DEPARTMENT OF ARCHITECTURE

Introduction:

Architects envision, design, and create habitats for people. The architecture program at Premier University prepares qualified students for careers in this comprehensive field. The focus of the program is on creativity, innovation, diversity and interactive skill development in design process. Course outline focused on making a strong foundation of art and design courses and to bring those skills and abilities into the design studio, combined with the study and applications of structures, construction technology, environmental systems, urban design and architectural history. The design studio is the ground where all the courses come together to form the professional experience of architecture.

OBJECTIVES OF THE B. ARCH PROGRAM:

Premier University is a non-profit organization with an ambition to create professionals with a high competency level. Learning from the ongoing practice in the developed world and transforming the design idea with respect to local context can bring better environment. Bachelor of Architecture program is organized in such a way that students can acquire knowledge with better perception and satisfaction.

The B.Arch program focuses on skill development and knowledge accumulation in an interdisciplinary exchange manner. Students will learn how to create spaces as well as habitats with a desired environment. Philosophical background, ethno-geographic roots, environment concerned, economically viable and technically advanced learning approach gives it a pedagogic stand. The students will be exposed to a variety of general subjects at the junior level, often with moderate specialization. They have to go through a rigor of theory courses and studios to develop specific professional and academic competence.

The year-wise thematic sequence starts with exposing students to artistic skills and communication techniques, and general appreciation of art and culture, preparatory and basic theories, intermediate and advanced knowledge, environmental and contextual awareness, and professional knowledge and skills.

The foundation year of the program helps students to build up their basic design skills and opens up their level of imagination. It brings out the basic composition sense, artistic orientation, creativity and awareness of the local context that build up the ground for basic design understanding that will remain with the students throughout their study and will be helpful in pursuing other courses. The foundation year develops the students' capacity to experience and acquire knowledge through different media and methods.

The second year of the program is designed to let the students grasp the knowledge of different core areas-both basic theories and advanced or specialized knowledge. This starts with design theory and process, covering building design as an interactive investigation of human factors, environmental forces and technology.

While in the remaining years, students will interact with the practical problems in a local context where they will learn the nature and means of creating architecture. Students will learn how to work in a group while dealing with bigger scale projects like housing, master planning and thus add a new dimension into their academic career. Internship in the eighth semester will make students capable of understanding practical job market. In the final semester, students formulate and accomplish a terminal project or thesis.

Working closely with their advisors, the students prepare programmatic statements, meet informally on a regular basis, and have formal periodic reviews throughout the year.

This curriculum has been designed carefully for imparting knowledge of architecture to the students so as to enable them to become future professionals. The supporting courses provide the basic knowledge of science, Commerce and Humanities that are essential for architectural education and to help students to enrich their skill development procedure. The program will also focus on their personal development as socially and environmentally aware citizens and lifelong learners.

Design of the Program:

The Bachelor of Architecture (B.Arch.) program extends over a period of five years divided into ten semesters. Each semester is of 18 working weeks duration where 14 weeks are assigned for the classes, 2 weeks for pre-examination leave and the remaining 2 weeks are for the examination. Normally 1 week of mid-term break is provided after 7 weeks of classes, which is followed by another 7 weeks of classes.

Each theory course is assigned 3 (three) or 2 (two) credits according to the size of detailed syllabus for each. The studios/ sessional are of 1.5 to 12 credits according to the level of the studio. There are also 2 (two) credits for professional practice theory course, 9 (nine) credits for internship, 12 credits for thesis/project and 1.5 credits project report. Thus a total of 208.5 credits are offered in this B.Arch Program.

The curricula structure of the 5 year 208.5 credit B. Arch. program has several core courses including Foundation and supporting coursed (90 credit lecture, 99 credit studio), and few Optional Courses(19.5 credit). The foundation core courses are designed to equip the students with the basic knowledge and skills in the major architectural areas. The supporting courses provide the basic knowledge of science, commerce and humanities. The optional courses allow students to select advanced courses according to their particular interest in a given area of concentration.

The main component of the architectural subjects are the design studios. Related studio subjects are working drawings, landscape and interior design. To support them there are some studio courses in communications which include courses in graphic and digital media. In the 9th semester Seminar is offered to complement design studio work. The design studios carry a substantial amount of credits so that the emphasis remains on design.

Assignment of Credits:

The assignment of credits to a theoretical course follows a different rule from that of a Studio/Sessional course.

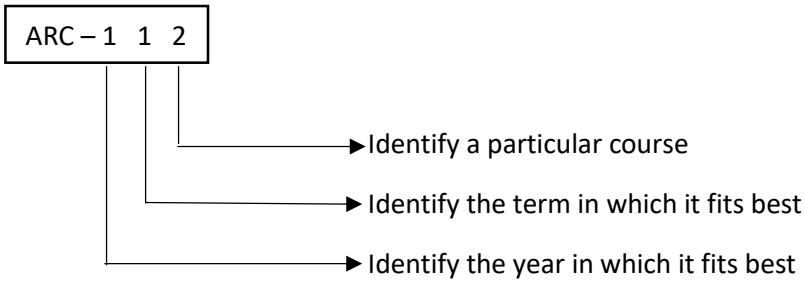
- Theoretical Courses: One lecture per week per term is equivalent to one credit.
- Studio Courses: Credits for studio courses is half of the class hours per week

  per term.

Each course is designated by a three letter code identifying the department offering the course followed by a three-digit number having the following interpretation:

- The first digit corresponds to the year/level in which the course is normally taken by the students.
- The second digit corresponds to the term of a particular year in which the course is normally taken by the students.
- The last digit is an odd number for theoretical courses and an even number for Studio/Sessional courses.

Example:



Design Studio, Jury & Grading System:

The design studio is a type of professional education, traditional in schools of architecture, in which students undertake a design project with the supervision of studio teacher/teachers. In the studio, students spend much of their working hours. Architectural design studio includes the design problem/project, periodic lectures, desk critiques, juries and final design proposal.

Design problem is introduced by the studio teacher in the form of a brief or program that outlines client goals, user requirements, site conditions and other technical information that may be acting as constraints of the problem. The problem may be a hypothetical design project developed to explore specific aesthetic, functional and/or technical issues, or the problem may be modeled closely after an actual project under consideration in the community with all its constraints like political, social/cultural, organizational, economic and technical.

At various stages during a semester, the student may be asked to present his or her project to a group for a formative evaluation. Student evaluation is structured through a jury system which has the following purposes: criticism of individual students' designs, provide general instruction, and initiate scholarly to further the student's growth. The studio teacher may provide lectures and demonstrations concerning special skills and techniques that will be required to successfully address the problem.

Concurrent with the formal studio desk criticism, students will informally criticize each other's work in the design development stage and learn various design skills and drawing and model construction techniques from each other necessary to accomplish a particular presentation of their design solution.

Studio teachers are responsible to fix up grading system for studio criticism in accordance with the nature and topics of the design studio.

Internship

Internship is a sort of Practical Training and prerequisite for the degree of B. Arch. This 6 to 8 week long training carries 9.0 credits and to give enough significance it is assigned as a core studio course. Each and every student has to go to earn practical professional architectural knowledge from a reputed/established architectural consulting firm at 4th year 2nd term level and close monitoring by the concerned studio teachers should continue. Students will go through work in the office as well as at the site of a construction project undertaken by that office. Students will have to maintain a daily log of their activities signed by the supervisor and a complete portfolio of the work done. Grade will be given on the basis of the supervisor's confidential report and an interview by board consisting of teachers of the department.

Project/ Thesis

The students will undertake Project/Thesis topic in the final semester studios and there will be assigned guide teachers and resource persons. The project and thesis report will be evaluated by a jury board which will be formed with the chairman and the members of the examination committee along with other teachers of the department and one or more experts from other institute or related field. The reports will be graded as per normal grade of the university. Failure to obtain a passing grade will call for either resubmission of project & thesis report or retake the course as may be determined by jury board.

The Studio Facilities:

Primarily there are five well equipped studios with ample lighting, drawing tables, white boards, display boards, multimedia projectors. Minimum 2 teachers or more will be assigned for each design studio depending on the number of the students and the ratio of student to teacher in design studio will be around 10 to 1. The number of studios will be increased consequently. Primarily the plan is to have its own studio space for each and every semester that will commensurate with the number of students and studio teachers along with all other facilities.

Computer Lab & other facilities:

The computer labs are equipped with state of the art graphics and design software related with architectural work, computer networking with and internet connection, in our library, necessary books for this subject are available.

Department of Architecture

Brief course outline

First Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-112	Design Studio I	0+9	Core	4.5
ARC-114	Architectural Graphics-I	0+6	Core	3.0
ARC-111	Architectural Heritage-I	3+0	Core	3.0
ARC-113	Aesthetics and Design –I	2+0	Core	2.0
MTH-111	Mathematics	3+0	Core	3.0
ENG-111	English Composition and Report Writing	2+0	Core	2.0
SS-111	Sociology	2+0	Core	2.0
ARC-119	Art Appreciation	2 + 0	Optional	2.0
	Total – 8 courses	14+15=29		21.5

Second Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-122	Design Studio II	0+9	Core	4.5
ARC-124	Architectural Graphics II	0 + 6	Core	3.0
ARC-126	Computer Graphics-I	0 + 3	Core	1.5
ARC-121	Architectural Heritage II	3 + 0	Core	3.0
ARC-123	Aesthetics and Design -II	2 + 0	Core	2.0
ARC-125	Climate and Design –I	2 + 0	Core	2.0
PHY-121	Physics	3+ 0	Core	3.0
ARC-129	Music Appreciation	2 + 0	Optional	2.0
	Total – 8 courses	12 + 18 = 30		21.0

Third Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-212	Design Studio-III	0 + 12	Core	6.0
ARC-214	Photography	0 + 3	Core	1.5
ARC-216	Computer Graphics-II	0+3	Core	1.5
ARC-211	Architectural Heritage-III	3 + 0	Core	3.0
ARC-213	Luminous and Sonic	2+0	Core	2.0
ARC-215	Environment Climate and Design-II	2+0	Core	2.0
CIV-211	Structure I	2+0	Core	2.0
ARC-219	Building Technology	2 + 0	Optional	2.0
	Total – 8 courses	11 + 18 = 29		20.0

Fourth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-222	Design Studio-IV	0 + 12	Core	6.0
ARC-224	Graphic Art	0 + 3	Core	1.5
ARC-221	Architecture Heritage-IV	3 + 0	Core	3.0
ARC-223	Construction Method and Detail	2 + 0	Core	2.0
ARC-225	Basic Planning	2 + 0	Core	2.0
CIV-221	Structure-II	2 + 0	Core	2.0
CIV-223	Plumbing	2 + 0	Core	2.0
ARC-229	Architecture and Film	2 + 0	Optional	2.0
	Total – 8 courses	13 + 15 = 28		20.5

Fifth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-312	Design Studio-V	0 + 15	Core	7.5
ARC-314	Sculpture	0 + 3	Core	1.5
ARC-316	Working Drawing-I	0 + 3	Core	1.5
ARC-311	Architecture Heritage-V	3 + 0	Core	3.0
ARC-313	Theory & Practice of Planning	2 + 0	Core	2.0
CIV-311	Structure III	2 + 0	Core	2.0
MEC-311	Mechanical Equipment's	2 + 0	Core	2.0
ARC-319	Logic	2 + 0	Optional	2.0
	Total – 8 courses	11 + 21 = 32		21.5

Sixth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-322	Design Studio-VI	0 + 15	Core	7.5
ARC-326	Working Drawing-II	0 + 3	Core	1.5
ARC-321	Architecture Heritage-VI	3 + 0	Core	3.0
ARC-323	Building and Finish Materials	2 + 0	Core	2.0
CIV–321	Structure IV	2 + 0	Core	2.0
EEE-321	Electrical Equipment's	2 + 0	Core	2.0
ARC-329	Anthropology	2 + 0	Optional	2.0
	Total – 7 courses	11 + 18 = 29		20.0

Seventh Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-412	Design Studio-VII	0 + 18	Core	9.0

ARC-414	Interior Design Studio	0 + 3	Core	1.5
ARC-411	Housing	2 + 0	Core	2.0
ARC-413	Landscape Architecture	2 + 0	Core	2.0
ARC-415	Urban Design	2 + 0	Core	2.0
CIV-411	Structure V	2 + 0	Core	2.0
MGT-411	Organizational Behavior	2 + 0	Core	2.0
ARC-419	Philosophy	2 + 0	Optional	2.0
	Total – 8 courses	12 + 21 = 33		22.5

Eighth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-422	Design Studio-VIII, (Internship)	0 + 18	Core	9.0
ARC-424	Landscape Design Studio	0 + 3	Core	1.5
ARC-421	Architectural Conservation	2 + 0	Core	2.0
ARC-423	Survey Technique & Analytical Method	2 + 0	Core	2.0
CIV-421	Structure VI	2 + 0	Core	2.0
ARC-425	Health Facilities Planning & Design	2 + 0	Core	2.0
ARC-427	Disaster Management	2 + 0	Optional	2.0
	Total – 7 courses	10+21=31		20.5

Ninth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-512	Design Studio-IX	0 + 21	Core	10.5
ARC-514	Seminar	0 + 3	Core	1.5
ARC-511	Professional Practice	2 + 0	Core	2.0
ARC-513	Specification and Cost Estimation	2 + 0	Core	2.0
ARC-515	Construction Management and Accounting	2 + 0	Core	2.0
ARC-517	Environmental Design	2 + 0	Core	2.0
ARC- 519	Research Methodology	2 + 0	Optional	2.0
	Total – 8 courses	10 + 24 = 34		22.0

Tenth Semester

Course no.	Course title	Hours/Week	Core/Optional	Credit
		Theory + Studio		
ARC-522	Design Studio-X (Thesis/Project)	0+24	Core	12.0
ARC-524	Project Report (Dissertation/ Construction Document)	0+3	Core	1.5
ARC-521	Rural Planning	2+0	Core	2.0
ARC-523	Project Economics	2+0	Core	2.0

ARC-526	Design Portfolio	0+3	Optional	1.5
	Total – 6 courses	4 + 30 = 34		19.0

TOTAL CREDIT OFFERED = 208.5

LEVEL-1 TERM-1

ARC 112: Design Studio I

4.50 Credits,9 Hours/Week.

Understanding nature in terms of forms. Exercises of two-dimensional composition in various Medias. Basic compositions with points, straight and curved lines and pure geometric shapes. Study of order and balance, scale, proportion, solid-void relationship, symmetry, asymmetry movement, flexibility, harmony, shade and shadow through composition. Understanding color and texture through compositions.

ARC 114: Architectural Graphics I

3.00 Credits,6 Hrs/Week

Mechanical and freehand architectural presentation drawings. Muilti-View Orthographic drawings such as plan, section and elevation. Praline drawings such as isometric, diametric, axonometric and one-point perspective. Lettering and graphic presentation symbols. Graphical expressions of sketch, drawing, rendering, layout, diagram, models and letters. Rough drawings of forms, shapes, objects, still image and human activity; freehand perspectives and renderings in various media; building and related elements at outdoor.

ARC 111: Architecture Heritage I

3.00 Credits,3 Hours/Week.

SECTION - A:

Origin of architecture in prehistoric times. History of art and architecture as a perpetual process of civilization through ages. Critical Evaluation of architecture from political, social, cultural and economic viewpoints with examples from ancient Egypt, Mesopotamia Samaria and Persia.

SECTION - B:

City planning and architecture in Indus civilization: Mohenjo-Daro and Harappa. Comparative study with examples from Aegean, Greek, Etruscan and Roman Architecture.

ARC 113: Aesthetics and Design -I

2.00 Credits, 2 Hours/Week

SECTION - A:

Definition and purpose of aesthetics; relationship of aesthetics with architecture; Aesthetic knowledge as a system; Methods of aesthetics; Aesthetic activity; Relationship between Art and Design. Essence and principal forms of aesthetics; Theoretical models of Aesthetics, Aesthetics as meta category. Style; Psychology of perception and creation; Creation as an object of perception. Developments of ideas and their trends in the field of aesthetic activity. Theory of criticism.

SECTION - B:

Introduction; Definition of design; Architectural design; Design methods; Design in nature; Man and design; Principles of Design; Elements of design, Architectural form, space, scale and proportioning system in relation to human perception and experiences.

MTH 111: Mathematics

3.00 Credits, 3 Hours/Week

SECTION - A:

DIFFERENTIAL CALCULUS - Function, limit, continuity, differentiation, successive and partial differentiation; Rolle's theorem; Mean value theorem; Expansion of functions; Tangent and normal; Maxima and minima.

INTEGRAL CALCULUS - Integration by various methods; Definite Integrals; Length of curves; Area bounded by plane curves; Volumes and surface areas of solids of revolution.

SECTION - B:

Co-ordinate Geometry: Plane and Line - Direction ratios and cosines of a line - Equations of a plane and intersecting planes - Symmetric form of a straight line - Angle between lines and planes - Coplanar lines - skew lines - shortest distance. Curved Surfaces - Equations of sphere - section by a plane - Tangent plane - standard equations of cone, cylinder and conoid -properties.

ENG111: English Composition and Report Writing

2.00 Credits,2 Hours/Week

SECTION - A:

Grammar Review; Common sentence patterns; Formation of sentence – questions, agreements, negations, commands, comparisons; Use of verbs – verb phrases, subject verb agreement, problem verbs, verb as complements; Noun phrases, pronouns, use of adjective and adverbs. Modal Auxiliaries, clauses,

subjunctives, Inclusive. Styles in English; Common stylistic problems. Vocabulary problems; Misused and confusing words.

SECTION - B:

Listening comprehension; Structure and written expressions; Vocabulary and reading comprehension's using modern technologies and teaching aids.

SS 111 Sociology

2.00 Credits, 2 Hours/Week

SECTION - A:

Scope, Some Basic Concepts, Social evolution and techniques of production, culture and civilization. Social structure of Bangladesh, Population and world resources. Oriental and occidental societies.

SECTION - B:

Industrial revolution, Family, Urbanization and Industrialization. Urban Ecology. Cooperative and Socialist movements. Rural sociology.

ARC 119: Art Appreciation

2.00 credits, 2 Hours/Week

SECTION - A:

Concept, development and evolution of art in different ages from cave painting to modern period with reference to important work of art and contributions of great masters. Art as imitation, expression and abstraction. Studies of creative arts like painting, sculpture, music, film, photography, etc.

SECTION - B:

The concept of craft as an art, craft as an expression of material culture, reflection of society and people. Early development of craft and its purpose. Evolution of craft through its movements. Critical analysis of selected individual art work, criticism of art and craft in a particular context, methodology.

LEVEL-1 TERM-II

ARC 122: Design Studio II

4.50 Credits, 9 Hours/Week

Prerequisite ARC 112

Understanding nature in terms of forms and space as fundamentals of composition and their different aspects. 3 dimensional composition and their scale and proportion. Layering and sequence of space,

solids, and voids, transparency and opacity. Explore different media and multilayer analysis through basic ordering principles. Basic composition with color schemes; planes, cubes and other geometric forms.

ARC 124: Architectural Graphics - II

3.00 Credits, 6 Hours/Week

Prerequisite ARC 114

Complex mechanical and free hand architectural drawing. Two and three-point perspectives. Shade-shadow and reflection in perspective. Presentation drawing in black and white, and color. Rendering concepts and techniques comprising shade & shadow, water color, photo montage, collage and others.

ARC 126: Computer Graphics - I

1.50 Credits, 3 Hours/Week

Introduction to computers and operating systems: DOS and Windows. Word processing and spreadsheets and other basic computer applications. Introduction to Computer Aided Design and drafting. Two and three dimensional computer aided architectural drawing. 2D plan elevation &section drawing, rendering, signs and symbols, dimensioning, scale, printing.

ARC 121: Architecture Heritage II

3.00 Credits, 3 Hours/Week

PrerequisiteARC111

SECTION - A:

Study of European art and architecture from the 4th to the 18th century. Early Christian, Byzantine, Romanesque, Medieval, Gothic, Renaissance, periods with their context and background.

SECTION - B:

Comparative study of world art and architecture from Baroque to Modern period. Movements and isms: romantic classicism, iron and glass, rise of commercial architecture, art novae, Bauhaus, Modern Masters. Introduction to selected projects, writings and issues up to modern world architecture.

ARC123: Aesthetics & Design II

2.00 Credits, 2 Hours/Week

Prerequisite ARC 113

SECTION - A:

Definition of art; Art as social phenomenon; Function of art; the method of art. Branches of art; Relationship between art & science; Beauty; Theoretical perception of beautiful, The beautiful in the history of artistic perception; Definition of music; Key elements of music, Relationship between music and architecture; Musical sound; Scale and form of Eastern and Western music. Historical conception of music; Modern theories of music; Methodology of musical criticism.

SECTION - B:

Context; The ideology of planning and design; Evolution of design (analysis, form, process); Social production of architecture; Influence of geo-climatic factors in design; Analysis and synthesis – aesthetics, structure and analogy. The properties and meanings of space and form etc. Ideology and its reflection in form & space. The basic methodologies of architectural criticism.

ARC 125: Climate and Design - I

2.00 Credits, 2 Hours/Week

SECTION - A:

Definition of climate, Global climatic factors, classification of climates, macro and micro climate, site climate, human comfort criteria and ranges.

SECTION - B:

Behavior and performance of a building and its components as a climatic modifier to provide comfort and energy savings through passive climatic control. Thermal design criteria, principles of thermal design and natural ventilation.

PHY 121: Physics

3.00 Credits, 3 Hours/Week

SECTION - A:

HEAT-Measurement of low and high temperature; Specific heat of solids and liquids; Transformation of heat; Thermal conductivity of solid and liquid.

Light: Theories of light: Interface, Diffraction, Polarization. Illumination and Photometry, Luminous intensity; their measurements and units, phosphorescence, fluorescence, discharge lamps.

SECTION - B:

SOUND - Simple harmonic motion; Combination of simple harmonic motion, wave motion.

ELECTRICITY - Electric Charge, conductor and insulators, Coulomb’s law, Ohm’s Law, Electrical Properties of materials.

ARC129: Music Appreciation

2.00 Credits, 2 Hours/Week

SECTION - A:

Musical forms. Ingredients of music- sound and time. Indian and western music- melody and harmony. Foundation of sub continental music- raga system: Dhrupad, Kheyal, Tappa and Thumri. Styles and presentation of vocal and instrumental music. The modern period of Bengali music- the five great composers: Rabindranath, Nazrul, Atul Prashad, D. L. Roy and Rajani Kanta.

SECTION - B:

Introduction to western classical music and works of some European masters- Bach, Beethoven, Handel, Mozart, Tchaikovsky. Relationship between music and architecture, Methodology of musical criticism.

RECOMENDED REFERANCE: Roger Kamien: Music: An Appreciation.

LEVEL-2 TERM-I

ARC 212: Design Studio III

6.00 Credits,12 Hours/Week

Prerequisite ARC 122

Development of awareness and perception of fundamentals of architecture: scale, proportion and space, The emphasis is on understanding man-space relationship, activity-space relationship and form-space relationship. Understanding ergonomics and elementary architectural spaces. Creative problem solving in two and three dimensional architectural exercises. Study of various materials.

ARC214: Photography

1.50 Credits, 3 Hours/Week

Introduction to photography. Parts and operations of camera, types of camera, lenses, films. Understanding shutter speed, depth of field & exposure. Importance of photography in architectural study and documentation. Architectural photography: typical exercises starting with bracketing, depth of field, etc. and continuing into photography of buildings, panorama, details, interiors and models. Dark room techniques in black and white.

ARC 216: Computer Graphics - II

1.50 Credits, 3 Hours/Week

Prerequisite ARC 126

2-D and 3-D architectural graphics with the help of computers. Understanding and using graphic software in architectural presentation and design development. Images and color, resolution, vector and raster. Illustration and formatting, using Corel Draw and Adobe Illustrator. Printing. Scanning. Image editing: using Adobe Photo shop. File Import export. Image editing and giving effects.

ARC211: Architectural Heritage III

3.00 Credits,3 Hours/Week

Prerequisite ARC 121

SECTION - A:

Indian sub-continental Architecture: Introduction to Gupta period; Evolution of temples; Dravidian style; Northern Indo-Aryan style.

SECTION - B:

Indian Sub-continental Architecture: Indus civilization; Vedic civilization; Early Mauryan dynasty; Buddhist period; Rock-cut architecture; Hynayana phase, Mahayana phase.

ARC 213: Luminous and Sonic Environment

2.00 Credits, 2 Hours/Week

SECTION - A:

Luminous: The Luminous environment, physical nature of the Luminous environment, human responses to environmental vision factors. Daylight in architecture, prediction tools and techniques of supplementary and artificial lighting, designing for daylight in the tropics.

SECTION - B:

Sonic: The concepts related to architectural acoustics; properties of sound; the fundamentals of sound perception, generation and propagation; behavior of sound in enclosed spaces. Principles of acoustical design of rooms for speech. Music and multi-purpose use. The concept of noise and control; sound absorption, reflection, diffraction, diffusion & isolation criteria for noise control design and acoustical measurements.

ARC 215: Climate & Design II

2.00 Credits, 2 Hours/Week

Prerequisite Arch 125

SECTION - A:

SOLAR CONTROL: Solar geometry - Solar chart - Sun angles and shadow angles- Design of solar shading devices.

AIR MOVEMENT: Wind rose - Wind shadows - Air movement around and through buildings - Stack effect - Thermally induced Air currents.

SECTION - B:

SHELTER DESIGN IN TROPICS: Design considerations, for hot-dry, warm-humid, composite and upland climates - Heavy rainfall regions - Landscape and climatic design.

CIV211: Structure I

2.00 Credits, 2 Hours/Week

SECTION - A:

Force; equilibrium, free body diagrams; resultants and Components; coplanar Concurrent forces; moments and parallel coplanar forces; centroid; moment of Inertia of areas; Maximum and minimum forces; friction; flexible chord; calculation of bar forces for simple trusses.

SECTION - B:

Types of structures and their methods and techniques of construction. Foundation, floor, wall and roof systems. Use of different types of modules. Moisture and thermal protection of floor, wall and roof. Doors and windows. Details of kitchen, bathroom and stair. Elevators and escalators. Construction techniques of special form: dome, vault, shell, space frame and metal structure. Building joints and movements.

ARC 219: Building Technology

2.00 Credits. 2 Hours/ Week

SECTION - A:

Definitions, types, preparation, manufacture, properties, uses, and applications of stone, metal, reconstructed wood, plastic and rubber. Modular co-ordination.

SECTION - B:

Prefabrication Techniques of building components. Construction techniques of special forms: dome, vault, shell, space frame and metal structure. Techniques of construction with indigenous materials.

LEVEL-2 TERM-II

ARC222: Design Studio - IV

6.00 Credits, 12 Hours/Week

Prerequisite ARC 212

Understanding relationship between function, space, form and structure. Program analysis, site analysis, functional zoning, schematic design, entry approach, circulation pattern, indoor-outdoor relationship, formal and spatial relationship. Environmental performance of building, site and surrounding. Report writing based on literature survey and field studies. Design of buildings with simple functions with basic skills, ideas and techniques.

ARC 214: Graphic Art

1.50 Credits. 3 Hours/Week

Basic techniques used in graphic design. Selection of drawing instruments, surfaces, typography.Use of tools and materials in presentation with color pencil, pastel, water colour-wash and gouache, ink, charcoal, airbrush and marker. Graphic reproduction techniques and the pros and cons of different systems to achieve the most effective presentation. Sketching as an essential technique to record design ideas during conceptualization. Graphic design of posters, products, display, portfolio. Introduction to computer generated presentation.

ARC 221: Architecture Heritage IV

3.00 Credits. 3Hours/Week

PrerequisiteARC211

SECTION - A:

Study of society, culture and architecture of Bengal through the ages: Mauryan, Pala, Sena, Sultanate, Mughal and Colonial periods. Language, custom, art and literature, and their relevance to architecture and planning. Spatial characteristics, proportion, use of materials, craftsmanship, construction techniques and other architectural features. Comparative analysis and evolution of the heritage and vernacular architecture of the area and its implication on the contemporary architecture of the country. Social, cultural, political and economic development and their influence on the built form.

SECTION - B:

Documentation of vernacular structures, architectural elements and their context, materials and technique; critical evaluation of transformation and evolution.

Arch 223: Construction Methods and Details

2.00 Credits. 2 Hours/Week

SECTION - A:

Foundations; Function and purpose of foundation: Classification, construction procedure, application of shallow and deep foundation; Causes of failures of foundation and remedial measures. Brick Masonry: Different types of brick bonds and their construction procedure; supervision of brick work: Typical structures in brick work. Damp Proofing; Causes and effects of dampness; Methods of damp proofing; DPC treatment in buildings. Walls; Load bearing walls -- types &design considerations; Cavity walls -- general features & construction of cavity walls. Partition walls – brick, concrete, glass, metal lath and timber partition walls -- their use and construction techniques.

SECTION - B:

Roofs; Classification and construction technique of roofs. Stairs; Types of stair; Stairs of different materials; Requirement of good stairs; Doors and windows; Classification of doors and windows; Fixtures and fastening for doors and windows; Technical terms. Provision of joints in structure; Construction technique of expansion joints, isolation joints, sliding joints, contraction joints, construction joints.

Arch 225: Basic Planning

2.00 Credits. 2 Hours/Week

SECTION - A:

Basic planning theories. The spatial structure of cities: concentric zone theory, sector theory, multiple nuclei theory, Chris taller theory of size, spacing and distribution of central places. Rank-size rule. Theories and principles of resources use and their limitations. History of settlements. Origin and evolution of settlements and cities.

SECTION - B:

Introduction of community, city and regional planning; Physical planning as a space dimension of national economic growth; City planning during ancient, classical medieval, neo-classical and modern periods. Industrial revolution and changes in the character of cities. New thoughts and ideas in planning after the industrial revolution. Problems & prospects of planning in Bangladesh.

CIV 221: Structure II

2.00 Credits. 2 Hours/Week

PrerequisiteARCCIV-211

SECTION - A:

Centroids; Moment of Inertia of Areas; Moment of Inertia of Mass.

SECTION - B:

Flexible chords; calculations of bar forces for simple truss; maximum and minimum forces

CIV 223: Plumbing

2.00 Credits. 2 Hours/ Week

SECTION - A:

Water supply and sanitation system in buildings; Introduction to water supply systems in high rise buildings.

SECTION - B:

Drainage and sewage disposal, Introduction to drainage systems in high rise buildings. Rural sanitation programmes in Bangladesh

ARC 229: Architecture and Film

2.00 Credits. 2 Hours/ Week

SECTION - A:

This course will analyze different historical and theoretical approaches of documentary filmmaking, while referring to relevant approaches in documentary photography. The study will focus on how documentaries are made by trying to situate the filmmaker, defining the context of the movie, and calling into question the interpretation of the outcome.

SECTION - B:

Seminars on films will be screened during class time followed by group discussion. Students will be asked to form individual arguments with regard to the material presented; evaluating its relevance to the realm of architecture. Students will present individually or in group their own documentary film at the end of the semester as their final assignment.

LEVEL-3 TERM-I

ARC 312: Design Studio V

7.5 Credits. 15 Hours/Week

Prerequisite ARC 222

Design exercises on buildings and complexes of buildings with simple functional and technical requirements, emphasizing imaginative concepts for expressing form and functional relationship, spatial quality, indoor- outdoor relationship and structural systems.

ARC 314: Sculpture

1.50 Credits, 3 Hours/Week

Study and analysis of three-dimensional qualities of different volumetric forms. Exercises based on the use of different types of materials like clay, wood, metal, plastic, stone etc.

ARC 316: Working Drawing I

1.5 Credits. 3 Hours/Week

Working drawings specifying materials and instructions for construction. Understanding construction document process and techniques. The construction document will include preparation of working and detail drawings of all building components. Details of drainage, damp-proofing and insulation. Bathroom and kitchen layouts. Application of building codes and bylaws.

ARC 311: Architectural Heritage V

3.00 Credits,3Hours/Week

PrerequisiteARC221

SECTION - A:

Modern art in the 19th and 20th centuries. Impressionism to Cubism in art. Age of 'isms' in art - cubism, purism, futurism, Dada and surrealism, constructivism, pop and op art, minimalism. Modern architecture:

SECTION - B:

Modern Architecture: Modern movement. Integrity of form and monumentalized technology - Mies Van der Rohe. Le Corbusier and means of expression. Standardization and irrationality - Alvar Aalto. Louis I. Kahn and architecture of great occasions J. Sterling and others.

ARC 313: Theory and Practice of Planning

2.00 Credits. 2 Hours/Week

PrerequisiteARC-225

SECTION - A:

Meaning, scope and significance of planning. Development planning. Sectoral and spatial approaches; need for integration. Planning theories; normative versus positive; procedural versus substantive. Traditional planning theories: incremental versus comprehensive; master plan, zonal plans and land use plan.

SECTION - B:

Modern planning process/ cyclical planning: strategic approach, structure, local and action plans. Systems approach, decision theory and conflict management. Advocacy and corporate planning. Planning and

public policies. Planning practices in Bangladesh: master plan of Dhaka 1959, Dhaka metropolitan area integrated urban development project 1981, Dhaka metropolitan development planning 1993, Detail Area Plan.

CIV 311: Structure III

2.00 Credits, 2 Hours/Week

SECTION - A:

Fundamental concepts of stress and strain, stresses and strains in member subjected to tension, 'compression, shear and temperature changes. The concept of factor of safety, Mechanical properties of materials.

SECTION - B:

Shear force and bending moment diagrams for statically determinate beams and frames. Indeterminate beam analyses; buckling of columns.

MEC311: Mechanical Equipment

2.00 Credits, 2.00 Hours/Week

SECTION - A:

Basic concepts and definitions of mechanical control of architecture. Heating & Cooling load calculation, air-conditioning systems, air handling and distribution, design of ducts. Air-conditioning equipment's.

SECTION - B:

Fire hazards, firefighting methods. Vertical transportation: types of elevators, determination of size and quantity of elevators. Incoming and outgoing traffic handling. Escalators and moving ramps. Special requirements and systems for multi- storied buildings.

ARC 319: Logic

2.00 Credits, 2 Hours/Week

SECTION - A:

Introduction to Deductive Logic: Definition and scope of deductive logic; terms and predicable; proposition and opposition of propositions; inference and syllogism.

SECTION - B:

Introduction to inductive Logic: Definition and scope of inductive logic; nature, characteristics and bases of scientific induction; methods of scientific induction; nature of hypothesis; inference and analogy.

LEVEL-3 TERM-II

ARC 322: Design Studio VI

7.5 Credits, 15 Hours/Week

Prerequisite ARC 312

Design exercises on complex building problems emphasizing innovative ideas incorporating formal and functional expressions, environmental qualities, circulation, linkages and organizational images. Exercises on building safety and security.

ARC 326: Working Drawing II

1.50 Credits 3 Hours/Week.

Prerequisite ARC 312

Design and drawings specifying materials and instructions to manufacturers of building elements, components, fittings and fixtures which are industrially produced. Understanding manufacturing process to generate creative design. The production drawing will include designing with variety of materials and manufacturing processes of a range of building components like door, window, fitting and fixture of functional and decorative nature.

ARC 321: Architectural Heritage VI

3.00 Credits,3 Hours/Week

Prerequisite ARC 311

SECTION - A:

Investigation into the theoretical and architectural practices that aimed to move away from the institutionalization of the functionalist paradigm of modern architecture. Against the orthodoxy of modernism, new architectural theories, groups, projects and events emerged that speculated on alternative possibilities of architecture. Values and assumptions that invigorated the social attitude towards architecture and design of the Machine Ages prior to our own Digital Age. Context and characteristics of each Machine Age to gain some perspective on the Digital Age.

SECTION - B:

Recent developments in the fields of Architecture of SAARC countries Study of Architectural identity and regionalism in architecture of SAARC countries. Contemporary Architecture of Bangladesh.

ARC323: Building and Finish Materials

2.00 Credits. 2 Hours/Week

SECTION - A:

Building materials; Cement, Sand, Concrete, Stone, Brick, Timber, Steel, etc., their properties, specifications, nature and application procedure during construction.

SECTION - B:

Finish materials: Glass, Plastic, Tiles, Wood, Metal, Terrazzo, Plaster, Roofing, False Ceiling, Paint, Insulation etc., their nature and use; Detail sketches.

CE 321: Structure IV

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Introduction: allowable stresses; different types of trusses; wind and static load analysis of trusses; design of truss sections;

SECTION - B:

Design of steel beams, columns; Reinforced concrete design (R. C. C.) by ultimate strength design (USD) method, Analysis and design of steel and timber structures.

EEE 321: Electrical Equipment

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Introduction to electrification in buildings. Simple calculations to access electricity requirements in buildings.

SECTION - B:

Electrical equipment's and electrical installations for buildings .Introduction to multistoried building electrification (problems and precautions).

ARC 329: Anthropology

2.00 Credits. 2 Hours/Week

SECTION - A:

Origin and development of social anthropology: ethnography and ethnology. Tools of anthropological research and their applications in architectural studies and analysis.

SECTION - B:

Mutual interaction of people and their built environment. Impact of social stratification. Pluralism in complex societies.

LEVEL-4 TERM-I

ARC 412: Design Studio VII

10.00 Credits, 15 Hours/Week

Prerequisite ARC 304

Understanding of projects in urban and regional context. Urban design and master planning. Design of building complexes with reference to socio-cultural aspects associated with the use and user.

ARC 414: Interior Design Studio

1.50 Credits, 3 Hours/Week

Preparation of interior design drawings for different types of spaces such as office, studio, bank, restaurant, club or shop. Detailed specifications of finish materials for floor, ceiling and wall. Natural and artificial lighting and ventilation. Fixed and movable furniture, decorative element, upholstery, drapery, art work, interior plantation, fountain.

ARC 411: Housing

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Housing and Community, their influence on individuals, societies and the environment; Physical, social, economic and technical aspects of housing Problems in Bangladesh,

SECTION - B:

Role of Private and public sectors in housing; Housing finance, spaces, standards, housing infrastructure and other housing design requirements; current housing technologies. Real Estate management.

ARC 413: Landscape Architecture

2.00 Credits, 2 Hours/Week

SECTION - A:

Introduction to principles and elements of landscape design. Historical references. Biosphere and eco-system. Organization of various outdoor spaces. Environment and design.

SECTION - B:

Site development. Location and sequence of outdoor activity. Circulation and linkages. Planting and gardening. Utility, services and maintenance.

ARC 415: Urban Design

2.00 Credits. 2 Hrs./Wk

SECTION - A:

Background &context: Development of urban spaces through history; Modern concepts in urban Design; Urban renewal, redevelopment, conservation, etc. Development control.

SECTION - B:

Concepts & Methods: Principles and techniques of Urban design, Analysis of Urban physical pattern, Frame work for development, Development context, Institutional framework, Financial context; Contemporary concept & trends.

CIV 411: Structure V

2.00 Credits, 2 Hours/Week

Prerequisite. CIV 321

SECTION - A:

Analysis and Design of Reinforced concrete structures By WSD method; Beams– singly reinforced, doubly reinforced, T- beams.

SECTION - B:

Slabs -- One way, two way, flat slab, column, footing, Retaining walls.

MGT 411: Organization behavior

2.00 Credits, 2 Hours/Week

SECTION - A:

Study of organizational behavior (OB): Relationship between the principles of human behavior, organizations are social systems, multiples factors and OB, Structure and process affect OB and the emergent culture; Model of managing organizations: Behavior, Structure and Processes: organization environment, behavior within organization, structure and design of the organization, the processes of

organization; The Individual: biological characteristics, Ability, Learning, Values, Attitudes, Job Satisfaction, Personality, Emotion, Perception, Individual Decision Making, Motivation,

SECTION - B:

The Group: Definition and Classification, Stages of Group Development, Roles, Status and Norms, Composition, Cohesiveness, Group Decision Making, Team, Creating effective team, Leadership – the emerging concepts, Power and Politics, Conflict and Negotiation, Contemporary Issues: organizational Change, Stress Management. Organizational culture.

ARC-419: Philosophy

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Introduction to Philosophy: Nature and scope of philosophy; methods of philosophical inquiries, epistemology, metaphysics. Ideas of great philosophers.

SECTION - B:

Relationship of philosophy to science, history, politics, religion and specially to architecture.

LEVEL-4 TERM-II

ARC 422: Design Studio VIII (Internship)

9.00 Credits. 18 Hours/Week

Prerequisite ARC 402

Identifying design tasks to specific realistic problems in an assigned setting. The assignment will include all design phases from formulation of architectural programme to preparation of preliminary working drawings. Emphasis will be laid on design quality in terms of formal, functional and structural aspects to attain professional level of achievement, within the giver socio- economic context.

This course will have to be taken after the third year of studies or after the completion of 110 credits and with a minimum GPA of 2.25. The training will take place in an architectural consulting office approved by the teachers and will consist of both training at the office and on site.

Beside course conducted through formal lectures in the class, a student will be required to spend 4 weeks in an architectural consulting office where he or she will be under the supervision of an architect and will gain experience in assisting the office in the preparation of the design of real projects. He or she will be expected to work on concept drawings, observe and help in the preparation of design documents.

This will be followed by site training where the student will be required to spend another 4 weeks on site visits preferably relating to the project/s he or she was involved in during the office training to observe how buildings are built, and will be required to participate hands on in the construction activities.

The student will have to provide a report on his or her activities in both parts supported by drawings and photographs and a diary of activities, which will be the basis for evaluation. The supervisor will be required to provide a report on the student's progress (in a prescribed format).

ARC 424: Landscape Design Studio

1.50 Credits. 3 Hours/Week

Analysis of landscape elements through sketches, drawings and reports on outdoor environment, Site analysis. Application of the principles and techniques of landscape design through design exercises of site planning and area development.

ARC 421: Architectural Conservation

2.00 Credits. 2 Hours/Week

SECTION - A:

Conservation, its meaning, nature, scope and principles, Preservation, restoration, reconstruction, adaptation, area conservation. History of conservation. Conservation laws and practices.

SECTION - B:

Issues of conservation, legislation, finance, regulating bodies, the role of government and public. Conservation of areas and buildings, Planning controls. Case studies. Conservation technologies.

ARC 423: Survey Technique and Analytical Methods

2.00 Credits.2 Hrs/Wk

SECTION - A:

Introduction; Principles and techniques of physical and socio-economic survey. Brief description of engineering Survey methods.

SECTION - B:

Analytical methods and their application; Fundamental quantitative techniques in demography, land-use, transpiration, housing, physical infrastructure, services and community facilities.

CIV 421: Structure VI

2.00 Credits. 2 Hours/Week

Prerequisite CIV- 411

SECTION - A:

Reinforced concrete columns, stocky and long. Preliminary analysis of column sections in multistoried buildings, Grids, approximate analysis. Approximate analysis of multistoried buildings for gravity and lateral loads. Vierendeel truss. Folded plates.

SECTION - B:

Introduction to shear-walls - preliminary design. Introduction and preliminary design of arches, domes and shells. Classification of shells. Prestressed concrete: introduction, analysis and preliminary design of beam sections.

ARC 425: Health Facilities Planning

2.00 Credits. 2 Hours/Week

SECTION - A:

Approaches to health facilities planning and design. Philosophy, policies and processes within comparative and historical perspective.

SECTION - B:

Fundamentals of programming, planning and design of health care facilities. Health facilities planning and policies in Bangladesh.

ARC 427: Disaster Management

2.00 Credits. 2 Hours/Week

SECTION - A:

Meaning of hazard and disaster, types of hazards, assessment of hazards, vulnerability analysis, risk assessment, analysis of disaster-related behavior pattern, people's awareness and perception of hazards and response to danger, disaster management cycle, disaster management planning, links between development planning and disaster management planning, social considerations and people's participation in disaster management, institutional framework for disaster management.

SECTION - B:

Hands-on exercises on hazard and risk assessment, land use planning with emphasis on vulnerability reduction etc. Disaster Management in Bangladesh.

LEVEL-5 TERM-I

ARC 512: Design Studio IX

10.5 Credits, 21 Hours/Week

Prerequisite ARC 422

Projects focusing renewal-regeneration, conservation, redevelopment and rehabilitation. Investigation, analysis and design of housing/communities with specific themes and their impact on the immediate environment. Architecture of spiritual and emotional content.

ARC 514: Seminar

1.50 Credits. 3 Hours/Week

Overview of current development in research related to art and architecture. Preparation of research papers including literature search, writing skills and referencing. Verbal and written presentation skills and techniques.

ARC 511: Professional Practice

2.00 Credits. 2 Hours/Week

SECTION - A:

The role of the architect in the building industry. Duties, responsibilities and obligations of the architect. General conditions of contract, client architect relationship, architectural services. The architect and the public.

SECTION - B:

Building codes and practices. The architect's office. Administration of construction. Conflicts and arbitration. Official correspondence. Professional organizations: local and international.

ARC 513: Specification and Cost Estimation

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Written details answering what, where, when, how in relation to drawn details for building construction. Specifying materials and methods of installation and precautions.

SECTION - B:

Preparation of tender documents, rules, regulations and obligations. Determination of cost of construction. Cost analysis of the various items of construction. Preparation of schedules. Control of cost. Case studies.

ARC 515: Construction Management and Accounting

2.00 Credits. 2 Hours/Week

SECTION - A:

Basic concepts and principles of management; Development of management skills; Management of organization; Decision making; Planning and control; Basic statistics; Basic operations; Research; Plans; Bidding and Sub-contracting; Use of operations research techniques.

SECTION - B:

Basic accounting principles; Different kinds of cheque; Cost accounting; Elements of cost accounting for direct and indirect costs; Inventory control; Overheard allocation; Cost sheet. Break-even analysis; Construction accounting; Budgeting and budgetary control; Standard costs-computation of cost; Variances.

ARC 517: Environmental Design

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Principals of environmental architecture: Energy Efficiency, Ecologically Benign Materials, Environmental Form, Good Design; Building an environmental ethic: Greenhouse gas production and its effect, climate cycle and climate change in the world, in Bangladesh; Kyoto protocol, problems with urbanization, Major natural Disasters and their impacts in Bangladesh, Strategy for Disaster management in Bangladesh: Internationally, Nationally, at field level,

SECTION - B:

Green building design methodology, The role of energy efficiency, renewable energy sources, Sustainability and construction technology, Designing and Planning a Quality Sustainable Environment for All. The emergence of a new sustainable vernacular typology,

ARC 519: Research Methodology

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Architectural research: Systems of inquiry and standards of research quality, literature review, theory in relation to method, design in relation to research, Research strategies: Interpretive-Historical, Qualitative, Correlation, Experimental and Quasi- Experimental, Simulation and Modeling, Logical Argumentation, Case studies and Combined Strategies.

Problem definition, sources of information, academia and accounts, Research Design, Sampling, Data collection Techniques, data organization, normal distribution and estimation, Testing Hypothesis.

SECTION - B:

Designing a research project: Research paper/research proposal preparation and methods to use information: issues of copy-write, citation and reference systems. Presentation techniques: oral presentation, layout, printing process, Internet, overhead, PowerPoint.

LEVEL-5 TERM-II

ARC 522: Design Studio X (Thesis /Project)

12.00 Credits. 15 Hours/Week

Prerequisite ARC 512

Thesis:

Identification of viable projects of significance as thesis projects. Preparation of complete design solution based on investigation and analysis of the physical and contextual aspects of the problem, and on the understanding of design considerations of material, structure and form. Stress is given on the objective analysis of the related factors and in transforming them into a tangible architectural solution of professionally acceptable quality.

OR

Project:

Design exercises of realistic complexities emphasizing professional level of achievement. Formulation of architectural programs for given projects. Preparation of design solution and development through the various phases. Production of working drawings.

ARC 524: Project Report (Dissertation / Construction Document)

1.50 Credits. 3 Hours/Week

Required course: ARC 522

Dissertation:

Approach to report writing. Preparation of report to supplement the various aspects of the thesis project of Arch 504. Design Studio X (Thesis). The report should reflect the student's research in areas related of the thesis, comparative analysis and case studies. This should lead to the formation of criteria and conceptual approaches to the design of the thesis in Arch 504: Design Studio X (Thesis)

OR

Construction Document:

Preparation of, specification and cost estimation of the project of Arch 522: Design Studio X (Project) based on current construction practices.

ARC521: Rural Planning

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Alternative theories and meaning of development. Nature and scope of integrated rural development. social, economic and physical characteristics of rural settlements. Problems and issues in rural development: population, urbanization and migration, human resource development.

SECTION - B:

Formulation of rural development projects: concepts, principles and techniques. Institutions for rural development. The process of planning. Policies and strategies of rural development.

ARC-523: Project Economics

2.00 Credits. 2 Hrs/Wk

SECTION - A:

Definition economics Subject matter, Importance & Limitation of Micro-Macroeconomics THEORY OF DEMAND & SUPPLY -Law of diminishing Marginal Utility. Relationship between Total &Marginal utility. Definition of Demand, Law of demand, Changes in demand. Definition of supply, Law of supply, Changes in supply. Equilibrium of demand & supply. Indifference Curve & Budget Line. Consumer's equilibrium of maximizing satisfaction. THEORY OF PRODUCTION- Factors of production--Land, Labor, Capital& Enterprise. Production possibility curve & production function. Law of Variable proportions & Law of returns to scale. Concept of cost curves, Relationship between Total & marginal cost. Iso-quant & lso-cost curves. Producer's equilibrium or maximizing revenue.

THEORY OF INCOME & EMPLOMENT - Concept of National Income: its measurement Circular flow of National Income. Special difficulties in measuring National Income in under developed countries.

ECONOMICS OF DEVELOPMENT -Meaning & stages Economic development. Development of economic growth. Obstacles to economic growth. Definition & characteristics of underdeveloped economy.

SECTION - B:

PROJECT PLANNING - Overview of planning. Generation & Screening of project ideas Feasibility Study.

PROJECT ANLAYSIS - Market & Demand analysis, Technical analysis, financial analysis.

PROJECT SELECTION & REVIEW - Appraisal critters. Risk analysis. Social cost benefit analysis. Qualitative factors, strategic aspects & organizational considerations. Project review & administrative aspects.

PHYSICAL & HOUSING PLAN: BANGLADESH CONTEXT - Activities covered physical & housing plans Fifth-five year plan. Programs for Fifth-Five year plan. Evaluation of past performance.

ARC-526: Design Portfolio

1.50 Credits. 3Hrs/Wk

This course provides practical skills in the planning, design and implementation of a personal digital design portfolio. Students will create a physical portfolio, designed to work in conjunction with their digital portfolio and provide an overall professional presentation of their skills and work.