular activities & sports.

The equipment in the workshop/laboratories has also to be provided to meet with the special requirement for architectural educational. It is desirable to provide locker facilities in the studios for students.

The library, Workshops, Laboratories & Photography unit should be managed by professionally qualified staff with adequate supporting staff to assist the students & faculty members in their academic programs . There should also be administrative supporting staff to run the Architectural Institutions.

It is desirable to provide hostel accommodation & residential accommodation for staff & student in close proximity of the institution.

SHIVAJI UNIVERSITY KOLHAPUR REVISED SYLLABUS

FOR BACHELOR OF ARCHITECTURE

Five Year Degree course

YEARWISE STRUCTURE OF SYLLABUS

First Year B. Arch. :

1. Aesthetics & Visual Arts
2. Graphics – I
3. Architectural Design – I
4. Human Settlement & Scope of Architecture
5. Building Technology – I (material)
6. Building Technology – I (Construction)
7. Theory of Structure – I
8. Workshop – I
9. Communication Skill
10. Computer Technology in Architecture – I

Second Year B. Arch. :

1. Architectural Design - II
2. Building Technology – II (material)
3. Building Technology – II (Construction)
4. Theory of Structure – II
5. Surveying & Leveling
6. History of Architecture – I (Indian, Asian & Egyptian)
7. Climatology & Tropical Architecture
8. Workshop-II
9. Computer Technology & Architecture – II
10. Building Services – I (Water supply & Sanitation)
11. Graphics II

Third Year B. Arch. Part -I :

1. Architectural Design -III
2. Building Technology – III (materials)
3. Building Technology – III (Construction)
4. Structure – III
5. History of Architecture – II (European & Modern)
6. Interior Design
7. Building Services
8. Working Drawing
9. Estimating Specification & Costing
10. Architectural Acoustics

11. i) Theory of Architecture
    ii) Landscape Architecture

Third Year B.Arch. Part – II :
Practical Training & Report

Final Year B. Arch. Part - I :
1) Environmental Design
2) Advanced Architectural Design – IV
3) Advanced Building (material)
4) Advanced Building Construction
5) Advanced Structure
6) Urban & Rural Planning
7) Environmental Services
8) Adv. Estimating & Valuation of immovable Properties
9) Professional Practice & Bldg. By-laws
10) Advanced Working Drawing
11) Project (Synopsis, Case Study & Site)

Final Year B. Arch. Part – II :
1) Seminar
2) Elective
   (Two to be chosen out of)
   1) Urban Design
   2) Disaster Management
   3) Building Economics & Sociology
   4) Industrial Architecture
   5) Contemporary Architecture
   6) Architectural Conservation
   7) Housing
   8) Valuation of Immovable Properties
   9) Bldg. Management
   10) Digital Architecture
   11) Landscape Architecture
   12) Interior Design
3) Project

STRUCTURE OF BACHELOR OF ARCHITECTURE (B.ARCH.)

FIRST YEAR B. ARCH.

Subject Code	Subject	Teaching Scheme		Examination Scheme			
		Lectures	Studios	Annual Paper	Sessio-nal Work (Int.)	Oral (Ext.)	Total Marks
AR1-01	Aesthetics & Visual Arts	30	120	-	100	-	100
AR1-02	Graphics – I	30	120	100	50	-	150
AR1-03	Architectural Design – I	30	240	-	100	100	200
AR1-04	Human Settlement & Scope of Architecture	60	-	-	50	-	50
AR1-05	Building Technology – I (material)	60	-	50 *	-	-	50 *
AR1-06	Building Technology – I (Construction)	30	120	100 *	100	100	300 *
AR1-07	Theory of Structure – I	120	-	100	50	-	150 *
AR1-08	Workshop – I	-	90	-	50	-	50
AR1-09	Communication Skill	60	-	-	50	-	50
AR1-10	Computer Technology in Architecture – I	30	60	-	50	-	50
	Total	450	750	350	600	200	1200

* means combine passing for Theory & Internal marks together

First Year Period = 1200

Second Year Period = 1140

Third Year Period = 1170

Stage I : Total Period = 3510 (50 min. each)

STRUCTURE OF SECOND YEAR B.ARCH.

Subject Code	Subject	Teaching Scheme		Examination Scheme				
		Lectures	Studios	Annual Paper	Sessional Work (Int.)		Oral (Ext.)	Total Marks
AR2-01	Graphics II	30	90	100	50		-	150
AR2-02	Architectural Design - II	30	240	100	Stage I 50	Stage II 50	100	300
AR2-03	Building Technology – II (material)	60	-	50 *	-		-	50 *
AR2-04	Building Technology – II (Construction)	30	120	100 *	Stage I 50	Stage II 50	100	300 *
AR2-05	Theory of Structure – II	90	-	100	50		-	150 *
AR2-06	Surveying & Leveling	30	60	-	50		50	100
AR2-07	History of Architecture I (Indian, Asian & Egyptian)	60	-	100	50		-	150 *
AR2-08	Climatology & Architecture	60	-	100	50		-	150
AR2-09	Workshop-II	-	60	-	50		-	50
AR2-10	Computer Technology & Architecture – II	30	60	-	50		-	50
AR2-11	Building Services – I (Water supply & Sanitation)	30	60	100	50		-	150
	Total	450	690	750	600		250	1600

* means combine passing for Theory & Internal marks together

STRUCTURE OF THIRD YEAR B. ARCH. PART- I

Subject Code	Subject	Teaching Scheme		Examination Scheme				
		Lectures	Studios	Annual Paper	Sessional Work (Int.)		Oral (Ext.)	Total
AR3-01	Architectural Design -III	30	240	100	Stage I 100	Stage II 100	100	400
AR3-02	Building Technology – III (materials)	60	-	50 *	-		-	50 *
AR3-03	Building Technology – III (Construction)	30	120	100 *	Stage I 50	Stage II 50	100	300 *
AR3-04	Structure – III	90	-	100	50		-	150 *
AR3-05	History of Architecture –II (European & Modern)	60	-	100	50		-	150 *
AR3-06	Interior Design	30	60	-	Stage I 50	Stage II 50	100	200
AR3-07	Building Services	30	60	100	50		-	150
AR3-08	Working Drawing	30	90	-	Stage I 50	Stage II 50	100	200
AR3-09	Estimating Specification & Costing	30	30	100	50		-	150
AR3-11	a) Theory of Architecture b) Landscape Architecture	60 -	- 60	- -	50 50		- -	50 50
AR3-12	Architectural Acoustics	60	-	100	50		-	150
	Total	510	660	750	850		400	2000

* means combine passing for Theory & Internal marks together

STRUCTURE OF THIRD YEAR B. ARCH. PART- II

Subject Code	Subject	Teaching Scheme		Examination Scheme			
		Lecture	Studios	Annual Paper	Sessional Work (Int.)	Oral (Ext.)	Total
AR3-14	Practical Training & Report	Sixteen weeks (96 days)	-	-	-	100 viva	100 viva

STRUCTURE OF B. ARCH. FINAL PART – I

Subject Code	Subject	Teaching Scheme		Examination Scheme				
		Lectures	Studios	Annual Paper	Sessional Work (Int.)		Oral (Ext.)	Total Marks
AR4-01	Environmental Design	30	120	-	Stage I 50	Stage II 50	100	200
AR4-02	Advanced Architectural Design – IV	30	180	100	Stage I 100	Stage II 100	200	500
AR4-03	Advanced Building (material)	30	-	50	-		-	50
AR4-04	Advanced Building Construction	30	90	100	Stage I 50	Stage II 50	100	300
AR4-05	Advanced Structure	120	-	100	Stage I 25	Stage II 25	50	200
AR4-06	Urban & Rural Planning	60	-	100	50		-	150
AR4-07	Environmental Services	60	60	100	50		-	150
AR4-08	Adv. Estimating & Valuation of immovable Properties	30	60	100	50		-	150
AR4-09	Professional Practice , Bldg. By-laws & Project Management	60	-	100	50		-	150
AR4-10	Advanced Working Drawing	-	120	-	Stage I 50	Stage II 50	100	200
AR4-11	Project (Synopsis, Case study & Site analysis)	30	90	-	Stage I 25	Stage II 25	50	100
	Total	480	720	750	800		600	2150

Stage II :

Final Year Part –I = 1200
Final Year Part –II = 196

Total Period = 1396 (50 min. each)

STRUCTURE OF B. ARCH. FINAL PART – II

Subject Code	Subject	Teaching Scheme		Examination Scheme			
		Lectures	Studios	Annual Paper	Sessio-nal Work (Int.)	Oral (Ext.)	Total Marks
AR5-01	1) Seminar	16	30	-	50	-	50
AR5-02	Elective (Two to be chosen out of) 1) Urban Design 2) Disaster Management 3) Building Economics & Sociology 4) Industrial Architecture 5) Contemporary Architecture 6) Architectural Conservation 7) Housing 8) Design with Climate 9) Sustainable Architecture 10) Digital Architecture 11) Vernacular Architecture	30 30	- -	- -	50 50	50 50	100 100
AR5-03	Project	-	90	-	100	200	300
	Total	76	120	-	250	300	550

SHIVAJI UNIVERSITY, KOLHAPUR

SYLLABUS FOR FIRST YEAR ARCHITECTURE DEGREE COURSE

SUBJECT: AESTHETICS AND VISUAL ARTS (AR 1 -01)

Lectures - 30	Paper - -	Internal - 100
Studio - 120	Duration - -	External - -
Total - 150		Theory - -
		Total - 100

The purpose of this subject is to create awareness about principle of good design to develop good aesthetic taste understand of Architecture and different fine arts and their application to study the principle of arts and their examples as seen in familiar day to day objects works of arts and architecture , interior design , house design, advertising, city planning etc. In each of these fields, one works with the sizes, shapes, colours and texture etc. which are created and arranged in accordance with the principles of aesthetics.

PART- I

- Aesthetics as part of LIFE, relation of all fine arts like painting, sculpture, music dance etc. to each other in every day life ,beauty in human activities and movements, good ,mediocre and bad taste expression of Artists personality.
- History of fine arts, relationship between visual arts and performing arts.
- Definition of design, functional and decorative design requirements of good design elements of design such as line , from & shape, colour & texture, patterns etc. principle of design such as harmony & unity, proportions, contrast, scale, balance, rhythm, emphasis expression and character.
- Understand and relationship of surface from space masses, point, line, light, and shade, aesthetics in motion, sound, touch and smell. Aesthetics as part of mind.

PART -II

- Study of texture in details tonal value.
- Preliminary colour theory, primary, secondary and tertiary colours colour circle, general psychological effects of colours, colour schemes and combinations.
- Composition of group of objects, forms positive and negative spaces.
- Apertures fenestration (relationship of solids and voids) Modular theory and development of proportions, Plato's Harmonic Ratio theory, golden rectangle.
- Application of elements and principle of design in two dimensional and three dimensional visuals. Concept of fourth dimension of time as related to aesthetics.
- Training in art appreciation and developing good taste and creative potentiality through visual aids, slides, visits to museums and art galleries exhibition and exercise with different forms.
- The sessional work shall consist of study of models photographs.

Project report writing and seminar on any one selected project based on this subject

SUBJECT: GRAPHICS (AR 1-02)

Lectures	- 30	Paper	- -	Internal	- 50
Studio	- 120	Duration	- 3 hrs.	External	- -
Total	- 150			Theory	- 100
				Total	- 150

The purpose of this subject is to develop ability to present all the elements of design in graphic forms to enhance the potential of a student in presenting concepts and ideas in terms of drawing, using different techniques. This including basis and fundamentals of scale drawing, solid geometry, sciography and perspective.

PART- I

- Introduction of drawing instruments such as drawing board set-squares tee-square french curve, stencils, different types of pencils and pens and their uses.
- Lettering, size and notation of drawing, symbolic representation of building, elements and material, other features as per I.S.I and standard practice.
- Introduction of various media of drawing and presentation such as pencil, charcoal crayon, water colour, sketch pens, inks etc and exercise using all these media.
- Scale drawing, construction of various metric scales, normally used scale, use of metric scale for various purpose.
- Introduction and understanding of plain elevation and section developed and inverted plans.
- Measured drawing of small objects, such as building elements, pieces of furniture and small built forms.

PART –II

Freehand perspective drawing of parts of building, furnitures, landscape, human figures and out door sketches of trees, shade and light, configuration, orthographic projections.

- Solid geometry to explain the need of solid geometry in architectural drawings such as techniques of presenting three dimensional drawing into two dimensional objects. Exercise involving geometrical forms, presented in different positions of individual object and then in group.
- Isometric and Axonometric projections.
- Interpenetration of forms and section of solids.
- Surface development of simple and complex objects.

SUBJECT: ARCHITECTURE DESIGN I (AR 1.03)

Lecture	- 30	Paper	- -	Internal	- 100
Studio	- 240	Duration	- -	External	- 100
Total	- 270			Theory	- -
				Total	- 200

External examination (oral) will be conducted by the university.

This subject introduces the student to study of fundamentals of process and application of the knowledge gained in other subject.

He solves design problems for minor activities with application of various principal. He learns how to collect data and to analyze the same process of design and individuality of approaches.

Part I

- What is architecture and what does an architect do? Scope of this activity. Types of services rendered by an Architect.
- Approach to Architecture and design and space.
- Planning for different activities building for them.
- Function – planning from in side out
- Forms development from the above.
- Application of elements of design to achieve design principles and in creative work.
- Approach to Design as a continuous process through Aesthetics, function and Technology (construction) Basic components of a building and their functions.
- Principal of Design with reference to function, various activates and related spaces. Data collection, Environments, climate, orientation, site conditions, Circulation.
- Study of basic human Needs, Various requirements, standard measurements of Human activities and allocation of Spaces.
- Study of signal units like living spaces, sleeping and cooking spaces, stalls, bus-stops, telephone booths etc. detailed design of single room for simple function, showing relationship with adjoining areas for other activities not more than 25 sq. mts.

Part –II

- Structure, types of structures and structures techniques
- Elementary, climatology and orientation
- role of interior design in planning and Architecture
- Architecture as one of the visual arts and its inter-relationship with other arts.
- Conceptual sketches developments of above principles and disciplines.
- At the end of year the students should take review of his study of the subject and prepare summary sheet to explain the knowledge gained.
- Design problems dealing with planning for activates such as individual living, units shops, stalls, snacks bars, unilevel activities with three to four functions of total area up to 80 sq. mt.
- The students should be encouraged to collect their own data experiments and try various alternative before reaching final solution and should also be encouraged to express their ideas with the help of different media and materials.

SUBJECT: HUMAN SETTLEMENT AND CIVILISATION (AR 1 – 04)

Lectures	- 60	Paper	- -	Internal	- 50
Studio	- -	Duration	- -	External	- -
Total	- 60			Theory	- -
				Total	- 50

Part I

- The study of this in intended to understand the process of evolution and development in social, economical and cultural environment of man with emphasis on establishing their direct relationship with Architecture.
- Brief history of evolution of human settlement from ancient times to present day.
- Man and with environment: Biological and behavioral responses to metropolition to human settlements design with natural and built environments.
- Settlements in villages and in mal median and large towns metropolition cities, their characteristics and relationship for industrial, educational, cultural and religious activities etc.

Part II

- Introduction to scope of term "Culture and Civilization" and their dialogue with architecture.
- Study of impact of sociology and economics on design of human settlements other human activities.
- Study of impact of religion and culture on house, housing and other human activities.
- Human settlements in ancient medieval modern period in India Europe and other parts of the world.
- Characteristics of human settlements during regimes of Hindu, Muslim and other rules inIndia.

SUBJECT:- BUILDING TECHNOLOGY – I (MATERIAL) AR- 1-05)

Lectures	- 60	Paper	- 1	Internal	- -
Studio	- -	Duration	- 2 hrs	External	- -
Total	- 60			Theory	- 50 *
				Total	- 50

BUILDING TECHNOLOGY

- Soil : Different types and their origin, Physical properties and effect of weather, water, temperature etc. on different soil types, bearing capacity of commonly met soil and their role in building foundations, angle of repose (introductory only)
- Brick : Composition of earths, standard market and I.S.I. size properties as per I.S.I. Brick manufacturing Processes, sundried brick, special types of bricks, Different uses of brick in construction.

- Stones : Building stones, types of rocks, method of quarrying origin and composition of stones, properties of good stones natural bed, various types of stone dressings defects in stone, stones used in construction, uses in construction, aggregates.
- Sand : Pit, river sea sand, gravel, I.S.I. standards use in mortar and concrete, bulkage of stand, impurities in sand their removal, different grades of sand with respective size and their application I.S.I. standard uses in construction.
- Lime : Lime ore stone,quarrying and collection composition and physical properties method of burning of lime ore, quick lime, fat lime , hydraulic lime mortar mix, method of preparation, neeru, plaster, efflorescence, peeling, flaking, blistering, use of surkhi, I.S.I. standards, lime wash, uses in construction.

SUBJECT:- BUILDING TECHNOLOGY – I (CONSTRUCTION) (AR- 1-06)

Lectures	- 30	Paper	- 1	Internal	- 100
Studio	- 120	Duration	- 4 hrs	External	- 100
Total	- 150			Theory	- 100 *
				Total	- 300

External examination (oral) will be conducted by the university.

General introduction: structure load bearing structure

Foundation: simple foundation for masonry load bearing walls, piers pillars; in brick and stones load bearing foundation; foundation in black cotton soil; masonry retaining wall.

Superstructure

Brick masonry: tools and equipments bonding and its principles; types of brick like headers stretchers king and queen closer etc and their use, English and Flemish bond in straight line for stopped end, corner tee and cross junctions up to thickness on two brick thick wall and its combinations; attached and detached piers, buttresses, pilasters, brick on edge wall, sundried brick construction in mud mortar, soil-cement block, expansion joint in masonry compound wall.

Stone masonry : various types of stone dressing, various types stone joint such as plain, beveled, rebated dowel, clamp joint monolithic construction of columns, quoins, header bond of through stones, various types of stone masonry such as ashlars and rubble with their different types, composites wall in brick and stone, compound walls.

Hollow, solid concrete block wall.

Brick and stone paving stone

Finish: plastering, sand faced, neeru finish and other finishing types, various types of pointing. Use of scaffolding, single and double scaffolding for masonry work, bamboo, timber and tubular scaffolding.

Arches and lintels in bricks, stones and timber.

Cornices, chajja, canopy and porch in brick and stones.

Doors and windows such as ledged, braced, battened, false paneled door, simple timber window.

Roof : roof layout ridge, hip valley, gable eaves etc. types of simple pitched roof such as lean to couple, close couple and ,collar and, material and details of roof covering such as thatch manglore and other patent tiles country tiles and shingles.

Flooring: precast and in-situ flooring, laying on ground and upper floors, various types of based for flooring.

SUBJECT:- THEORY OF STRUCTURE – I (AR- 1-07)

Lectures	- 120	Paper	- 1	Internal	- 50
Studio	- -	Duration	- 3 hrs	External	- -
Total	- 120			Theory	- 100 *
				Total	- 150 *

Consider the intention of the architecture course in which students are expected to deal with the construction of building structure, the orientation of the structure syllabus shall be such that the students shall be able to understand the behaviour of structural systems, limitation of different forms and spans and choice of proper material in construction of structural components considering the strength, behaviour and response during service loads. The intention of this course is to impart basic knowledge of different structural systems, preliminary design procedure and understanding behavior and conceptual design of major/ special structural. It is not expected from the student to carry out all load assessments, analysis, design, checks it any of major structural for which they can sought the help of structural engineers however they shall be able to take decision considering intuitive structures independently.

Taking above points in to account the syllabus of structures shall be modified so that

1. In F.Y. students learn different types of load, effects of loads on structural systems types of structural systems.
2. In S. Y. they can learn about strength of material, suitability of different material to different modes of behaviour.
3. In T.Y. analysis and design of basic structure components and design of small structures.
4. In final year conceptual design of special structural and their behaviour under the action of loads shall be taught.

Studies for structure can be introduced at third and final year level where structural detailing and working drawing of small structures can get done.

Regarding the examination pattern the student shall be provided by the institute a hand–book containing formulas and basic data required in the calculation so that he will be made to understand application and use of available data rather than making memory test which in practice today.

PART- I

- Introduction: aim and object, scope of study
- Concept of simple load bearing and frame structure.
- Terminology of common structural components from foundation to roof and their concepts.
- Load: Dead, live, wind impact and earthquake, conceptual ideas and their impact on building as a whole, relevant I.S.I. code.
- Force: concept and definition cause, effect, units, force as a vector, graphical representation, resolution of forces by forces by graphical and analytical method.
- Basic concept of supports and reactions.
- Graphics: forces in simple frames and trusses under action of dead and wind load by graphical method, method of section and method of resolution.
- Moments : moment of force, moment of couple, effect of couple, beam reaction graphically and analytically, static equilibrium (H= 0, V = 0, M= 0)

PART- II

- Stress and strain : concept and definition, cause, effects, units, concepts of different types of stresses and strains, stress and strain curve, elastic limits, yield point breaking and safe stress, factor of safety, different types of safe stress as per I.S.I. code for different materials like timber,steel and other basic material, masonry and concrete walls, stress and strain. Hook's law, elastic constants, young's modulus, linear and lateral strain ,Poisson's ratio concept of shear modulus bulk modulus and their relation.

- Properties of section: centre of gravity by graphical and analytical methods, moment of inertia, modules of section, Radius of gyration etc. of simple symmetrical and asymmetrical section reference to ISI table of various steel section and their properties concept of application of these properties in structural design

- Bending moment and shear force: shear force and bending moment diagrams in case of simply suppurated beams and cantilevers with distributed and point loads and moments, points of contraflexture in simply supported beams with overhang, moments, applied to cantilevers and beams.

- Sessional work based on above topics.

SUBJECT:- WORKSHOP – I (AR- 1-08)

Lectures	-	-	Paper	-	-	Internal	- 50
Studio	-	90	Duration	-	-	External	- -
Total	-	90				Theory	- -
						Total	- 50

- Introduction of carpentry tools and machines.
- Different types of joints and their function.

- Introduction to modeling with paper, paper board, plastics, plaster of paris, wood and clay.
- Basic model making technique, different types of material and their techniques.
- Material collection- timber, sand brick, stone, aggregate etc.
- Identification and selection of timber, timber operations.
- Introduction of masonry tools.
- Demonstration of brickwork, stonework, demonstration of plaster and textured finishes. i) Mud ii) Cement iii) Lime.
- Models for basic design and Architecture design studio work.
- Study tours to sources of local building materials and to local building under construction to study their actual use.

SUBJECT: COMPUTER (AR- 1-09)

Lectures	- 30	Paper	- -	Internal	- 50
Studio	- 60	Duration	- -	External	- -
Total	- 90			Theory	- -
				Total	- 50

MICROSIFT WINDOWS

Introduction to windows use and importance
Comparison with dos application
Use of pointing devise style types parts of windows.
Concept of dialogue boxes
Window application
Concept of tab work in windows.
Concept of data interchange

CAD AND ADVANCED APPLIATION

Creating and organizing 2-d drawing
All 2 Dimensional drawing commands.
All 2 Dimensional edit commands.
Inquiry commands.
Setting for drawing
Concept of layer, line types,
Dimensions
Introduction to block and application
Textd and fonts
Out put of the drawing through printer or plotters
Different setting of drawing snap mode etc.
Hatch its patterns.

Isometric drawing

Minimum one drawing showing plan elev section of a project be submitted as sessional work.

SUBJECT :- COMMUNICATION SKILL (AR- 1-10)

Lectures - 60	Paper - -	Internal - 50
Studio - -	Duration - -	External - -
Total - 60		Theory - -
		Total - 50

PART – I

Charter No.	Name of the Topic	Hours	Marks
I A	Introduction to Communication	6	5
	Definition ., need & Importance Elements of Communication cycle (process)		
B	Principles of effective Communication	6	5
	Communication barriers & how to over come them		
II	Essay Writing	4	10
	Descriptive (Architectural point of view)		
III	Pressing writing		
	Importance & Technique of précis writing	4	10
IV	Types of professional correspondence. Application Letter, Inquiry & replies, order & complaint	8	10
V	Paragraph writing Techniques of paragraph writing	4	10

PART – II

Charter. No.	Name of the Topic	Hours	Marks
I	Correction of sentences	6	101
	Correction of common errors		
II	Do as directed	5	10
	(Remove too, active / Passive, voice, direct/ indirect		
	Affirmative, Negative, Assertive, Exclamatory		
	Question tag, Use articles, preposition, Conjunction, Change the Degree, Use Proper tense,	5	
III	Use pairs of word in sentences	4	10
IV	Use phrases and idioms in sentences	4	10
V	Transcription (language grammar)	8	10
	Transcribe the words (with the help of phonetic keys.)		

Assignments (Term Work)

1) Types of communication
   formal/ informal, verbal/ non verbal
2) communication situation
3) Advantage and disadvantages of oral comm. / written communication.
4) Vocabulary exercise on phonetics and grammar.

Guidelines for External Examiners :

1) Arch Design – Concept, Case study, Analysis, Evaluation, Presentation, Graphical understanding, Services & Construction Understanding and structural aspects should be seen.

2) B.T. (Const.) – Techniques & Graphical Understanding & detailing should be seen.

3) Envi. Design :- Environmental aspects & bylaws, quality aspects & detailing should be seen.

4) W. D.- Detailing of Project, Special Designs, RCC & Structural aspects should be seen.

5) Elective:- Approach of study concerned to research & analysis should be seen.

6) Practical Training :- Student approach in office and site and new developments in architecture should be seen.

7) Thesis – 1st Stage – Synopsis, Case Study, Analysis Site Study & Requirements (Programme).
2nd Stage – NIASA Guidelines for project.

B.Arch. Examination

(Internal Assessment Term Work)

From Academic Year 2008-2009 following internal examination system is finalized for S.Y.B. Arch., T.Y. B.Arch. Part-I & final year B.Arch. Part-I. These marks should be sent to the university for appropriate subject in Stage I & Stage II. Stage I & Stage II marks should be sent within seven days after the end of each term. These marks will be included in the final mark sheet of yearly examination.

Subject Code		Subject	Examination Scheme			
			Int. Term Work Marks		Total Marks	
			Stage I	Stage II		
S.Y. B.Arch.	AR2-02	Arch. Design -II	100	100		200
	AR-2-04	Bldg. Tech. (Const.)-II	50	50		100
T.Y. B.Arch.	AR3-01	Design - III	75	75		150
	AR3-03	B.T. Const.- III	50	50		100
	AR3-06	Interior Design	50	50		100
	AR3-08	Working Drawing	50	50		100
Final.Yr. Part -I	AR4-01	Environmental Design	50	50		100
	AR4-02	Adv. Arch. Design IV	100	100		200
	AR4-04	Adv. Bldg. Tech. (Const.)	50	50		100
	AR4-10	Adv. Working Drawing	50	50		100
	AR4-05	Advanced Structure	25	25		50
	AR4-11	Project	40	40	Ext. Oral 50	130

Project (Internal Term Work) Marking :

Stage I Total Marks – 40

1) Registration of Title & Synopsis Submission	-	February	-	15
2) Data Collection	-	April	-	25

Stage II Total Marks – 40

1) Submission of Case Study & Report	-	July	-	20
2) Submission of Requirements & Site Selection	-	Oct.	-	20

Project (External Oral)

Total Marks – Month – November - 50

Total Mark = 130

B.Architecture
Equivalence for First Year B.Arch.

Subject Code	Old Syllabus	Subject Code	New Syllabus 2008-
AR-1-01	Aesthetics & Visual Arts	AR1-01	Aesthetics & Visual Arts
AR1-02	Graphics-I	AR1-02	Graphics-I
AR1-03	Architectural Design-I	AR1-03	Architectural Design-I
AR1-04	Human Settlements & Civilization	AR1-04	Human Settlement & Scope Architecture
AR1-05	Bldg. Technology –I (material)	AR1-05	Bldg. Technology-I (materi
AR1-06	Bldg. Technology –I (Construction)	AR1-06	Bldg. Technology-I (Constr
AR1-07	Theory of Structures-I	AR1-07	Theory of Structures-I
AR1-08	Workshop-I	AR1-08	Workshop-I
AR1-09	English	AR1-09	Communication Skill
AR1-10	Computer Technology in Architecture-I	AR1-10	Computer Technology in Architecture –I
AR1-11	Theory of Design	AR1-04	Human Settlement & Scope Architecture

Students appeared in old Syllabus will be given only 2 (Two) attempts for Nov.2008 & May 2009 Exam.