



AMITY UNIVERSITY

— R A J A S T H A N —

Syllabus Revision

Amity School of Architecture and Planning(ASAP)

Course Name	Page No.
B.Arch.	1
B.I.D.	244

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2021-26 Onwards

Total Credits = 299

STAGE - I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

FIRST SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/T/ST/P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 101	Design -I	CC	PC	0	6	0	9	6
BAR 102	Materials & Construction Technology – I	CC	BS &AE	1	1	1	3	3
BAR 103	Structural Design & Systems – I	CC	BS & AE	2	0	0	2	2
BAR 104	Graphics Skills - I	CC	PC	0	0	4	2	4
BAR 105	History of Built Environment	CC	PC	2	0	0	2	2
BAR 106	Architectural Workshop	CC	PC	0	0	2	1	2
BAR 107	Theory of Design	CC	PE	2	0	0	2	2
BAR 108	Visual Arts & Appreciation	CC	PE	0	0	2	1	2
BAR 109	Presentation Techniques	CC	PE	0	0	2	1	2
AND 001	Aanandam-I	VA	SEC	0	0	4	2	4
BCS 101	English	VA	SEC	1	0	0	1	1
BSS 105	Behavioral Science – I(Understanding Self for Effectiveness)	VA	SEC	1	0	0	1	1
	Foreign Language - I	VA	SEC	2	0	0	2	2
FLT 101	French							
FLG 101	German							
FLS 101	Spanish							
FLC 101	Chinese							
	TOTAL			11	7	15	29	33

BAR 101 DESIGN – I

Course Code: BAR 101

Credit Units: 09

L/0-ST/6-P/0 Teaching hours: 06

A. COURSE LEARNING OUTCOME:

CLO 1 :	Interpret and Implement “Design” as a problem solving process.
CLO 2 :	Recognise and Execute visual form, functional space, anthropometrics, technology, economy, culture and environment as key parameters of Architecture.
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5 :	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Objectives:

- To create visual compositions using elements and principles in theory of design and understand its application in built- environment
- To measure, draw and comprehend the relationship between human dimensions and those of the built-environment.
- To investigate forms and subsequently analyze existing built-forms and spaces through Measured drawings so as to derive design criteria from the Case Studies
- To create architecture design for single purpose space employing the architectural design process
- To practice direct application of learning in BAR107 Theory of Design

Course Contents:

Module I: Design of 2D & 3D Compositions - 2 weeks

Exercise to design compositions with 2D Shapes and 3D Forms (geometric and irregular) using elements and principles of design

Module II: Transformations and Form Analysis– 3 weeks

Transformations of Forms -Addition, Subtraction, Extrusion – Space division, Space derivation, positive and negative spaces , Form Analysis, 2d representation of 3d form in terms of plan, section and elevation, Application in built- environment such as Façade design, Door elevation, Carpet design; Floor tile design & floor design, Mural design etc.

Module III: Anthropometrics - 2 weeks

Human dimensions – static and dynamic; proportions, space dimensions for various human postures and activities; Modular and Golden Section

Module IV: Measured Drawings of Architectural Spaces – 2 weeks

Importance of Case Study in design learning, Study of various existing architectural spaces through preparation of measured drawing with furniture layout

Module V: Design and Representation of Single purpose space unit – 5 weeks

Design project of Single Space unit structure with respect to Visual Language of Form (Art), Functional Space, Material & Structure (Technology) and culture; Suggestive Studio Projects involving activity spaces such as Living area, sleeping area, washroom, cooking area etc. – for example, cabin design, Entrance gate, kiosk, Toilets, Kitchen, Study room, Exhibition stall etc. *An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.*

Examination Scheme:

Components	A	S1	S2	C T	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text Books /Reference Books/Journals/Other Study Material:

- 'Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect's Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, M cGraw Hill Book Company, New York.
- Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- <https://www.architecture.com/knowledge-and-resources/resources-landing-page>

BAR 102 MATERIALS AND CONSTRUCTION TECHNOLOGY - I

Course Code: BAR 102 Credit Units: 03 L/1-ST/1-P/1 Teaching hours: 03

A. COURSE LEARNING OUTCOME:

Course Learning Outcome:

CLO 1 :	To define basic building elements.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3:	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings
CLO 4 :	To be able to use composite materials in a structure.
CLO 5 :.	To be aware of the properties and applications of the various materials

B. SYLLABUS:

Course Objective:

To understand the use of traditional building materials in simple building works.

To familiarize students with basic building components, their function and behavior under various conditions with specific reference to “Load Bearing Construction”

Course Contents:

Module I: Building Materials and Construction Technology - 3 weeks

Introduction to components of building from foundation to roof: Foundation, plinth, plinth beam, damp proof course (D. P.C.), sill, lintel, beam and slab, parapet, mummy etc. Detailed Section through 2 story building, Introduction to various methods, technology, materials, tools and equipment commonly used in – Excavation, Masonry works and carpentry.

Module II: Clay and Clay products, Stone - 2 weeks

Mud including stabilized earth, burnt bricks, brick tiles, blocks, lime and its product, stone and its varieties etc, Classification, availability, preparation and uses of above materials and their structural, visual and textural properties. **Module III: Brick and Stone Masonry -3 weeks**

Terminology: Bricks and its types, bats and closures used in different Brick Bonds Bonding: Types of bonds:

English, Single, double, Flemish and rat trap bond.

Corbelling, String courses and decorative brickwork.

Stone masonry: Types of stones, dressing and different bonds in stone, Random Rubble, Coursed Rubble, Ashlar.

Module IV: Stone and brick masonry Foundation - 3 weeks

Foundations: Need for foundations, its preliminary design criteria.

Detail of spread foundation for load bearing walls of various thicknesses.

Module V: Openings - 2 weeks

Openings – Types and construction details of Lintels, arches, sill, jam etc. necessary to make openings

Exercises: preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Building construction W.B.M cKay
- Building construction R Berry
- Building construction Chudley
- Building construction Francis D.K. Ching.

BAR 103 STRUCTURAL DESIGN & SYSTEM- I

Course Code: BAR 103 Credit Units: 02 L/2-sT/0-P/0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

Course Learning Outcome:

CLO 1 :	Analyse& evaluate the stress - strain relations for beam element under various loading & support conditions.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3:	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings
CLO 4 :	To be able to use composite materials in a structure.
CLO 5 :	To be aware of the properties and applications of the various materials

B. SYLLABUS:

Course Objective:

- To introduce the structural system in a building with all the basic components to understand the functions of various elements and building technologies used in various types of buildings.

Course Contents:

Module I: Simple Stresses and Strains- 3 Weeks

Elasticity, Stress, Strain, Types of Stresses, Elastic limit, Hook's Law,,Modulus of Elasticity, Stresses in Composite Bars. , Poison's ratio, shear stress, Basic, Deformation of a body due to self-weight & force acting on it.

Module II:Principal stresses and strains-3 Weeks

Introduction, principal planes & their stresses, Analytical methods for the stresses on an oblique section of a body, stresses on an oblique section of a body subjected to a direct stress in one plane & two mutually perpendicular directions.

Module III:Centre of gravity-2 Weeks

Introduction, Centroid, methods for Centre of gravity, Centre of gravity by geometrical & moments consideration, axis of reference, Centre of gravity of plane figures, symmetrical & unsymmetrical sections.

Module IV:Moment of inertia-2 Weeks

Definition, Important theorems, section Modulus, Calculation of M.I by Integration method and its application to architecture system

Module V:Elements of Static-2 Weeks

Law of parallelogram of forces, resolution of a forces, law of triangular of forces, polygon of forces, Theorem of resolved p arts resultant of number of concurrent coplanar forces, conditions of equilibrium, moment of a forces. Moment and arm of a couple, theorems on couples

Module VI:Shear force and bending moment-2 Weeks

Various types of support & loads in Beams, Calculation of reactions in loaded beams, Cantilever & simply supported, Point load ,udl&uvl. Calculation of shear force & bending moment & also its diagrammatic representation.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Elements of Structure, Morgan
- Salvadori, Structures in Architecture,
- Everet, Structure and Fabric,
- Khurmi R. S., Strength of Materials,
- R.K. Bansal, Engineering Mechanics
- Khurmi R. S, Applied Mechanics and Strength of Materials.
- Salvadori and Heller, Structure in Architecture.

BAR 104 GRAPHIC SKILLS – I

Course Code: BAR 104 Credit Units: 02 L-0 ST-0 P-4 Teaching hours: 04

A. COURSE LEARNING OUTCOME:

Course Learning Outcome:

CLO 1	Understand and remember the fundamentals of drafting
CLO 2	Understand the fundamentals of geometry
CLO 3:	Understand the principle and different types of projections and views
CLO 4 :	Learning the techniques of surface development
CLO 5	Produce presentations on all the four cognitive learning outcomes.

B. SYLLABUS:

Course Objective:

To familiarize the students with various drawing tools to give basic knowledge of drafting and lettering techniques. To provide a clear understanding about the scale of measurement and orthographic projections used as a drawing technique.

Course Contents:

Module I: Introduction to basics drafting, Lettering & Scales

Introduction and setting to the drawing equipment, Concept of line, its types, Line thickness quality, grade, divisions and angles, Concept of polygons, circles, geometrical curves, helix etc., Concept of Dimensioning & dimension line, BIS codes of drawings.

Free hand and Architectural lettering, proportion of letter size as per scale and size of the sheet.Scales: Engineers scale, Graphical scale and Representation factor (R.F).Scales on drawings. Types of scales: Plain scale and Diagonal scale.

Module II: Projection- Point, Lines, Planes

Definition, meaning and concept, Principles and Methods of projection.Projection of point, Lines & planes.

Module III: Projection-Solid

Projections of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in different positions.Sections of regular rectilinear and circular solids in varying conditions of sectional plane.

Module IV: Surface Development

Introduction and Methods of development of surfaces.Development of lateral surfaces of right solids like Cubes, Prisms, Cylinders, Pyramid, Cone etc.

Module V: 3D Drawing Views

Types, uses & advantages. Isometric, Axonometric & oblique view -solids, compositions & buildings.Metric drawings, projections and their dimensions.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Architectural Graphics, C. Leslie Martin
- Architectural Graphics, Ching Frank
- Engineering Drawing, N.D. Bhatt

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather Architectural Graphic standards editor, Boaz Joseph
- Neufert's Architect's data
- Time Saver standards for building types, Editor Joseph D.C. and John Callender. Rendering with pen and ink
- Practical Plane and Solid Geometry, H.Joseph and Morris

BAR 105 HISTORY OF BUILT ENVIRONMENT

Course Code: BAR 105

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyze and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Examine the developments in the use of materials with different eras.
CLO 3:	Analyze the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS:

Course Objectives:

- To make them understand the importance of study history of Architecture, development of civilizations and evolution of design as a by process of it
- To familiarize students with the factors that influence the development of architecture in history. Such as socio- economic, historical political influences of that time.
- To inform them about the technologies, materials used in the historical developments and their impact on the present day knowledge of architecture and design.
- To familiarize them with the regional architecture.

Course Contents:

Module I: Introduction to History of Human Settlements and Its Importance - 2 weeks

Pre-Historic Period till 3000B.C. - The type of settlement development during the period taking few examples of the different periods – Neolithic, Mesolithic, Bronze age, Iron Age with advancements of construction techniques, material used , human progression over the time period.

Module II: Introduction to Valley Civilization-1 - 4 weeks

Nile Valley Civilization (3000 B.C. – 100 A.D.)- Introduction to Egyptian Architecture and civilization, building characteristics and developments over the period in respect of different styles, construction technology, building materials used, evolution of form with significant changes over the time period.

Examples like- Tomb Architecture- Mastabas, Pyramids, Temples at Giza , Thebes ,Karnak Etc.

Mesopotamian Civilization (2500 B.C. – 600 B.C.)- Mesopotamian Civilization comprising of Babylonian, Assyrian, Akkadian Sumerian civilization in respect of buildings styles, construction technology, building materials used, evolution of form and art work development with significant changes over the time period

Examples like - Forts ,Temples ,Dwellings ,Ziggurats at Uruk ,Ashur ,Babylon etc.

Module III: Introduction to Valley Civilization-2 - 4 weeks

Indus Valley Civilization (3300B.C. – 300 B.C.)- The era of development in the Indus valley. Development of Harappan civilization. Iron Age of India explaining with examples of planning and buildings, construction technology, building materials used, evolution of form and art work development with significant changes over the time period.

Vedic Architecture (1750 B.C.)- The Aryan civilization- explain with examples of the buildings, construction technology, building materials used, evolution of form and art work development with significant changes over the time period.

Module IV: Introduction to Rajasthani Civilization - 4 weeks

Introduction to Regional Architecture of Rajasthan- M āru-Gurjara Architecture and Rajputana design from different regions with examples of Jaipur City and nearby areas:

Forts & Palaces – Amer Fort, City Palace , Nahargarh Fort, Udaipur Palace, Kumbhalgarh Fort , Mehrangarh fort etc. Havelis – in Shekhawati like at Nawalgarh , Fatehpur , Ramgarh ,Mandawa etc.

Stepwells &Temples – Chand Baori in Abhaneri ,Ranakpur Temple , Dilwara Temple ,Rani Sati Temple ,Eklingji Temple Etc.

Introduction to Planning of Old Jaipur City with characteristics and material significance according to climate . Study the examples of vernacular buildings like Hawa Mahal , City Palace, Albert Hall , Jantar Mantar etc. with developing the understanding of different elements like jharokhas , jalis , chhatris etc. locally available materials , their application , construction techniques, evolution of form and characteristics changed over time period

Detailed Presentation exercise to be combined with local educational tour, heritage walks to be organized at regular intervals during the semester comprising of analysis of existing structures with respect

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Sir Bannister Fletcher, (1975) “The History of Architecture”
- G.K.Hiraskar (2018)“Great Ages of World Architecture”
- Yatin Pandya, (2005) “Concepts of space in Traditional Indian Architecture”
- Deependra Prasad, Saswati Chetia, (2007)“New Architecture and Urbanism: Development of Indian Traditions”
- Vibhuti Chakrabarti,(1998) “Indian Architectural Theory and Practice: Contemporary Uses of Vastu Vidya”

BAR106 ARCHITECTURAL WORKSHOP

Course Code: BAR 106

Credit Units: 01

L/0-T/0-P/2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To remember different tools used in carpentry, masonry and surface painting
CLO 2 :	To understand the technique of applying construction material such as brick, cement, wood, stone and its testing.
CLO 3 :	To construct different building components like dome, arch and wall with various typologies.
CLO 4 :	To create new forms and structures using the learned techniques.

B. SYLLABUS

Course Objectives:

To introduce various building materials like carpentry, materials testing methods within the site and Working methods of Architectural components like Arches, Dome and Vaults etc.

Course Contents:

Module I: Introduction to carpentry - 4 weeks

Introduction to the carpentry tools, processes, joints and wood working machines. Preparation of various carpentry joints, fixing of plywood, commercial boards etc. and their application in furniture. Painting and polishing on different surfaces and textures

Module II: Introduction to Building materials - 6 weeks

Building materials Manufacturing process, on site quality tests of types of bricks, cement, lime, sand, aggregate. Types and uses of mortar and concrete. Superstructure: Types of bonds, ends and junctions, attached and detached piers, jointing and pointing in brick masonry and stone masonry.

Module III: Building Components and construction - 4 weeks

Types of arches in bricks and stone, centering of arches. Types of Dome, Construction method of Dome, Assembling of Glass curtain wall.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Cassells Carpentry and Joinery by Paul N. Hasluck
- The Very Efficient Carpenter: Basic Framing for Residential Construction Paperback by Larry Haun
- Complete Book of Framing: An Illustrated Guide for Residential Construction 2nd Edition by Scot Simpson
- The Basics of Building with Arches, Vaults and Cupolas by Thierry Joffroy
- Building of the Arch Enlarged 9th Edition by R. Artaega
- Brunelleschi's Dome: How a Renaissance Genius Reinvented Architecture by Ross King
- Illustrated Dome Building by Gene Hopster
- Dome Builder's Handbook No. 2 by William Yarnall
- Building Materials by S.K. Duggal
- Building Material and Construction (WBSCTE) by S.S. Bhavikatti

Online Resources

- <http://www.gobrick.com/docs/default-source/read-research-documents/technicalnotes/30-bonds-and-patterns-in-brickwork.pdf?sfvrsn=0>
- <https://civilengineering.blog/2017/10/27/types-of-bonds-in-brick-masonry/>

BAR 107 THEORY OF DESIGN

Course Code: BAR 107

Credit Units: 02

L/2-ST/0-P/0 Teaching Hours : 02

A. Course Learning Objective

CLO 1 :	To Illustrate The Knowledge of various principles elements design.
CLO 2 :	To critically analyse the 2D & 3D compositions.
CLO 3:	To analyse the differences between systematic and random design approach though developing understanding of design thinking.

B. Syllabus

Course Objectives:

- To enable student to develop understanding of “Design” as problem solving process for everyday life
- To enable student to interpret “Architecture Design” as integration of Visual Form, Functional space, Human measure, building technology (material and structural systems), economy, culture and environment.
- To enable student for direct application of design theories in studio projects of course BAR101 Design –I

Course Contents:

Module I: Design and Built Environments - 2 weeks

Introduction to Design – Creative problem solving, Aspects of Design – Art and Science, Design for Built Environment, Role of Architect, Interior Designer& Engineer, Aspects of Architecture Design– Visual Language of Form(Art) , Functional Space, Material& Structure (Technology) and culture.

Suggested Activities:i) Student will be asked to use online and Library resources to select images of any one product from everyday life and images of any one building of his/her choice to investigate aspects of design embedded in them . Student will present the investigation and learning in the form of PowerPoint presentation. ii) Group reading and discussion from extracts of “A Pattern Language: Towns, Buildings, Construction – Christopher Alexander”

Module II: Visual Language – 4 weeks

Introduction to how we see forms and perceive them and its importance in design, Visual Elements of Design - **point, line, surface, solids, colour, texture** etc; Principles of Design-**Balance, Symmetry, Repetition, Rhythm, Datum, Hierarchy** etc.; Built Forms and their aesthetics, Order-Character- meaning (symbolism) of Built Forms, Abstraction

Suggested Activities:i) Student will be asked to do online search for optical illusions and present them in class to appreciate how we perceive things ii) Student will be asked to disintegrate/explode a given built form into its constituent elements by sequential representation in drawing from whole form to surfaces to lines till points.iii) Student will be asked to sketch any one Building Façade in vicinity to identify and disintegrate it into its constituent design elements. Student needs to present the identified design principle that binds the elements together in the selected building façade iv) Students will be asked to search for built-form s that with strong association in cultural meaning and present them

Module III: Function: Activities, Spaces and Anthropometrics – 4 weeks

Types of Built- Environment - Enclosures; Human activities- space function; Types of Spaces – Primary, Supporting (Ancillary) and Link; Positive and Negative spaces; Relationship between Built-Form and Space & its function; Elements of Space making ; Anthropometrics – Human being as measure of everything, Modular and Golden Section.

Suggested Activities:i) In Group:- Rectangles of different sizes shall be marked in an open area and students shall be asked to use anthropometrics to suggest activities that can be done in the marked area. Students will enact the suggested activities within the area to evaluate their comprehension of space and anthropometrics ii) In Group : Students will be asked to create enclosure around the marked area and comprehend the psychological difference w.r.t space which the sense of enclosure creates in the user. Students shall now be asked to re-suggest the activities within the enclosure and enact them to evaluate their comprehension of space and

anthropometrics iii) Composition using Golden Section

Module IV: Technology and Design - 2 weeks

Role of Material and technology in Design for Built- Environments; Brief introduction to types of Structural systems and their influence on built form; key materials used in Building Design (interior and exterior); Relationship between Material, Structure, function and form.

Suggested Activities:*i) Student will be assigned a building/ built-form to deduce the influence of material and structure system on built-form*

ii) Redesign of a given built-form by altering material and structural system to presented through conceptual sketch/ model

Module V: Design Process in Architecture– 2 weeks

Iterative problem solving process of Design (Design Cycle); Design Process for Built-forms – sequence and stages; Different drawing types to represent different Design Stages – Bubble Diagram, Space Matrix, Conceptual Drawing, Architectural Presentation Drawing and Working Drawing.

Suggested Activities:*i) Student will draw Design Process cycle, Bubble Diagram, Space Matrix, conceptual drawing and Presentation drawing for Studio Project in the course BAR101Design-I*

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- A Pattern Language: Towns, Buildings, Construction- Christopher Alexander
- Structure in Architecture, Heller Robert and Salvadori Mario
- Design Fundamental in Architecture, Walter Gropius
- Pattern of Nature, Peter Streens
- Elements of Architecture, MeissPieree Von
- Architecture: Form, Space and Order, Francis D.K. Ching
- Elements of Space Making – Yatin Pandya
- Sketch Book by Tony Hunt

BAR 108 VISUAL ART AND APPRECIATION

Course Code: BAR 108 Credit Units: 01

L/0-ST/0-P/2

Teaching hours: 02

A. Course Learning Outcome:

CLO 1 :	Understand and remember the fundamentals of drafting
CLO 2 :	Understand the fundamentals of geometry
CLO 3:	Understand the principle and different types of projections and views
CLO 4 :	Learning the techniques of surface development
CLO 5 :	Produce presentations on all the four cognitive learning outcomes.

B. Syllabus

Course Objectives:

- To familiarize the students with the fundamentals and vocabulary of design.
- To expose the students to the practice of arts appreciation
- To enable the students, represent their ideas in different media through aesthetically pleasing compositions.

Course Contents:

Module I: Principles of design- 2 weeks

Introduce the students to the fundamental elements of art -line, shapes, form, space, colour, value & texture. Exercises will involve application of these elements.

Impart conceptual and procedural knowledge about principles of design- Balance, unity, pattern, emphasis, movement, rhythm, and contrast. Exercises will require implementation of these principles

Module II: Fundamentals of Colours- 3 weeks

Introduce the students to the fundamental terminologies of colour - hue, intensity, value, shades, tints, warm & cool colours- Learning their synthesis and application through exercises.

Enable the students to comprehend the qualities of colours - Colour wheel - Primary, Secondary & Complementary colours. Learning their synthesis and application through exercises.

Module III: Various Mediums of Drawings -3 weeks

Familiarize the students with the different mediums of drawing- Pencils, ink and water colour. Exercises will include creation of simple art works using the various mediums

Module IV: Free hand drawing - 2 weeks

Upskill the students with techniques of free hand drawing. Exercises will involve drawing of still life objects and outdoor sketches like buildings, streets, etc.

Module V: Art Appreciation - 2 weeks

Expose the students to the practice of interpretation of visual representation like ideas, emotions, and activities. Demonstrate examples to students. Exercises will include synthesis of graphics art with a background expression.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Wayne Enstice, Melody Peters, "Drawing space, Form, Expression", Prentice hall, Englewood Cliffs, New Jersey, 1990. Palmer John, "Drawing & Sketching", Brock Hampton Press, London, 1993.
- "Learn to Paint and Draw", Victoria House Publishing Ltd., Bath, UK, 1981. Goodman Sue & Porter Tom., "Designer Primer", Butter Worth Architecture, London, 1988.

BAR 109 PRESENTATION TECHNIQUES

Course Code: BAR 109
hours: 02

Credit Units: 01 L/0-ST/0-P/2 Teaching

A. Course Learning Outcome:

CLO 1 :	Develop the understanding of various most relevant Presentation Techniques for the purpose of Design Project.
CLO 2 :	Develop the ability of lateral thinking required for visualizing the balance between various building materials & elements.
CLO 3:	Create better design solutions in an effective way by enhancing the observation and learning skills through existing projects.

B. Syllabus

Course Objectives:

- To familiarize the students with the fundamentals and vocabulary of design.
- To expose the students to the practice of arts appreciation
- To enable the students, represent their ideas in different media through aesthetically pleasing compositions.

Course Contents:

Module I: Principles of design- 2 weeks

Introduce the students to the fundamental elements of art -line, shapes, form, space, colour, value & texture. Exercises will involve application of these elements.

- Impart conceptual and procedural knowledge about principles of design- Balance, unity, pattern, emphasis, movement, rhythm, and contrast. Exercises will require implementation of these principles

Module II: Fundamentals of Colours- 3 weeks

Introduce the students to the fundamental terminologies of colour - hue, intensity, value, shades, tints, warm & cool colors - Learning their synthesis and application through exercises. Enable the students to comprehend the qualities of colours - Colour wheel - Primary, Secondary & Complementary colours. Learning their synthesis and application through exercises.

Module III: Various Mediums of Drawings -3 weeks

Familiarize the students with the different mediums of drawing- Pencils, ink and water colour. Exercises will include creation of simple art works using the various mediums.

Module IV: Free hand drawing - 2 weeks

Upgrade the students with techniques of free hand drawing. Exercises will involve drawing of still life objects and outdoor sketches like buildings, streets, etc.

Module V: Art Appreciation - 2 weeks

Expose the students to the practice of interpretation of visual representation like ideas, emotions, and activities. Demonstrate examples to students. Exercises will include synthesis of graphics art with a background expression.

Examination Scheme:

Components	A	CE	CT	EE
Weight age (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Architectural Graphics, C. Leslie Martin
- Architectural Graphics, Francis D.K. Ching
- Rendering with Pen & Ink: Robert W. Gill
- The Color Source Book for Graphic Designers: Sadao Nakamiva
- Time Saver standards for building types, Editor Joseph D.C. and John Callender
- Neufert's Architect's Data
- Architectural model making by Nick Dunn
- Architectural Model Building by Roark T. Congdon

AND 001 AANANDAM-I

Course Code: AND 001 Course Type: Compulsory Credit Units: 02

Credit Units: 02

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants are to be given** (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

GUIDELINES FOR GCSP (Group Community Service Project) ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.

5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to <=54hrs (30-40 marks)**
- **O grade >54 hrs to <=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

BCS 101 ENGLISH

Course Code: BCS101

Credit Units: 01

Teaching hours: 01

Course Objective:

The course is intended to give a foundation of English Language. The literary texts are indented to help students to inculcate creative & aesthetic sensitivity and critical faculty through comprehension, appreciation and analysis of the prescribed literary texts. It will also help them to respond form different perspectives.

Course content :

Module I: Vocabulary	Use of Dictionary Use of Words: Diminutives, Homonyms & Homophones
Module II: Essentials of Grammar – I	Articles Parts of Speech Tenses
Module III: Essentials of Grammar – II	Sentence Structure Subject -Verb agreement Punctuation
Module IV: Communication	The process and importance Principles & benefits of Effective Communication
Module V: Spoken English Communication	Speech Drills Pronunciation and accent Stress and Intonation
Module VI: Communication Skills-I	Developing listening skills Developing speaking skills
Module VII: Communication Skills-II	Developing Reading Skills Developing writing Skills Written English communication Progression of Thought/ideas Structure of Paragraph Structure of Essays
Module IX: Short Stories	Of Studies, by Francis Bacon

	<p>Dream Children, by Charles Lamb</p> <p>The Necklace, by Guy de Maupassant</p> <p>A Shadow, by R.K.Narayan</p> <p>Glory at Twilight, Bhabani Bhattacharya</p>
Module X: Poems	<p>All the Worlds a Stage - Shakespeare</p> <p>To Autumn - Keats</p> <p>O! Captain, My Captain. - Walt Whitman</p> <p>Where the Mind is Without Fear - Rabindranath Tagore</p> <p>Psalm of Life - H.W. Longfellow</p>

Text & References:

1. Madhulika Jha, Echoes, Orient Long Man
2. Ramon & Prakash, Business Communication, Oxford. Sydney Greenbaum Oxford English Grammar, Oxford.
3. Successful Communications, MalraTreece (Allyn and Bacon) Effective Technical Communication, M. Ashraf Rizvi.

*** 30 hrs Programme to be continued for Full yea**

BSS 105 BEHAVIOURAL SCIENCE - I

(UNDERSTANDING SELF FOR EFFECTIVENESS)

Course Code: BSS105

CreditUnits: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) should be able to:

1. Demonstrate awareness of self and the process of self-exploration.
2. Demonstrate knowledge of strategies for developing a healthy self-esteem.
3. Recognize the importance of attitudes and its effect on personality.
4. Identify the difference between healthy and unhealthy expression of emotions and develop emotional competence necessary for personal and professional life.

Course Objective:

This course aims at imparting:

- Understanding self & process of self exploration
- Learning strategies for development of a healthy self esteem
- Importance of attitudes and its effective on personality
- Building Emotional Competence

Course Contents:

Module I: Self: Core Competency

Understanding of Self

Components of Self – Self identity

Self concept

Self confidence

Self image

Module II: Techniques of Self Awareness

Exploration through Johari Window

Mapping the key characteristics of self

Framing a charter for self

Stages – self awareness, self acceptance and self realization

Module III: Self Esteem & Effectiveness

Meaning and Importance

Components of self esteem

High and low self esteem

Measuring your self esteem

Module IV: Building Positive Attitude

Meaning and nature of attitude

Components and Types of attitude

Importance and relevance of attitude

Module V: Building Emotional Competence

Emotional Intelligence – Meaning, components, Importance and Relevance

Positive and Negative emotions

Healthy and Unhealthy expression of emotions

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS-**Journal of Success; **HA-**Home Assignment; **P-**Presentation; **V-**Viva; **Q-**Quiz; **FC-** Flip class; **MA-** Movie Analysis; **CS-** Case study; **A-**Attendance

Text & References:

- Organizational Behaviour, Davis, K.
 - Hoover, Judith D. Effective Small Group and Team Communication, 2002, Harcourt College Publishers
 - Dick, Mc Cann & Margerison, Charles: Team Management, 1992 Edition, viva books
 - Bates, A. P. and Julian, J.: Sociology - Understanding Social Behaviour
 - Dressler, David and Cans, Donald: The Study of Human Interaction
 - Lapiere, Richard. T – Social Change
 - Lindzey, G. and Borgatta, E: Sociometric Measurement in the Handbook of Social Psychology, Addison – Welsley, US.
 - Rose, G.: Oxford Textbook of Public Health, Vol.4, 1985.
 - LaFasto and Larson: When Teams Work Best, 2001, Response Books (Sage), New Delhi
 - J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 2, Group (1996); Pfeiffer & Company
- Smither Robert D.; The Psychology of Work and Human Performance, 1994, Harper Collins College Publishers

FOREIGN LANGUAGE :Foreign Language French (Technology)

Semester 1 Course Code: FLT 101/111 (Tech French)

Credit Units: 02

Program Learning Outcomes:

- To produce global citizens speaking an International language in keeping with the institutional vision.
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.

To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts.
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

- To tell ones name and to spell it
- To understand the French keyboard
- To wish/welcome/identify/name someone
- To present oneself and someone else
- To fill a form
- To ask for information
- To understand and ask simple questions

Course Contents:

Unité 1 Premiers pas en France. Page: 1-17 Leçons 0, 1, 2 & 3

Contenu Lexical:

1. Les mots transparent (en sciences)
2. Quelques prénoms français
3. La prise de contact
4. La politesse
5. Les salutations
6. La famille
7. Les présentations
8. Quelques spécialités scientifiques
9. Les Chiffres de 0 à 20
10. Les ordinaux
11. L'adresse postale
12. L'adresse mail
13. Le numéro de téléphone

Contenu Grammatical:

1. Les accents
2. Etre au présent
3. Les articles indéfinis
4. Les pronoms personnels
5. Le féminin et le masculin
6. Les prépositions de lieu
7. Les articles définis
8. Avoir, étudier, habiter au présent, Les verbes du 1 er groupe au présent
9. Les adjectifs possessifs au singulier
10. Les pronoms toniques
11. L'interrogation

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 101/111 Foreign Language German

Semester 1:

Course Code: FLG 101/111 Credit units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of the course, students will be able to express simple vocabulary in oral and writing German language.

After successful completion of this semester, students will be able to:

- greeting formally and informally.
- self introduction
- countings from 1 To 100
- make simple sentences using present tense
- spelling names.
- describing objects with articles in the classroom

Course Contents:

Vocabulary:

- Personal information like age, name etc.
- Alphabets
- Greetings: Good morning, good afternoon, good evening,
- parting good bye Etc.
- describing objects with articles in the classroom

Grammar:

- Personal Pronouns
- Use of verbs >to be< and >to have< in simple present tense
- Use of regular verbs like to live, to go, to learn etc.
- Using definite and indefinite article in German in nominative case

- Interrogative pronouns > **who, what, where, where from, where to**<
- talk about gender, numbers and articles.
- Singular and plural
- Basic Phonetics: Consonants and Vowels

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: First 10 Lessons from Deutsch als Fremdsprache -1A, IBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: Studio D: Glossar A1 - Deutsch – Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 101/111 FOREIGN LANGUAGE SPANISH
Semester 1: Course Code: FLS 101/111 Credit units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of the course, students will be able to express simple vocabulary in oral and writing. Students will be able to:

- Greet Formally and Informally
- Talk about gender, numbers and articles.
- Deal with basic Phonetics
- Introduce oneself and others
- Talk about Professions and nationalities
- Count from 1 To 20
- Get introduced to Hispanic Culture

Course Contents:

Vocabulary: Passport Form, personal information, age, Interrogative pronouns, Alphabets, to be able to spell names, surnames, Good morning, good afternoon, Good bye Etc. different professions, countries, nationalities, languages.

Grammar:

Subject pronouns

Use of verbs SER/ESTAR/TENER in simple present tense

Use of regular AR /ER/IR ending verbs.

Llamar y dedicarse

Simple Negativesentences

ExaminationScheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 101/111 FOREIGN LANGUAGE CHINESE

Semester I Course Code: FLC- 101/111 Credit Units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Aim: The Aims of Chinese language course at AUR is to equip students with the basic knowledge & skills in Chinese language so as to enable them to interact with Chinese speaking people and efficiently work in the Chinese environment and also to build a solid foundation for further studies in the language.

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

On the completion of first semester the students will be able to:

- Understand the nature and characteristics of Chinese language.
- Read Chinese Pinyin and Chinese Characters.
- Write Chinese Characters and sentences related to greetings & personal information.
- Speak Chinese dialogues related to greetings & personal information.
- Listen and understand simple Chinese words and dialogues of the text.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use; approx 70 Characters including 50 characters of HSK level -I.
- Understand China as a powerful nation.

COURSE CONTENT

1. Introduction to Chinese Language
2. Introduction to the Sound System , Initials and Finals
3. Table of sounds of Beijing Dialect
4. Tones
5. Writing System & Basic Strokes of Chinese Character
6. Rules of Stroke-Order of Chinese Character,
7. Expression of Greetings & Good wishes
8. Farewell
9. Asking & telling Personal Information : Name & Age
10. Personal Information : Residence
11. Personal Information : Family Members
12. Listening Skill & Practice
13. Conversation based on dialogues
14. China; an emerging world power (In English)

VOCABULARY CONTENT

Vocabulary will have approx 70 Characters including 50 characters of HSK-I level.

1. Vocab related to greetings & farewell; 你, 好, 再见。。。
2. Vocab related to personal information; 名字, 年纪, 家, 住, 爸爸。。

GRAMMATICAL CONTENT

1. Introduction to the sound system, initials and finals, sound table & tones.
2. Basic strokes of Chinese Character & stroke- order.
3. Conjunction 和.
4. Word order in Chinese sentence.
5. Adjective Predicate sentence.
6. 是sentence type (1).
7. Interrogative sentence with 吗.
8. Attributive & structural particle 的.

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text Books & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Chinese Reader (HSK Based) book-I (suggested reading)
3. Elementary Chinese Reader Book-I (suggested reading)

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2021-26 Onwards

Total Credits = **299**

STAGE - I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

SECOND SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/T/ST/P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 201	Design – II	CC	PC	0	6	0	9	6
BAR 202	Materials & Construction Technology – II	CC	BS & AE	1	1	1	3	3
BAR 203	Structural Design and Systems – II	CC	BS & AE	2	0	0	2	2
BAR 204	Graphics Skills – II	CC	PC	0	0	4	2	4
BAR 205	History of Architecture – I	CC	PC	2	0	0	2	2
BAR 206	Building Services – I	CC	BS & AE	2	0	0	2	2
AND 002	Aanandam-II	VA	SEC	0	0	4	2	4
EVS 001	Environment Science	CC	BS & AE	4	0	0	4	4
BCS 201	English	VA	SEC	1	0	0	1	1
BSS 205	Behavioural Science – II (Problem Solving & Creative Thinking)	VA	SEC	1	0	0	1	1
	Foreign Language - II	VA	SEC	2	0	0	2	2
FLT 201	French							
FLG 201	German							
FLS 201	Spanish							
FLC 201	Chinese							
	Open Elective/Minor Track	OE/MT	OE	3	0	0	3	3
	TOTAL			18	7	9	33	34

BAR 201 DESIGN – II

Course Code: BAR 201

Credit Units: 09

L/0-ST/6-P/0

Teaching hours: 06

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse functional spaces and the issues like clearances, lighting and ventilation, using the anthropometric study approach and work out Minimum and optimum areas for various functions.
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5 :	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Objectives:

- To understand interdependence of Form, Function, structure and basic services in building design
- To comprehend Site as determinant of Architectural Design
- To progress from the ability to design for uni-functional space to multi-functional spaces in a single building not exceeding G+1

Course Contents:

Module I: Introduction

Introduction to interdependence of Form, Function, Structure and essential services in with examples of residential buildings not exceeding G+1; Establishing Relationships between multifunctional spaces and their disposition in a single building; Understanding Site and Conducting Site Studies; Project introduction for studio exercise

Module II Measured Drawing as Tool for Case Studies and Site Studies

Detailed Measured Drawings (Plans, Sections & Elevations) of Residential building along with Site measurements and studies; Literature Review – Design Standards and Codes, Brief Formulation

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. ***An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.***

Design exercise can include minor problems like bus shelter, milk booth, entrance gate, watchman's cabin, traffic police kiosk, flower stall, ATM Centre and major problems like Residence – villa, farmhouse, weekend cottage, artist studio etc. having 3-4 spaces.

Examination Scheme:

Components	A	S1	S2	C T	E E
Weightage (%)	05	15	20	10	20 Viva 30 EE

Text Books /Reference Books/Journals/Other Study Material:

- 'Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect's Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, M cGraw Hill Book Company, New York.
- Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, M assachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, M atthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- <https://www.architecture.com/knowledge-and-resources/resources-landing-page>

BAR 202 MATERIALS AND CONSTRUCTION TECHNOLOGY - II

Course Code: BAR 102 Credit Units: 03 L/1-ST/1-P/1 Teaching hours: 03

A. COURSE LEARNING OUTCOME:

CLO 1 :	Distinguish between various type of wood though analysing their physical and chemical properties. Evaluate Cross sectional detail of a log Properties of Timber; Processing of Timber Evaluate and Identify use of timber & timber products in buildings
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Recognise the different types of openings made up of timber in day to day life & understand the construction techniques of making wooden doors and windows. Develop understanding regarding the different types of carpentry joints & their specific uses and evaluate the best suitable joint in openings. Understand the construction techniques of making wooden staircase. Understand the various types of wooden trusses, their different components and construction techniques of making wooden trusses.
CLO 4 :	Evaluating and Analysing with the market surveys, case examples or literature studies available.
CLO 5:	Create details for constructing a wooden staircase. After evaluating and analysing various wooden joints , Students will create roof trusses, staircases, windows or door.

B. SYLLABUS

Course Objective:

- To acquaint the students with Timber as a construction material and to familiarize them with construction techniques for use in building works.

Course Contents:

Module I: Timber -2 weeks

Difference between wood and timber, Classification, Characteristics, Defects and Preservation.

Module II: Timber Doors --3 weeks

Drawings of Timber Joinery, Types, Classification and Usage.

Doors: Ledged, Braced, Battered door, flush, paneled, single and double shutter doors of various types and sizes.

Module III: Timber Windows and ventilators - 3 weeks

Types, classification and construction details

Fully glazed, fixed glass, timber louvered, bay & casement window detail, ventilators details.

Module IV: Different type of Timber products: -3 weeks

Soft board, hard board, ply, straw board, MDF board, saw dust, block and particle board etc.

Their manufacturing, advantages and disadvantages, market terminology, Sizes available and prices, availability and use with all the details. Report, samples, catalogs to be compiled from market survey.

Module V: Wooden Staircases & trusses- Basic concepts and construction -2 weeks

Different type of Staircases & trusses and their terminology and construction detail.

Exercises: Preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Building construction W.B.McKay
- Building construction R Berry
- Building construction Chudley
- Building constructin Francis D.K. Ching

BAR 203 STRUCTURAL DESIGN & SYSTEM - II

Course Code: BAR 203 Credit Units: 02 L/2-ST/0-P/0 Teaching hours: 02

A. Course Learning Objective

CLO 1 :	Understand & identify the properties of the constituent materials of concrete Identify and demonstrate the behaviour of fresh and hardened concrete. Design concrete mixes as per IS and ACI codes Identify, describe and carry out the main laboratory tests on concrete constituents.
CLO 2 :	Demonstrate recent advancements in concreting materials and procedures. Investigate the properties & characteristics of any soil type at any construction site using advanced methods
CLO 3:	Develop his /her interest in geotechnical engineering designing field

B. Syllabus

Course Objective:

- To understand the application of basic structural system into modified system of structure.
- To help the students for understand the basic principles of structural behavior and requirements of buildings with emphasis laid on the principles of various load & stresses distribution in beams and columns.

Course Contents:

Module I:Stresses in Beams-3 weeks

Theory of simple bending- neutral layer, bending stresses in beams, bending equation, Definitions, Distribution of shear stress in section of a beam – rectangular, semi-circular, T and I sections.

Module II:Analysis of Trusses-2 weeks

Introduction, forces in members, analytical methods, Method of joint & sections, graphical method, link polygon in trusses

Module III:Direct and Bending stresses-2 weeks

Introduction, eccentric loading, columns with eccentric loading, symmetrical columns with eccentric loading about one & two axis.

Module IV:Deflection of Beams-3 weeks

Introduction, Curvature of the bending beam, relation between slope, deflection & radius of curvature, methods for slope & deflection at a section, simply supported beam with a central, eccentric, UDL, UVL, Macaulay's method for slope & deflection.

Module V:Columns& Struts-3 weeks

Definition, Euler's Theory of long columns, Assumptions in the Euler's column theory Columns with end conditions, slenderness ratio, Limitations of Euler's formulae, IS Codes for columns.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Elements of Structure, Morgan
- Salvadori, Structures in Architecture,
- Everet, Structure and Fabric,
- Khurmi R. S., Strength of Materials,
- R.K. Bansal, Engineering Mechanics By.
- Khurmi R. S, Applied Mechanics and Strength of Materials,
- Salvadori and Heller, Structure in Architecture,

BAR 204 GRAPHIC SKILLS – II

Course Code: BAR 204 Credit Units: 02 L/0 ST/0 P/4 Teaching hours: 04

A. Course Learning Outcome:

CLO 1 :	Understand and remember the fundamentals of drafting
CLO 2 :	Understand the fundamentals of geometry Understand the principle and different types of projections and views
CLO 3:	Produce presentations on all the four cognitive learning outcomes.

B. Syllabus

Course Objective:

To enable students to produce manual drawings of interpenetration of solids, perspective views and Sciography. To impart the techniques of architectural rendering required for effective presentation.

Course Contents:

Module I: Interpenetration of Solids

Orthographic Projection Drawings and Axonometric views of interpenetration of different solids in different position.

Module II: Introduction to perspective – Plan Method

Importance and use of perspective drawing in architecture; Anatomy of a perspective-cone of vision, station Points, picture plane, eye level, horizon line, ground line, vanishing point, etc; One point & Two point Perspectives Plan Method-simple form to building forms.

Module III: Perspective – Grid Method

One Point and Two point perspectives using Grid Method for faster production of Perspective Drawings.

Module IV: Sciography

Values in shades and shadows. Constructing plan shadows (point, line and plane). Constructing shadows in elevations (Point, line and Plane). Constructing shadows in perspective views. Short-cut methods for constructing shadows.

Module V: Introduction to Rendering(dry and wet)

Presentation techniques in different types, medium and materials. Rendering perspectives in different media (Dry/water based color and ink etc.). Variation in color/ ink, as per light position. Use of basic plantation, vehicles, human beings etc to introduce scale to building perspectives.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Architectural Graphics, C. Leslie Martin
- Perspective and Sciography, Shankar Mulik
- Interior Design, Ahmed Kasu
- Architectural Graphics, Ching Frank
- Engineering Drawing, N.D. Bhatt
- Engineering Drawing – P.S. Gill

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Architectural Graphic standards editor, Boaz Joseph
- Neufert's Architect's data
- Time Saver standards for building types, Editor Joseph D.C. and John Callender.
- Rendering with pen and ink.

BAR 205 HISTORY OF ARCHITECTURE-I

Course Code: BAR 205 Credit Units: 02 L/2-ST/0-P/0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyze and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Examine the developments in the use of materials with different eras.
CLO 3:	Analyse the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS:

Course Objectives:

- Understanding of the Art and architecture of an era with respect to its influence in terms of its location, climate as well as the socio-cultural historical, economical and political systems in planning, building form and architectural details.
- Study of the building types and development of major buildings form of that period in detail with examples that identify the works of the period.

Course Contents:

Module I: Module titleBuddhist and Architecture- 2 weeks

Buddhist Architecture- study of Bodh Gaya and Sanchi Stupa, Examples of Chaityas, Monastries and Stupas

Module II: Temple Architecture- 2 Weeks

- South India or Dravidian Architecture – Pallava Style (AD 600-900), Chola Style (AD 900-1150), Pandya Style (AD 1200 -1350), Vijaynagara Style. Some of the major buildings to be covered include Ratha and Shore temples in Mahabalipuram, Brihadeshwara Temple in Tanjore, Meenakshi Temple in Madurai and Virupaksha Temple
- North India
Nagara Style of Gwalior explained using examples of Teli Ka Mandir, Chaturbhuj Temple, etc.
Nagara Style of Orissa with examples of Mukteshwara Temple, Lingaraja Temple, Konark Sun Temple, etc.
Khajuraho Group of temples
- Central India - Chalukyan/ Vesara Style of Architecture – Description using examples like Badami Temple, temples at Aihole, etc.
- Jain temples of Rajasthan and Gujarat

Module III: Introduction to Islamic Period-1 Week

Introduction and understanding of “Islam’s” philosophy and its interpretation in building types – Mosque, Tomb, Fort

and their elements like dome, arches, minarets etc. With reference to the Slave, Khilji, Tughlaq, Lodi and Shershah Suri (who ruled from Delhi), architecture at Punjab, Gujrat, Bijapur and Deccan.

Module IV: Mughal Architecture-2 Weeks

Examples of monuments at Fatehpur Sikri, Qutab Complex, Tughlakabad, Taj Mahal, Gol Gumbaj, Golconda Fort, Jami Masjid etc. The Architecture related to Babur, Humayun, Akbar, Shahajan Period and later Mughal period its implication on Architectural field. Introduction to Mughal Gardens

Module V : Indian Colonial architecture-1 Week

Monumental buildings of Early colonial period – Examples – St. Pauls Cathedral Calcutta & Bombay Town hall

– Architectural character of Indo-Saracenic and Classical revival – University of Madras Senate House & Victoria

Memorial hall Calcutta – Later Colonial period – Contribution of Edwin Lutyens & Herbert Baker to the lay-out and Architecture of New Delhi – Rashtrapathi Bhavan & Parliament House.

Measured drawing exercise may be combined with local educational tour, recommended by the subject teacher to be organized at the end of the semester after the examinations

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- “ Glimpses of World History” by Pt. Jawahar Lal Nehru
- “ The History of Architecture” by Sir Bannister Fletcher
- *Indian Architecture (Islamic Period) – Percy Brown*
- *Indian Architecture – Islamic Period – 1192 – 1857 b – Dr. SurinderBahai*
- *Islam ic Architecture of the Indian Subcontinent – Bianca MariaAlferia*
- “*Buddist and Hindu Architecture*” in *Indiaby*

References:

- History of Architecture – J ESwain
- History of Architecture by DoraCouch
- A study of History – AlmondToynbee
- Traditions in Architecture – DoraCouch
- Indian Architecture (Islamic Period) – PercyBrown

BAR 206 BUILDING SERVICES -I

Course Code: BAR 206

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome:

CLO 1 :	Understanding the scope, importance and ethics of the field of building services. Appreciate the requirements of different types of building services. Learn the concepts of the building services systems
CLO 2 :	To evaluate the quantity and quality of services to be provided.
CLO 3:	Identify the various appliances, fixtures and appurtenances. Learn about the popular techniques of the building sciences.
CLO 4	Study about the thumb rules and the byelaws of the services and learn how to apply the knowledge while designing the layout of the buildings and its execution
CLO 5	Develop reports and assignments containing write-ups, and sketches to express their understanding of building services during lectures and site visits.

B. Syllabus

Course Objectives:

- To acquaint students to basic principles of water supply, sanitation and plumbing bye laws and systems.
- To assist them in design of plumbing systems at building to town level for different typologies.

Course Contents:

Module I: Water Supply- 2 weeks

Introduction to water supply- sources of water; impurities, purification and treatment of water, Need to protect water; and requirements of water supply for different building types- storage, distribution. Water supply systems at City/ Settlement level; Distribution networks; schematic making of an overhead water reservoir for a town/city.

Module II: Drainage Systems- 3 weeks

Concept, design and detailing of drainage systems at micro and macro level- Introduction to municipal drainage systems at town level, Building/ Site planning for drainage systems, Rainfall, Storm water drains, gullies, open drains (construction, gradients, ventilation and maintenance etc.). Concept, design and detailing of rainwater harvesting systems. Self-cleansing velocity, invert levels, drains on sloping sites, sewage disposal system in unsewered localities- septic tank, soak pits, cesspools, aqua-privy, leeching pits for individual building of urban and rural areas.

Module III: Sanitation- Sewerage- 2 weeks

Purpose and principles, collection and conveyance of waste matter. Sewage treatment plants and bye products. Sewage system design at building and town level. Sanitary appliances, fixture, traps, pipes and joints, drainage in non-municipal areas. Plumbing bye laws. Plumbing design of a toilet and kitchen

Module IV: Sanitation- Solid waste management - 2 weeks

Garbage types, collection and disposal- Purpose and methods (Incinerator, Dry disposal etc.). Garbage disposal in multi-story buildings, Treatment of industrial refuse, Refuse and pollution problems. R4 of waste management.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Water supply, waste disposal and environmental engineering, Chatterjee Water supply and sanitary engineering, Singh
- Water supply and sanitation, Shah
- S.C.Rangwala, “Water supply and sanitary engineering”, Chartar publishing house, Anand, 1989.

References:

- Design and practical handbook of plumbing, Mohan & Anand Plumbing Design and practice, Deolalikar
- Civil handbook, Khanna
- Building construction details, Banz
- Maintenance of buildings, Panchdhari
- G.M. Fair, J.C. Geyer and D.Okun, “Water and Waste water engineering”, Volume II, JohnWiley& Sons, Inc. New York, 1968
- Manual on sewerage and sewerage treatment, CPHEEO – Ministry of works and housing, NewDelhi, 1980
- Renewable energy, basics and technology, supplement volume on integrated energysystems, Auroville, 1998

AND 002 AANANDAM-II

Course Code: AND 002 Course Type: Compulsory Credit Units: 02

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants** are to be given (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

GUIDELINES FOR GCSP (Group Community Service Project)
ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.
5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to<=54hrs (30-40 marks)**
- **O grade >54 hrs to<=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

EVS 201 ENVIRONMENTSCIENCE

Course Code: EVS 201

Credit Unit: 04

Teaching hours: 04

Course Objective:

The term environment is used to describe, in the aggregate, all the external forces, influences and conditions, which affect the life, nature, behavior and the growth, development and maturity of living organisms. At present a great number of environment issues, have grown in size and complexity day by day, threatening the survival of mankind on earth. A study of environmental studies is quite essential in all types of environmental sciences, environmental engineering and industrial management. The objective of environmental studies is to enlighten the masses about the importance of the protection and conservation of our environment and control of human activities which has an adverse effect on the environment.

Course Contents:

Module I: The multidisciplinary nature of environmental studies	Definition, scope and importance Need for public awareness
Module II: Natural Resources	<p>Renewable and non-renewable resources:</p> Natural resources and associated problems; Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies. Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.
Module III: Ecosystems	Concept of an ecosystem, Structure and function of an ecosystem Producers, consumers and decomposers, Energy flow in the ecosystem Ecological succession, Food chains, food webs and ecological pyramids Introduction, types, characteristic features, structure and function of the following ecosystem: <ol style="list-style-type: none"> a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)
	Introduction <u>D</u> efinition: genetic, species and ecosystem diversity Biogeographical classification of India Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values

<p>Module IV: Biodiversity and its conservation</p>	<p>Biodiversity at global, national and local levels India as a mega-diversity nation Hot-spots of biodiversity Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts Endangered and endemic species of India Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity</p>
<p>Module V: Environmental Pollution</p>	<p>Definition, causes, effects and control measures of:</p> <ol style="list-style-type: none"> a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear pollution <p>Solid waste management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution.</p> <p>Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides.</p>
<p>Module VI: Social Issues and the Environment</p>	<p>From unsustainable to sustainable development Urban problems and related to energy Water conservation, rain water harvesting, watershed management Resettlement and rehabilitation of people; its problems and concerns. Case studies, Environmental ethics: Issues and possible solutions Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies. Wasteland reclamation, Consumerism and waste products Environmental Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness</p>
<p>Module VII: Human Population and the Environment</p>	<p>Population growth, variation among nations Population explosion Family Welfare Programmes Environment and human health Human Rights, Value Education, HIV / AIDS, Women and Child Welfare Role of Information Technology in Environment and Human Health Case Studies</p>
<p>Module VIII: Field Work</p>	<p>Visit to a local area to document environmental assets-river / forest/ grassland/ hill/ mountain. Visit to a local polluted site Urban / Rural / Industrial / Agricultural Study of common plants, insects, birds Study of simple ecosystems-pond, river, hill slopes, etc (Field work equal to 5 lecture hours)</p>

Examination Scheme:

Components	CT	HA	S/V/Q	A	EE
Weightage (%)	15	5	5	5	70

Text & References:

Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.

Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad 380 013, India,
Email:mapin@icenet.net(R)

Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p Clark
R.S., Marine Pollution, Clarendon Press Oxford (TB)

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

De A.K., Environmental Chemistry, Wiley Eastern Ltd. Down to
Earth, Centre for Science and Environment (R)

Gleick, H.P. 1993. Water in Crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env.
Institute Oxford Univ. Press. 473p

Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R) Heywood, V.H
&Waston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press 1140p.

Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284
p. McKinney, M.L. & School, R.M. 1996. Environmental Science Systems & Solutions, Web enhanced edition.
639p.

Mhaskar A.K., Matter Hazardous, Techno-Science Publication (TB) Miller

T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)

Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA, 574p

Rao M N. & Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd. 345p. Sharma
B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut

Survey of the Environment, The Hindu (M)

Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science

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

Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (TB) Wanger

K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

BCS 201ENGLISH

Course Name	Course Code	LTP	Credit	Semester
General English	BCS201	1:0:0	1	1

A. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Participate in conversation and in small- and whole-group discussion
CLO 2	Explore and use English as medium of communication in real life situation
CLO 3	Discuss topics and themes of a reading, using the vocabulary and grammar of the lesson
CLO 4	Identify features of a reading textbook and utilize them as needed
CLO 5	Prepare and deliver organized presentations in small groups and to whole class
CLO 6	Apply sentence mechanics and master spelling of high frequency words

B. SYLLABUS

Developing Listening Skills
Developing Speaking Skills
Developing Reading Skills
Developing Writing Skills
Principles of Good Writing - L Hill
Toasted English -R. K. Narayan
On Saying Please- A G Gardiner
All the World's a Stage : Shakespeare
Where the Mind is without Fear: R N Tagore
O Captain, My Captain: W. Whitman
Psalm of Life: H. Longfellow
Go Kiss the World by Subroto Bagchi; Steve Jobs By Walter Isaacson; Rich Dad, Poor Dad by Robert Kiyosaki; The Road Ahead by Bill Gates; What You See, Is What You Get By Alan Sugar (Non detailed study; any of books)

EXAMINATION SCHEME:

Components	CT/Mid-term	Project/Presentation/Assignment/Viva	Book Review	Quiz	Attendance	EE
Weightage (%)	15	10	10	10	5	50

SUGGESTED READINGS

Bhardwaj, Ashu. *A Course Book of English & Communication Skills*. Paragon: New Delhi, 2011.

Farhanthullah, T M. *Communication Skills for Technical Students*. Orient Black PVT: 2008.

Jha, Madhulika. *Echoes*. Orient Blackswan: New Delhi, 2007.

Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008.

Prasad, Dr P. *The Functional Aspects of Communication Skills*. SK & Sons: New Delhi, 2003.

Raman, Meenakshi and Sangeeta Sharma, *Technical Communication: Principles and Practice*. OUP: New Delhi, 2004.

BEHAVIOURAL SCIENCE - II

(PROBLEM SOLVING AND CREATIVE THINKING)

Course Code: BSS 205

CreditUnits: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Recognize the relation critical thinking with various mental processes.
2. Identify hindrance to problem solving processes.
3. Analyze the steps in problem-solving process.
4. Create plan of action applying creative thinking.

Course Objective:

To enable the students:

- Understand the process of problem solving and creative thinking.
- Facilitation and enhancement of skills required for decision-making.

Course Contents:

Module I: Thinking as a tool for Problem Solving

What is thinking: The Mind/Brain/Behaviour

Critical Thinking and Learning:

Making Predictions and Reasoning

Memory and Critical Thinking

Emotions and Critical Thinking

Thinking skills

Module II: Hindrances to Problem Solving Process

Perception

Expression

Emotion

Intellect

Work environment

Module III: Problem Solving

Recognizing and Defining a problem

Analyzing the problem (potential causes)

Developing possible alternatives

Evaluating Solutions

Resolution of problem

Implementation

Barriers to problem solving:

Perception

Expression

Emotion

Intellect

Work environment

Module IV: Plan of Action

Construction of POA

Monitoring

Reviewing and analyzing the outcome

Module V: Creative Thinking

Definition and meaning of creativity

The nature of creative thinking

Convergent and Divergent thinking

Idea generation and evaluation (Brain Storming)

Image generation and evaluation

Debating

The six-phase model of Creative Thinking: ICEDIP model

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS**-Journal of Success; **HA**-Home Assignment; **P**-Presentation; **V**-Viva; **Q**-Quiz; **FC**- Flip class; **MA**- Movie Analysis; **CS**- Case study; **A**-Attendance

Text & References:

- Michael Steven: How to be a better problem solver, Kogan Page, New Delhi, 1999
- Geoff Petty: How to be better at creativity; Kogan Page, New Delhi, 1999
- Richard Y. Chang and P. Keith, Kelly: Wheeler Publishing, New Delhi, 1998.
- Phil Lowe Koge Page: Creativity and Problem Solving, New Delhi, 1996
- J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 3, Management (1996); Pfeiffer & Company
Bensley, Alan D.: Critical Thinking in Psychology – A Unified Skills Approach, (1998), Brooks/Cole Publishing Company.

FLT 201/211 FOREIGN LANGUAGE FRENCH (TECHNICAL)

Semester 2 Course Code: FLT 201/ 211 Credit Units: 02

Course Learning Objective:

- Students will hone basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc

- To speak about the activities and hobbies
- To express one's tastes
- To excuse oneself
- To understand a mail
- To ask one's way
- To indicate the direction
- To express a wish
- To ask for information
- To give an order or a suggestion
- To read a plan of metro and RER.

Course Contents:

Unité 1 (Leçon 4) and Unité 2 Université et les grandes écoles : 18-39 Leçons 4, 5 & 6.

Contenu Lexical:

1. Les loisirs
2. Les saisons
3. Les nombres
4. Le logement et la ville
5. Les prépositions de lieu
6. Les verbes de direction
7. Les lieux de l'université
8. Les documents administratifs
9. Les expressions utilisées en classe par le professeur
10. Quelques raccourcis: diminutifs et sigles

Contenu Grammatical:

1. Aimer, faire et savoir au présent
2. La négation
3. Les adjectifs possessifs au pluriel
4. Le partitif
5. Aller au présent
6. <<il y a>>
7. L'usage des prépositions de lieu
8. Vouloir et pouvoir au présent

9. L'impératif
10. Le conditionnel de politesse

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 201/ 211 FOREIGN LANGUAGE GERMAN

Semester 2: Course Code: FLG 201/211

Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of this semester, students will be able to:

- Recognizing geographical locations.
- Know famous places in Germany and Europe.
- To be able to form basic questions
- use of past participle of verb was/were and make sentences.
- able to conjugate irregular verbs
- use possessive article for the nominative case
- Use of adjectives in sentences.
- They can describe their house like number of bedroom, kitchen etc
-

Course Content:

Vocabulary

- Verb was/were
- Types of Houses and Apartments,
- State and cities
- directions like north, south etc.,
- Neighboring countries of Germany and their respective languages.
- Description of house: Bedroom, bathroom, kitchen etc.

Grammar:

- Interrogatives – what, which, why, how, who, when
- Yes - no question
- Introduction of irregular verbs
- Article in accusative (definite and indefinite)
- Possessive article

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam

10	15	10	10	5	50
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Prescribed Text-Book:

Lesson 11 onwards from Deutsch als Fremdsprache -1A, IBH & Oxford, New Delhi, 1977

References:

Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1 - Deutsch –Englisch**, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 201/211 FOREIGN LANGUAGE SPANISH
Semester 2: Course Code: FLS 201/211 Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.
- To enhance all five skills of the language: Reading, Writing, Listening, Interacting and speaking.
- Adjectives to describe people
- To talk about locations and places.
- To be able to form basic questions
- Counting till 100
- To be able to speak about daily Routine and verbs of daily usage both regular & irregular verbs.

Course Content:

Vocabulary:

Home, Classroom, Neighborhood, hotel, Restaurant, Market, Days name, Months name, Colors names etc. Interrogatives.

Grammar:

Use of SER/ESTAR/TENER/ HAY
 Difference between Estar and Hay
 Demonstrative pronouns
 Interrogatives – what, which, why, how, who, when
 Introduction of irregular verbs
 Possessive pronouns

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					EndSem Evaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero,
Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

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FLC 201/ 211 FOREIGN LANGUAGECHINESE

Semester - II Course Code: 201/211 Credit Units: 02

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

On the completion of second semester the students will be able to:

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters.
- Write Chinese Characters and sentences.
- Speak Chinese dialogues with correct pronunciation & tone.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Manipulate basic grammatical structures such as questions type (2), 有 sentence, verbal predicate, 们, numeration, time etc.
- Master and use most essential vocabulary items of day to day use; approx 110 Characters including 50 characters of HSK level -I.
- Understand Sino-Indian Relations.

COURSE CONTENT

1. Personal information : hobbies & habits
2. Personal information : abilities
3. Expression of gratitude
4. Expression of apology
5. Numbers & currencies
6. Expression of time
7. Description of weather
8. Description of direction,
9. Listening of dialogues
10. Conversation based on dialogues
11. Chinese CBT package /video clipping
12. Sino-Indian relations (in English)

VOCABULARY CONTENT

Vocabulary will include approx 110 Characters including 50 Characters of HSK-I level.

1. Vocab related to hobbies, abilities, gratitude, apology numbers, time, weather, direction, etc will be covered.

GRAMMAR CONTENT

1. Question of type (2) & (3)
2. 有 sentence
3. Auxiliary verbs: 要 会 能 可以
3. The sentence with a verb as its predicate.
4. 们 a plural suffix
5. Numeration

6. Interrogative pronoun 多少
7. Counting Money
8. A numeral-measure word as the attributive
9. Time words: Time, month, day & date
10. The demonstrative pronoun as the attributive
11. The adverbial adjunct:
12. Words of location

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text books & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Elementary Chinese Reader Book-I (suggested reading)
2. Chinese Reader (HSK Based) book-I (suggested reading)
3. Practical Chinese Grammar for foreigners (suggested reading)

MTARC204 GRAPHIC SKILLS – I

Course Code: MTARC204 Credit Units: 03 Teaching hours: 03

A. Course Learning Outcome:

CLO 1	Understand and remember the fundamentals of drafting
CLO 2	Understand the fundamentals of geometry
CLO 3:	Understand the principle and different types of projections and views
CLO 4 :	Learning the techniques of surface development
CLO 5	Produce presentations on all the four cognitive learning outcomes.

C. SYLLABUS:

Course Objective:

To familiarize the students with various drawing tools to give basic knowledge of drafting and lettering techniques. To provide a clear understanding about the scale of measurement and orthographic projections used as drawing technique.

Course Contents:

Module I: Introduction to basics drafting, Lettering & Scales

Introduction and setting to the drawing equipment, Concept of line, its types, Line thickness quality, grade, divisions and angles, Concept of polygons, circles, geometrical curves, helix etc., Concept of Dimensioning & dimension line, BIS codes of drawings.

Free hand and Architectural lettering, proportion of letter size as per scale and size of the sheet. Scales: Engineers scale, Graphical scale and Representation factor (R.F). Scales on drawings. Types of scales: Plain scale and Diagonal scale.

Module II: Projection- Point, Lines, Planes

Definition, meaning and concept, Principles and Methods of projection. Projection of point, Lines & planes.

Module III: Projection-Solid

Projections of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in different positions. Sections of regular rectilinear and circular solids in varying conditions of sectional plane.

Module IV: Surface Development

Introduction and Methods of development of surfaces. Development of lateral surfaces of right solids like Cubes, Prisms, Cylinders, Pyramid, Cone etc.

Module V: 3D Drawing Views

Types, uses & advantage. Isometric, Axonometric & oblique view -solids, compositions & buildings. Metric drawings, projections and their dimensions.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Architectural Graphics, C. Leslie Martin
- Architectural Graphics, Ching Frank
- Engineering Drawing, N.D. Bhatt

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather Architectural Graphic standards editor, Boaz Joseph
- Neufert's Architect's data
- Time Saver standards for building types, Editor Joseph D.C. and John Callender. Rendering with pen and ink
- Practical Plane and Solid Geometry, H. Joseph and Morris

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2020-25 Onwards

Total Credits = **299**

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

THIRD SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/T/ST/P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 301	Design – III	CC	PC	0	6	0	9	6
BAR 302	Materials & Construction Technology – III	CC	BS & AE	1	1	1	3	3
BAR 303	Structural Design and Systems – III	CC	BS & AE	2	0	0	2	2
BAR 304	Graphics Skills – III	CC	SEC	0	0	4	2	4
BAR 305	History of Architecture – II	CC	PC	2	0	0	2	2
BAR 306	Building Services - II	CC	BS & AE	2	0	0	2	2
BAR 307	Surveying & Leveling	CC	BS & AE	0	0	2	1	2
Domain Elective – I (Select any One DE)								
BAR 308	Photography	DE	PE	0	0	2	1	2
BAR 309	Vernacular Architecture	DE	PE					
BAR 310	Model Making Workshop	DE	PC					
AND 003	Aanandam-III	VA	SEC	0	0	4	2	4
BCS 301	Communication Skills – I	VA	SEC	1	0	0	1	1
BSS 305	Behavioral Science – III (Interpersonal Communication)	VA	SEC	1	0	0	1	1
Foreign Language - III								
FLT 301	French	VA	SEC	2	0	0	2	2
FLG 301	German							
FLS 301	Spanish							
FLC 301	Chinese							
Open Elective/Minor Track		OE/MT	OE	3	0	0	3	3
TOTAL				14	7	13	31	34

BAR 301 DESIGN – III

Course Code: BAR 301 Credit Units: 09

L/0-ST/6-P/0 Teaching hours: 06

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse functional spaces and the issues like clearances, lighting and ventilation, using the anthropometric study approach and work out Minimum and optimum areas for various functions.
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5 :	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Objectives:

- To understand design for low rise Community buildings requiring integration of multifunctional spaces and services
- To understand symbolisms in built-forms

Course Contents:

Module I: Introduction

Introduction to community buildings preferably not exceeding G+2 that need ease of access, vertical circulation, way finding and form that can be a landmark and symbolize the aspirations of the target group with examples; Project introduction for studio exercise

Module II :Case studies, Site Studies and Literature Studies

Case Studies – primary and secondary; Site studies; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. *An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.*

Design exercise can include community buildings like Kindergarten School, Primary Health Centre, neighbourhood Cafeteria, Motel, Post Office, Bank extension counter, Police Station, Departmental Store, Gymkhana and Youth Club etc.

Examination Scheme:

Components	A	S1	S2	C T	E E	
Weightage (%)	05	15	20	10	20 Viva	30 EE

Text Books /Reference Books/Journals/Other Study Material:

- 'Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect's Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, M cGraw Hill Book Company, New York.
- Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- <https://www.architecture.com/knowledge-and-resources/resources-landing-page>

BAR 302 MATERIALS & CONSTRUCTION TECHNOLOGY – III

Course Code: BAR 302 Credit Units: 03 L/1-ST/1-P/1 Teaching hours: 03

A. COURSE LEARNING OUTCOME:

CLO 1 :	To define basic building elements.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3 :	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings.
CLO 4 :	To be able to use composite materials in a structure.
CLO 5:	To be aware of the properties and applications of the various materials

B. SYLLABUS

Course Objective:

- To acquaint the students with cement and cement concrete as a construction materials and to familiarize them with construction techniques in building works.

Course Contents:

Module I: Introduction to cement and Concrete – 2 weeks

Cement types, qualities, precautions etc. special purpose cement, cement concrete: Types, Mixing, Curing, Water Cement Ratio etc.

Reinforced Brick Concrete: Qualities and Workability.

Introduction to R.C.C, its usage, types, making and availability with its advantages and disadvantages. Concreting under special conditions.

Module II: Foundation – 3 weeks

shallow and deep foundation

R.C.C. footings, isolated, strip, combined footings, Raft, Pile foundation with their detail.

Module III: Staircases – 3 weeks

Different types of R.C.C. Staircases with their construction detail, Components of staircase.

Module IV: Special Details – 3 weeks

R.C.C. columns and beam structure, roof forms and its connection with structure.

R.C.C. work defects and its treatment.

Expansion joints and its detail.

R.C.C. roof with water proofing details.

Module V: Temporary constructions – 3 weeks

Shoring, underpinning, strutting, formwork, scaffolding etc. in timber and steel.

Exercises: Identification of materials and study of relevant I.S. codes, field trips, preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Building construction W.B.M cKay
- Building construction R Berry
- Building construction Chudley

- Building construction Francis D.K.
Ching Civil Engineering Handbook,
P.N. Khanna
- R.C.C. Design, Khurmi, Punmia, Sushil
Kumar Design of Steel Structure, Negi
- Structure in Architecture, Salvadori and Heller.

BAR 303 STRUCTURAL DESIGN & SYSTEM- III

Course Code: BAR 303

Credit Units: 02

L/0-ST/0-P/4

Teaching hours: 04

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse & evaluate the shear force & bending moment for beam element under the various loading & support conditions by using different methods of structural analysis.
CLO 2 :	Examine the structure by using indeterminacy/determinacy concept from the stability point of view of structure.
CLO 3 :	Analyse the shear force & bending moment diagram by using moment distribution method slope deflection method & strain energy method under the various loading & support condition for the beam element.
CLO 4 :	Understanding the loading conditions of arches by using two & three hinged arches concept.

B. SYLLABUS

Course Objective:

- To understand the transformation of basic components of structural system into the analysis of structural system like: - analytical approaches in the beams & columns by using different kind of methods.
- To help the students for understanding the analytical methods by using statically methods which is described below

Course Contents:

Module I: Forms of structure-3 weeks

Determinacy & indeterminacy of the rigid as well as pin jointed structures, definition of static & kinematic indeterminacy, its application in plane & space forms structures.

Module II: Shear Force & Bending Moments calculation & its diagrammatic presentation by Moment distribution method-3 weeks

Introduction of S.F.D & B.M.D. calculation of shear force & bending moment by using moment distribution method for all types of support & loading system.

Module III: Shear Force & Bending Moments calculation & its diagrammatic presentation by Slope deflection methods-2 weeks

Introduction of S.F.D & B.M.D. calculation of shear force & bending moment by slope deflection methods for all types of support & loading system.

Module IV: Shear Force & Bending Moments calculation & its diagrammatic presentation by strain energy methods-2 weeks

Introduction of S.F.D & B.M.D. calculation of shear force & bending moment by Strain energy method for all types of support & loading system.

Module V: Arches-2 weeks

Introduction, definition, three & two hinged arches, fixed arches. Parabolic & circular arches. & its application in architecture system.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- E. P. Popov, Mechanics of materials.
- S. Ramanathan, Theory of Structures.

- S. Bhavikatti, Structural analysis Vol.-I.
- S. Bhavikatti, Structural analysis Vol.-II.
- Morgan, Elements of Structure.
- Salvadori, Structures in Architecture.
- Everet, Structure and Fabric.
- Khurmi R. S., Strength of Materials
- R.K. Bansal, Engineering Mechanics.
- Khurmi R. S, Applied Mechanics and Strength of Materials.
- Salvadori and Heller, Structure in Architecture.

BAR 304 GRAPHIC SKILLS– III (Computer aided)

Course Code: BAR 304 Credit Units: 02 L/0-ST/0-P/4 Teaching hours: 04

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse& produce manual drawings of interpenetration of different solids in different positions and at different angles.
CLO 2 :	Understand the importance and use of perspective drawing in architecture; Anatomy of perspective-cone of vision, station Points and produce one point and two point perspective drawings manually through plan method and grid method.
CLO 3 :	Calculate and draw sciography, using different grades of shade and shadow in elevation and perspective views.
CLO 4 :	Apply the presentation techniques using different mediums such as color/ ink, as per light position. Also understand the use of basic plantation, vehicles, human beings etc to introduce scale to building perspectives.

B. SYLLABUS

Course Objective:

- To introduce students with computer and its application in architecture.
- To train students in drafting and presentation techniques using Auto-CAD.
- To train students how to make 2-D presentation and render using photoshop.

Course Contents:

Module I: Intro to Computer Graphics and basic application of 2D drafting Software - 1 week

Introduction to Auto CAD and its interface. Auto CAD co-ordinate system, inputting points, basic Auto CAD terminology, basic drafting commands.

Module II: Auto Cad (2-D): basic commands and introduction to use of printing equipment's and hardware - 2 weeks

To setting up a drawing environment; setting up the paper size setting unit setting grid limit, drawing limit, snap controls. Two- dimensional drafting work to be handled in detail on Auto Cad. Basic Drafting commands (Related to drafting of line to All geometrical shapes).

Module III: Auto Cad (2-D): modifying commands - 3 weeks

Basic commands related to drawing properties “layer control change properties, line-weight control”. Use of Display Commands, editing commands, construction commands, enquiry commands etc., Hatching & texting in drawing, Working on layout & x-ref etc. Drafting of Plan(s), Elevation(s) and Section(s).

Module IV: Auto Cad (2-D): advanced commands-3 weeks

Draw, edit and create a complete set of architectural drawings for a dwelling unit using AutoCAD Plan(s), Elevation(s) and Section(s) in detail. Create final presentation and documentation of 2D drawings in AutoCAD.

Familiarizing the use of printers, plotters their hardware and other related systems. Various Settings & different mode to print Auto CAD drawing. Importing & exporting the drawings from one software into other.

Module V: Use of photo editing Software - 4 weeks

Introduction to Photo editing as well as preparation of 2-D presentations and rendering views on Photoshop.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Manuals of AutoCAD – Autodesk Inc.
- Computer graphics and design,
Radhakrishnan Inside AutoCAD -parker,
denial& rice
- Adobe Photoshop user guide/manual.
- Manuals of AutoCAD – Autodesk Inc.

BAR 305 HISTORY OF ARCHITECTURE- II

Course Code: BAR 305

Credit Units: 02

L/2-ST/0-P/0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Synchronize the construction activities with installation of building services. Select the suitable system for particular requirements of buildings.
CLO 3 :	Understanding the importance of sound energy and its impact on building design and also able to control noise within the interior and from exterior sources.

B. SYLLABUS

Course Objectives:

- Understanding the world architecture during the Greek, Roman Romanesque Period and Gothic Period, Study of specific Architectural examples, characteristics features and their origin in above mentioned period.

Course Contents:

Module I: Greek Architecture- 2 weeks

Evolution and Development, Classical orders and constituent elements of architecture- Column orders and the articulation of temples. Classification of temples, Geometry and symmetry of individual buildings and their relationship with others based on different organizing principles and conditions of site. Study of importance- Acropolis, Agora, Temples, Theatres, Tombs and House forms

Module II: Roman Architecture - 2 Weeks

Evolution and Development, Multiple building types to correspond the complex social functions and structure. Complex axial organization of forms. Concrete and construction of vaults and domes. Uses of classical orders in surface articulation. Study of important forums, Temples, Basilicas, Theaters, Amphitheatres, Circuses, Tombs, Triumphal arches, palaces, houses and villas.

Module III: Early Christian Architecture - 1 Week

Introduction and understanding of "Islam's" philosophy and its interpretation in building types – Mosque, Tomb, Fort and their elements like dome, arches, minarets etc. With reference to the Slave, Khilji, Tughlaq, Lodi and Shershah Suri (who ruled from Delhi), architecture at Punjab, Gujrat, Bijapur and deccan.

Module IV: Byzantine Architecture-2 Weeks

Study of Italian basilicas and churches. Centralization in churches, Centrality and interiors of both cross domed and cross in square plan churches. Interior and exterior of churches with heavenly interiors. Construction of domes over polygonal compartments through the use of pendentives. Study of important churches of the Time period.

Module V : Romanesque Architecture-1 Week

Spatial and formal integration of Romanesque churches. Integration of wall and vaults. Ribbed vault and the dissolution of external wall to allow light. Sensitivity to light and use of stained glass for mysterious interiors. Need and development of different external buttressing. Study of important cathedrals and churches in France

Presentations, paper writing and Essays exercise may be optionally be considered, recommended by the subject teacher at the end of the semester after the examinations

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- “ Glimpses of World History” by Pt. Jawahar LalNehru
- “ Ubrban Pattern” by A.B.Gallion
- “ The History of Architecture” by Sir BannisterFletcher
- “ Thegreat age of world Architecture”-G.K Hirasker

References:

- History of Architecture – J ESwain
- History of Architecture by DoraCouch
- A study of History – AlmondToynbee
- Traditions in Architecture – DoraCouch

BAR 306 BUILDING SERVICES- II

Course Code: BAR 306

Credit Units: 02

L/2-ST/0-P/0

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Understand the basic of sound energy, process and are able to manage building acoustical services provisions in construction sites.
CLO 2 :	Examine the developments in the use of materials with different eras
CLO 3 :	Analyse the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS

Course Objectives:

- To integrate electrical system with building design. Application of indoor and outdoor lighting in various planning and installation requirement right from generation to actual building level so that the students could use the same in their design.

Course Contents:

Module I: Introduction to electrical systems- 1 weeks

Introduction to electrical engineering services for buildings; Sources of electrical energy supplied to buildings Electricity generation, transmission and distribution. Instruments for measurement, metering; Electricity Authority, Act, rules and regulation regarding electrification of buildings; Standard Graphical symbols for electrical systems; electric fittings and appliances; Requirements of electrical materials such as conductors, insulators; Types and requirements of electrical cables

Module II: Electrical System design for a building - 1 weeks

Basic Principles of electrical circuit, Methods of wiring -Open and concealed wiring system, distribution system and supply in a building, distribution board and meter, switches; Electrical load calculation,; Design considerations of electrical installations, Study of Electrical layout in a building.

Module III: Electrical safety and protection system - 1 weeks

Protection against overload, short circuit, Control equipment such as switch gear, safety devices to be used in electrical layouts - Fuse, M.C.B, MCCB, ACB, VCB, RCB, ELCB; Earthing and Lightning Protection

Module IV: Photometric Concepts and Day Lighting- 1 weeks

Introduction to basic photometric concept: Light its behaviour and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module V: Artificial Lighting- 1 weeks

Introduction to basic photometric concept: Light its behaviour and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module VI: Design Exercise- 2 weeks

Design and developed detailed layout of electrical and lighting services of previous semester design problem.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	C T	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Raina K. B. & Bhattacharya S. K. (2007) Electrical Design, Estimating and Costing, New Age International Publishers, New Delhi.
- Dagostino, F. R. (1978) Mechanical and Electrical Systems in Construction in Architecture, Reston Publishing Company, Prentice Hill Co., Virginia.
- Egan, D. M. (1983) Concepts in Architectural Lighting, McGraw Hill Book Company.
- Flynn, J. E. et. al (1992) Architectural Interior Systems: Lighting, Acoustics and Air conditioning, Van Nostrand Reinhold
- NBO (1966) Hand book for Building Engineers, National Buildings Organisation, New Delhi.
- Grondzik, W. T., Kwok, A.G., Stein, B, Reynolds, J. S. (2009) Mechanical and Electrical Equipment for Buildings, Wiley
- “Electric Heating”, E.P.Ambrose, John Wiley & Sons Inc., New York, 1968.
- Electrical Technology, Seventh Edition, H.Cotton, CBS Publications, 2003
- Design of Electrical Installations by Er. V.K. Jain and Er. Amitabh Bajaj

BAR 307 SURVEYING AND LEVELLING

Course Code: BAR 307

Credit Units: 01

L/0-T/0-P/2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Carry out temporary adjustment of survey instruments by standard methods: to perform temporary adjustment of survey instruments with concepts of permanent adjustments
CLO 2 :	Conduct linear measurements using survey instruments and tools:- to perform line measurements using conventional and modern methods
CLO 3 :	Carry out levelling and cross sectioning survey:- to conduct and complete cross - sectional surveys and levelling works across multiple work environments
CLO 4 :	Carry out topographic survey: to conduct a topographical survey of an area and prepare resulting contour maps.

B. SYLLABUS

Course Objective:

- To impart basic surveying & levelling principles and use the skills to commonly needed in the planning of projects.
- To Demonstrate the role and application of modern surveying techniques and technologies.

Course Contents:

Module I: Introduction to surveying-2 weeks

Role of surveying in Architecture, Principle of surveying, classification of surveying according to nature of field & object, units of measurements.

Module II: Linear measurement-3 weeks

Role of linear measurement, Different methods, Equipment- Tape, chain, Odometer, Arrows, Ranging rods, Stadia Tachometry, EDM, Procedure, errors, applications of linear measurement

Module III: Angular measurement-3 weeks

Various equipment's, theodolite, compass -surveyors & prismatic, simple numerical. Rectangular and polar coordinates, Definition of Traverse, Application of traversing, Equipment and field procedure.

Module IV: Leveling & Contouring-3 weeks

Definition, Levelling instruments, differential levelling, Booking and reduction, Longitudinal and cross sectioning, Contouring, Characteristics of contours, locating contours.

Module V: Plane tabling & Setting out works-2 weeks

Various equipment's, methods of plane table, & setting out works, triangulation method etc. Simple methods of preparing on site drawings and layout of small buildings

Examination Scheme:

Components	A	H	C	V	CT	EE
Weightage (%)	05	10	10	05	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Alok De, plane Surveying
- W. Schofield and Butterworth, Engineering surveying
- B.C. Punmia, Heinemann Surveying vol- 1
- S.K. Duggal, Surveying vol -1

BAR 308 PHOTOGRAPHY

Course Code: BAR 308

Credit Units: 01

L/0-ST/0-P/2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1	A comprehensive knowledge and understanding of light, exposure and colour , and their application in architectural lighting
CLO 2	An advanced understanding of theories of photographic composition, balance and weight
CLO 3	A knowledge of the history of architectural photography, with an awareness of the contextual boundaries within, and outside of, the genre.
CLO 4	An advanced ability to use film and digital cameras to capture and create outstanding photographs of architecture, form and space
CLO 5	A comprehensive knowledge and understanding of digital photographic image manipulation and processing techniques using industry standard software programmes

B. SYLLABUS

Course Objectives:

- This course will teach students to create successful images of exterior architecture, interior architectural design, as well as architectural models.
- The course discusses equipment, processes, and procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress.
- Students will learn to use Digital SLR cameras, lighting techniques, software and to create output.
- Students will be able to use High Dynamic Range (HDR) :multiple exposures to create dramatic architecture/interior images without additional professional lighting.

Course Contents:

Module I: Introduction - 2 weeks

Architectural Photography Origins of architectural photograph, Review of architectural photographs, Light and Shades, Understanding light – Properties and elements of light. Basics of camera – Operations and Control Parallax Error, use of camera, lens and understanding lighting conditions. Pixels, resolution, Sensor size etc.

Module II: Light & Planning – 4 weeks

Understanding light and photography, External lighting- Direction of lighting - front, side, back, shadows, texture, and effects of clouds, light modification, psychological effects, and types of artificial lighting, combined daylight and flash. Overview of architectural photography, Color balance, Reading histogram, White balance and Color temperature.

Module III: Creativity in Photo shooting - 4 weeks

Shooting Finding Forms and Shapes, Elements and Principals of framing, Rules of composition, Aesthetic of framing and composition, Perceptual Control, Depth of field and center of confusion, Exterior and interior photography, Flash control etc.

Module IV: Quality & Safety Management - 4 weeks

Introduction to software, RAW file editing, HDR Imaging, Adobe Photoshop and Light room, Retouching

and color correction, Printing Preparation Module IV: Framing Views Single point and two point perspective- examples, distortions, emphasizing architectural elements, effect of camera to subject distance, oblique angles, three point perspective- applications in interiors and exteriors - composition, symmetric composition, applying the law of thirds - examples, image capture to publication

Project: Students should submit two projects at the end of the semester. (a) Interior Photography (b) Exterior Photography .

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Ackerman, J. S. (2001). On the origins of architectural photography. Mellon lecture, December
- Harris, M. G., & Harris, M. G. (1998). Professional architectural photography. Oxford: Focal Press
- Rosa, J., & McCoy, E. (1994). A constructed view: The architectural photography of Julius Shulman, Rizzoli Intl Pubns.
- Siskin, J. (2012). Photographing architecture: lighting, composition, postproduction, and marketing techniques. Buffalo, NY: Amherst Media
- Schulz A., Architectural Photography: Composition, Capture, and Digital Image Processing, O'Reilly Media Inc., 2010

Online Resources

- <https://www.udemy.com/topic/architecturephotography>

BAR 309 VERNACULAR ARCHITECTURE

Course Code: BAR 309

Credit Units: 01

L/0-ST/0-P/2 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To understand how the contexts of a region have an impact on vernacular architectural forms.
CLO 2 :	To explore various traditional materials and construction techniques used in vernacular architectural forms.
CLO 3 :	To acquire knowledge on traditional materials and construction techniques which can be used in the design of built spaces in the modern context.
CLO 4 :	Understanding the impact of context of a region over architectural forms and expressions will lead to sensible and context specific and sensitive design solutions.

B. SYLLABUS

Course Objectives:

To expose the students to traditional architecture of the various parts of the country. The students will have knowledge of the planning aspects, materials used in construction, constructional details and settlement planning of the settlements in various parts of the country.

Course Contents:

Module I: Introduction to Vernacular Architecture

Approaches and concepts to the study of Vernacular Architecture – Introduction to Kutcha architecture and Pucca architecture and architecture without architects developed through experience based on local material.

Module II: Southern region

Planning aspects, materials of construction, Constructional details & Settlement Planning of:

- Kerala – Nair houses (Tarawads), Kerala Muslim houses (Mappilah houses), Temples, Palaces and theaters – Thattchushastra.
- Tamil Nadu – Toda Huts, Chettinad Houses (Chettiars) & Palaces
- Karnataka – Gutthu houses (land owning community), Kodavaancestral home (Aynmane)
- Andhra Pradesh –Kaccha buildings Religious practices, beliefs, culture & climatic factors influencing the planning of the above.

Module III: Western Region:

Planning aspects, Materials used, Constructional details, Climatic factors influencing the planning of

- Jat houses for farming caste, Bhungas(Circular Huts) and Havelis(Pukka houses) of Rajasthan
- Pol houses of Ahmedabad - Primitive forms, Symbolism, Colour, Folk art etc in the architecture of the deserts of Kutch & Gujarat state.
- Vernacular architecture of Goa.

Module IV: Northern and Eastern India

Planning aspects, Materials used, Constructional details, Climatic factors influencing the planning of

- Kashmir – Typical Kutcha houses, mosque, Dhoongas(Boathouses), Ladakhi houses, bridges
- Himachal Pradesh – Kinnaur houses
- Uttar Pradesh – Domestic housing of Uttar Pradesh
- Bengal – Bangla (Rural house form), AatChala houses – change from Bangla to Bungalow, Kutcha & Pucca architecture of Bengal.Nagaland – Naga houses & Naga village, Khasi houses Factors influencing the planning aspects, materials of construction & constructional details of the above.

Module V : Vernacular Architecture

Overview of vernacular Architecture of neighbouring countries and world such as Africa, UAE etc.

Exercise : Students may be advised to prepare case studies through literature/online/ site visits and submit report.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Traditional buildings of India, Ilay Cooper, Thames and Hudson Ltd., London
- Architecture of the Indian desert, Kulbushan Jain & M eenakshi Jain, Aadi Centre, Ahmedabad
- The Royal Palaces of India, George M ichell, Thames and Hudson Ltd., London
- Chettiar Heritage, S.Muthiah, M eenakshi M eyappan, Visalakshmi RAMASWAMY, Lokavani-Hallmark Press Pvt. Ltd., Chennai
- Encyclopaedia of Vernacular architecture of the World, Cambridge University Press
- Havali – Wooden houses & mansions of Gujarat, V.S.Pramar, Mapin Publishing Pvt. Ltd., Ahmedabad
- The Tradition of Indian architecture – Continuity & Controversy – Change since 1850, G.H.R.Tillotsum, Oxford University Press, Delhi
- VISTARA – The architecture of India, Carmen Kagal. Pub : The Festival of India, 1986.
- House, Form & Culture, Amos Rappoport, Prentice Hall Inc, 1969

BAR310 MODELMAKING WORKSHOP

Course Code: BAR 310

Credit Units: 01

L/0-ST/0-P/2 Teaching

hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To remember different tools used in carpentry, masonry and surface painting
CLO 2 :	To understand the technique of applying construction material such as brick, cement, wood, stone and its testing.
CLO 3 :	To construct different building components like dome, arch and wall with various typologies.
CLO 4 :	To create new forms and structures using the learned techniques.

B. SYLLABUS

Course Objectives:

To introduce various fabrication skill and techniques to produce scale –models and to encourage preparation of models as an essential phase in design development and evaluation.

Course Contents:

Module I: Introduction to model-making - 4 weeks

Need, role of scale models in design, general practices, Essentials of model-making, understanding of various tools And machines employed, best practices involved in operating the tools and the techniques.

Module II: Materials for model-making - 4 weeks

Introduction of various materials available for model making such as papers, mount boards, mount sheets, wood, plastics, films, plaster of Paris, acrylic sheets, metal, glass, FRP etc. Potential of these materials, in model-making

Module III: Techniques of scale-modeling- 6 weeks

Use of different scale, templates, measuring aids, conventions followed. Techniques for preparation of presentation models, mock-ups, simulation of various materials and textures such as wood, glass, aluminum, steel, bricks, roofing tiles, flooring, etc. Models with soft materials like; clay, plaster of Paris etc. Models of shells & membrane structures by use of canvas molding cloth

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Architectural Models: Construction Techniques – Wolfgang Knoll, Martin Heching
- Model-Making: Materials and Methods – David Neat

Reference Books

- The aesthetic experience –magnet Jacque Form, Space & Order – D.K Ching.
- Object by Architects – tapert,Annette,swidpowell Art Forms – Preble,duame

AND 003 AANANDAM-III

Course Code: **AND 003**

Course Type: **Compulsory**

Credit Units: **02**

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants are to be given** (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

**GUIDELINES FOR GCSP (Group Community Service Project)
ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)**

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.
5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to<=54hrs (30-40 marks)**
- **O grade >54 hrs to<=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

BCS 301 COMMUNICATION SKILLS - I

Course Code:BCS 301

Credit Units: 01

Teaching hours: 01

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS 301	1:0:0	1	1

B. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Inculcating creative thinking skills
CLO 2	Construct and showcase their communication skills in a creative manner.
CLO 3	Comprehending and demonstrating ways of self-introduction
CLO 4	Outlining and illustrating presentation Skills

B. SYLLABUS

Topic
Self-Actualization (Baseline, Self-Image Building, SWOT, Goal Setting)
Telephone Etiquette
GD-1 (Basics, Do's & Don'ts, Mannerism, Dynamics, GD Markers)
Book Review Presentation

EXAMINATION SCHEME:

Components	Self Introduction	GD	Book Review Presentation	Attendance
Weightage (%)	30	35	30	5

SUGGESTED READINGS

- Business Communication, Raman – Prakash, Oxford
- Creative English for Communication, Krishnaswamy N, Macmillan
- Textbook of Business Communication, Ramaswami S, Macmillan
- Writing Skills, Coe/Rycroft/Ernest, Cambridge

BEHAVIOURAL SCIENCE – III: (INTERPERSONAL COMMUNICATION)

Course Code: BSS305

CreditUnits: 01

Course learning outcomes (CLOs):

At the successful completion of this course you (the student) should be able to:

1. Demonstrate knowledge of strategies for developing a healthy interpersonal communication .
2. Recognize the importance of transactional analysis, script analysis .
3. Identify the difference between healthy and unhealthy expression of emotions and develop emotional competence necessary for conflict resolution and impression management.
4. Enhance personal effectiveness and performance through effective interpersonal communication .

Course Objective:

This course provides practical guidance on

- Enhancing personal effectiveness and performance through effective interpersonal communication
- Enhancing their conflict management and negotiation skills

Course Contents:

Module I: Interpersonal Communication: An Introduction

Importance of Interpersonal Communication

Types – Self and Other Oriented

RapportBuilding – NLP, Communication Mode

Steps to improve Interpersonal Communication

Module II: Behavioural Communication

Meaning and Nature of behavioural communication

Persuasion, Influence, Listening and Questioning

Guidelines for developing Human Communication skills

Relevance of Behavioural Communication for personal and professional development

Module III: Interpersonal Styles

Transactional Analysis

Life Position/Script Analysis

Games Analysis

Interactional and Transactional Styles

Module IV: Conflict Management

Meaning and nature of conflicts

Styles and techniques of conflict management

Conflict management and interpersonal communication

Module V: Negotiation Skills

Meaning and Negotiation approaches (Traditional and Contemporary)

Process and strategies of negotiations

Negotiation and interpersonal communication

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; JOS-Journal of Success; HA-Home Assignment; P-Presentation; V-Viva; Q-Quiz; FC- Flip class; MA- Movie Analysis; CS- Case study; A-Attendance

Text & References:

- Vangelist L. Anita, Mark N. Knapp, Inter Personal Communication and Human Relationships: Third Edition, Allyn and Bacon
- Julia T. Wood. Interpersonal Communication everyday encounter

- Simons, Christine, Naylor, Belinda: Effective Communication for Managers, 1997 1st Edition Cassel
- Goddard, Ken: Informative Writing, 1995 1st Edition, Cassell
- HarvardBusinessSchool, Effective Communication: United States of America
- Foster John, Effective Writing Skills: Volume-7, First Edition 2000, Institute of Public Relations (IPR) Beebe, Beebe and Redmond; Interpersonal Communication, 1996; Allyn and Bacon Publishers

FLT 301/ 311 FOREIGN LANGUAGE FRENCH

Semester 3 Course Code: FLT 301/311 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc

- To understand and present the time schedule and to tell the time
- To understand and draft a short biography and to present a scientist
- To understand an online conversation and read a program and the timings.
- To propose an outing and to accept an outing.
- To leave a message on the answering machine

Course Contents:

Unité 3 La science au quotidien Page : 40-61 Leçons 7, 8 & 9

Contenu Lexical:

1. L'heure
2. Les jours de la semaine
3. Les mois de l'année
4. Les matières et types de cours
5. Les spécialités scientifiques.
6. L'année universitaire
7. Les nationalités
8. Les noms de pays
9. Les métiers scientifiques
10. Les chiffres de 69 à l'infini
11. Quelques unités de mesure
12. Quelques termes scientifiques
13. Les termes de l'exposition
14. Les expressions familières pour accepter une invitation.

Contenu Grammatical:

1. Finir, commencer au présent
2. Les prépositions de temps
3. Féminins et masculins des noms de métiers scientifiques
4. Les adjectifs de nationalité.
5. Le futur proche
6. Les adjectifs démonstratifs
7. Le but: pour + infinitive

8. Le register familial

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionnaire, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 301/311 FOREIGN LANGUAGE GERMAN

Semester 3: Course Code: FLG 301/311

Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of this semester, students will be able to:

- describe furniture in a room.
- ask question related to time like when, from when etc.
- tell time (formal and informal)
- how to make calls on phone
- can excuse for cancel appointments.
- speak about their daily routine.

Course Contents

Vocabulary:

- Furniture
- Days and months name
- Time vocabulary like 15 min, quarter, minute, seconds.
- Adjectives use to describe furniture.

Grammar:

- Past participle of verb had
- Usage of negation like **not = nicht; kein= not a single.**
- Preposition of time.
- Use of adjective in sentences.
- Introduction and use of separable verbs

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: First 10 Lessons from Deutsch als Fremdsprache -1B, INBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen,

2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 301/311 FOREIGN LANGUAGE SPANISH

Semester 3: Course Code: FLS 301/311 Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.
 - To enable the students to talk about a place like, class room, market, neighborhood and location of thing with the use of prepositions.
 - To talk about one's likes/dislikes, how one is feeling, to express opinions, pain and illness.
 - Time and date
 - Speaking about prices/currency/ market and quantity.
 - Counting above 100,
 - To discuss near future plans

Course Content

Vocabulary:

Vocabulary pertaining to describe people/ place /objects, Illness, Currency, Market etc. preferences, opinions , body parts etc.

Grammar:

Introduction of stem changing irregular verbs

Introduction of prepositions (Cerca de/ lejos de/ encima de etc.)

Present continuous tense (**Estar+ gerundio**)

Introduction of third person verbs Gustar/Parecer/Encantar/ Doler etc

Interrogatives – How much/ How many

Introduction of irregular verbs.

Immediate future plans (Ir a + verbo)

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús sánchez Lobato, Concha Moreno Garcia, Concha

Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

PasaporteNivel (A1) byMatideCerralozza Aragón, oscarCerralozzaGilli, BegoñaLlovetBarquero,

EdelsaGroupdidascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 301/ 311 FOREIGN LANGUAGE CHINESE

Semester - III

Course Code: FLC- 301/311

Credit Units: 02

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.

Students will be able to communicate in small sentences in oral, self introduction, family description etc

On the completion of third semester the students will be able to attain the proficiency of HSK-I and they will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out conversation in the target language.
- Manipulate basic grammatical structures such as: 在 是 有 sentence, etc.
- Master and use most essential vocabulary items of day to day use and programme specific vocabulary; approx 100 Characters including 50 characters of HSK level -I.

COURSE CONTENTS

1. Description of size
2. Description of quantity
3. Asking and replying questions on shopping
4. Asking and replying questions on Communication
5. Conversation Related to Study
6. Conversation Related to Work
7. Expression of Simple Feelings
8. Listening of dialogues
9. Conversation based on dialogues
10. Programme Specific Vocabulary & Expressions
11. Chinese CBT Package
12. Chinese Festivals (In English)

VOCABULARY CONTENTS

1. Vocabulary will include approx 100 Characters including 50 Characters of HSK-I level.
2. Vocab related to size, quantity, shopping, communication, study, work and simple feelings and Programme Specific Vocabulary will be covered during this semester.

3. By the end of third semester the students will be able to master all 150 characters set for the HSK level-I.

GRAMMATICAL CONTENTS

1. Antonyms

2. Prepositional phrases
3. The object of 在 从
4. Complement of degree
5. Preposed object
6. Verb 在
7. 有 and 是 indicating existence
8. Question of type (4)
9. The 是 sentence type (2).
10. Sentence with a verb taking two objects

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Elementary Chinese Reader Book-I
2. Chinese reader (HSK Based) book-I
3. Module on Programme specific vocab.

MTARC304 GRAPHIC SKILLS – II

Course Code: MTARC304
hours: 03

Credit Units: 03

Teaching

C. Course Learning Outcome:

CLO 1 :	Understand and remember the fundamentals of drafting
CLO 2 :	Understand the fundamentals of geometry Understand the principle and different types of projections and views
CLO 3 :	Produce presentations on all the four cognitive learning outcomes.

D. Syllabus

Course Objective:

To enable students to produce manual drawings of interpenetration of solids, perspective views and Sciography. To impart the techniques of architectural rendering required for effective presentation.

Course Contents:

Module I: Interpenetration of Solids

Orthographic Projection Drawings and Axonometric views of interpenetration of different solids in different position.

Module II: Introduction to perspective – Plan Method

Importance and use of perspective drawing in architecture; Anatomy of a perspective-cone of vision, station Points, picture plane, eye level, horizon line, ground line, vanishing point, etc; One point & Two point Perspectives Plan Method-simple form to building forms.

Module III: Perspective – Grid Method

One Point and Two point perspectives using Grid Method for faster production of Perspective Drawings.

Module IV: Sciography

Values in shades and shadows. Constructing plan shadows (point, line and plane), Constructing shadows in elevations (Point, line and Plane). Constructing shadows in perspective views. Short-cut methods for constructing shadows.

Module V: Introduction to Rendering(dry and wet)

Presentation techniques in different types, medium and materials. Rendering perspectives in different media (Dry/water based color and ink etc.). Variation in color/ ink, as per light position. Use of basic plantation, vehicles, human beings etc to introduce scale to building perspectives.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Architectural Graphics, C. Leslie Martin
- Perspective and Sciography, Shankar Mulik
- Interior Design, Ahmed Kasu
- Architectural Graphics, Ching Frank

- Engineering Drawing, N.D. Bhatt
- Engineering Drawing – P.S. Gill

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Architectural Graphic standards editor, Boaz Joseph
- Neufert's Architect's data
- Time Saver standards for building types, Editor Joseph D.C. and John Callender.
- Rendering with pen and ink.

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2020-25 Onwards

STAGE - I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

FOURTH SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/T/ST/P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 401	Design – IV	CC	PC	0	6	0	9	6
BAR 402	Materials & Construction Technology – IV	CC	BS & AE	1	1	1	3	3
BAR 403	Structural Design & Systems – IV	CC	BS & AE	2	0	0	2	2
BAR 404	Graphics Skills – IV	CC	SEC	0	0	4	2	4
BAR 405	History of Architecture – III	CC	PC	2	0	0	2	2
BAR 406	Building Services – III	CC	BS & AE	2	0	0	2	2
BAR 408	Architectural Climatology - Theory & Lab	CC	BS & AE	1	0	2	2	3
Domain Elective – II (Select any One DE)								
BAR 409	Bamboo Architecture	DE	PE	2	0	0	2	2
BAR 410	Architecture Documentation	DE	PE					
BAR 411	Barrier Free Architecture	DE	PE					
AND 004	Aanandam-IV	VA	SEC	0	0	4	2	4
BCS 401	Communication Skills – II	VA	SEC	1	0	0	1	1
BSS 405	Behavioural Science – IV(Relationship Management)	VA	SEC	1	0	0	1	1
	Foreign Language - IV	VA	SEC	2	0	0	2	2
FLT 401	French	VA						
FLG 401	German	VA						
FLS 401	Spanish	VA						
FLC 401	Chinese	VA						
	Open Elective/Minor Track	OE/MT	OE	3	0	0	3	3
	TOTAL			17	7	11	33	35

BAR 401 DESIGN – IV

Course Code: BAR 401

Credit Units: 09

L/0-ST/6-P/0 Teaching hours: 06

A. Course Learning Outcome

CLO 1 :	Investigate the nature of the problem by analyzing the project brief, data collected from literature studies, site visits, case studies and other specific studies.
CLO 2 :	Create design concepts for the given project based on the developed understanding of the project.
CLO 3 :	Apply the learning of previous semesters and other allied subjects of the semester
CLO 4 :	Develop the architectural project in terms of architectural drawings, models, etc. with all the given requirements.

B. Syllabus

Course Objectives:

- To understand design for multifunctional public/commercial buildings upto G+6 requiring parking, vertical circulation, Grid Planning

Course Contents:

Module I: Introduction

Introduction to public or commercial buildings up to G+6 that are governed by Site restrictions in terms of bylaws and need ease of access, vertical circulation, way finding, Grid Planning and parking with examples; Project introduction for studio exercise

Module II :Case studies, Site Studies and Literature Studies

Case Studies – primary and secondary; Site studies- vehicular circulation pattern studies; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and 3-D sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. *An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.*

Design exercise can include office buildings, shopping centers/mall, Library, Town Hall,/municipal offices/headquarters, District Court, Nursing Homes, etc.

Examination Scheme:

Components	A	S1	S2	C T	EE	
Weightage (%)	0 5	1 5	20	10	20 Viva	30 E E

Text Books /Reference Books/Journals/Other Study Material:

- 1'Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- 2Neufert Ernst, (1970), Architect's Data, Crosby Lockwood and Sons, London.

- 3Chiara JD and Calender, (1983), Time Savers Standards for Building Types, M cGraw Hill Book Company, New York.
- 4Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, M assachusetts.
- 5Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- 6Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- 7Frederick, M atthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- 8Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- 8Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- [https:// www.architecture.com/knowledge-and-resources/resources-landing-page](https://www.architecture.com/knowledge-and-resources/resources-landing-page)

BAR 402 MATERIALS & CONSTRUCTION TECHNOLOGY – IV

Course Code: BAR 402 Credit Units: 03 L/1-ST/1-P/1 Teaching hours: 03

A. Course Learning Outcome

CLO 1	To illustrate the application of metal as construction material.
CLO 2	To demonstrate the various properties & characteristics of basic building materials such as steel & aluminum.
CLO 3	To demonstrate the application of steel and aluminum in actual building construction.
CLO 4	To elucidate the knowledge of various construction details of foundations, staircase & door window built in metal.
CLO 5	To indicate knowledge of steel trusses.

B. Syllabus

Course Objective

- To familiarize students with different metals such as aluminum and steel and copper in construction techniques for use of building materials in building works.

Course Contents:

Module I: Steel -2 Weeks

Study of steel as building material: types/ properties and treatment and various uses.

Structural, Visual and textural properties, Varieties and application of steel and other metals and alloys

Module II: Foundation columns& trusses - 2 Weeks

Foundation such as Grillage foundation.

Structural Steel columns and space frames, Different type and details of Structural steel trusses, details of geodesic domes etc.

Roofing: Roof covering in G.I. Asbestos and fiber Sheets etc.

Module III: Staircases - 3 Weeks

Metal staircase: Types and construction detail and joints, fire escape staircase.

Module IV:Steel door and windows - 3 Weeks

Steel door and window: types and construction detail, standard door/ windows sections, fire doors Types of Rolling Shutters and their construction detail.

Module V: Aluminum - 3 Weeks

Aluminum as building material: properties and treatment, Construction and fixing details used for aluminum doors and windows, their applications, types, pricing.

Market survey of available materials: technology and hardware.

Exercises: presentation of seminars, preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Building construction
W.B.McKay Building

construction R Berry

- Building construction Chudley
- Building construction Francis D.K. Ching

BAR 403 STRUCTURAL DESIGN & SYSTEM- IV

Course Code: BAR 403 Credit Units: 02

L/2-ST/0-P/0

Teaching hours: 02

A. Course Learning Outcome:

CLO 1 :	Understand & identify the properties of the constituent materials of concrete
CLO 2 :	Identify and demonstrate the behaviour of fresh and hardened concrete.
CLO 3:	Design concrete mixes as per IS and ACI codes
CLO 4 :	Identify, describe and carry out the main laboratory tests on concrete constituents.
CLO 5 :	Demonstrate recent advancements in concreting materials and procedures.
CLO 6	Investigate the properties & characteristics of any soil type at any construction site using advanced methods.
CLO 7	Create his own judgement regarding the analysis method required for problems regarding Stability of Soil Structures.
CLO 8	Apply these methods to the real-life structures
CLO 9	Develop his / her interest in geotechnical engineering designing field

B. Syllabus

Course Objective:

- To understand the material specification & its physical, engineering properties.
- To help the students understand the mix design process by IS codes & laboratory experiments & also learn about the soil classification & foundation system in framed as well as load bearing structures.

Course Contents:

Module I: Cement-3 weeks

Definition, Ingredients, Compounds, Properties, Hydration, Types and applications, manufacturing process of cement. Workability & durability Tests of cement

Module II: Aggregate-3 weeks

Classification, Sp. Gravity, Bulk density, moisture contents, Bulking of fine aggregates, fineness modulus, Practical size distribution. Laboratory tests for aggregate particles.

Module III: Concrete & its mix design-3 weeks

Definition, Advantages/ disadvantages, relevant IS codes, workability, Compressive strength, Flexural strength, factors affecting strength, nominal and designed mix concrete. Laboratory & field tests to check the quality of concrete in terms of workability & durability.

Module IV: Soil Mechanics & Foundation engineering-4 weeks

Importance of the subject, Types of Soils, Phases, various Index properties of soil, relationships, simple numerical Classification of soil, engineering properties of soil, testing of soil. Various types of foundations, Bearing capacity of soil, field tests, plate load & penetration test, Effect of water level, Failure of foundation systems, Design procedures for simple load bearing foundations., Terzaghi's theory

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- M.V. Naik, Building Construction – Materials.
- Khurmi R. S, Strength of Materials.
- Khurmi R. S., Applied Mechanics and Strength of Materials.
- P.N. Khanna, Civil Engineering Handbook.
- M.S. Shetty, Concrete technology.
- K.R. Arora, Soil mechanics & foundation engineering.
- Morgan, Elements of Structure.
- Salvadori, Structures in Architecture.
- Mackay WB, Building Construction, Vol. 1-4.
- Chudley, Construction Technology, Vol. 1-6.
- Mitchell, Elementary Building Construction.
- Everet, Structure and Fabric.

BAR 404 GRAPHICS SKILLS – IV (Computer Aided)

Course Code: BAR 404 Credit Units: 02 L/0-ST/0-P/4

Teaching hours: 04

A. Course Learning Outcome

CLO 1	Remember various tools or shorthand commands used in SketchUp, AutoCAD-3D, V-Ray.
CLO 2	Understand to develop higher-quality, more accurate architectural designs, and models; use tools specifically built to support 3D design- creation- rendering- animation based application.
CLO 3	Apply the knowledge of various aspects of building Services & Construction techniques into 3D designs.
CLO 4	Analyse the importance of 3Ddesign- creation- rendering- animation based application in the field of Architecture and construction industry.
CLO 5	Evaluate 3D Modelling based design on critical thinking and problem solving skills.
CLO 6	Create 3D design models of an Architectural Project

B. Syllabus

Course Objective:

To learn drawing 3D-drawings through computers and taking advantage of it for rendering and presentations of the views.

Course Contents:

Module I: Introduction to (3-D) software: Exterior and Interior – 2 weeks

Introduction to basic 3-D software of architectural significance AutoCAD-3D and their basic usage (creating conceptual exterior and views of an Architectural Project).

Creating detailed Interior and views of a 3D project using Auto CAD.

Module II: Introduction to (3-D) software: Exterior and Interior -3 weeks

Introduction to basic 3-D software of architectural significance Google SketchUp and their basic usage (creating conceptual exterior and views of an Architectural Project).

Creating detailed Interior and views of a 3D project using Google SketchUp.

Module III: Introduction to Rendering software: Exterior-3 weeks

Use of V-Ray for Rendering 3D models of SketchUp and their final editing in photoshop.

Module IV: Introduction to Rendering software: Interior-3 weeks

Use of V-Ray for Rendering 3D models of SketchUp and their final editing in photoshop.

Module V: Introduction to Animation-3 weeks

Creating animation (walkthrough) of 3D models on SketchUp.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Manuals of AutoCAD – Autodesk Inc.
- Computer graphics and design, Radhakrishnan Inside AutoCAD- parker, denial & rice
- Google SketchUp user’s guide.
- Adobe Photoshop user guide/manual.
- Google SketchUp for Interior Designers – Daniel John Stine
- Rendering in SketchUp – Daniel Tal V-ray user’s Guide.
- Lumion user’s guide/manual.
- Architectural Design with SketchUp – Alexander Schreyer

BAR 405 HISTORY OF ARCHITECTURE

Course Code: BAR 405

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Critically evaluate the development of architecture style in terms of its spaces .
CLO 2	Classify various architecture style by there elements and their evolution in terms of construction technology, building materials and forms over the period.
CLO 3	Formulate various stages of architecture movements in terms its style and evolution of its elements
CLO 4	Create the relevance and utility of various local materials used by various architects in different regions of the world.

B. Syllabus

Course Objectives:

Understanding the world architecture during the, Renaissance and Baroque Period; Study of specific Architectural characteristics and their origin in above-mentioned period.

Understanding the Modern and contemporary Architectural History From 19th Century to the present age, the development process, the change in Techniques and construction.

Course Contents:

Module I: Gothic Architecture- 2 weeks

Massiveness and verticality of medieval churches. Combination of towered structures and longitudinal basilica. Gradual integration of towers from early to later with examples. Integration of centralized and longitudinal plans. Articulation of external wall like arcaded interiors resulting in dematerialization of exterior. Study of important cathedrals and churches from Italy and France.

Module II: Renaissance Architecture- 2 Weeks

- Italian Renaissance - The idea of rebirth and revival of art - Outline of the Architecture during the early Renaissance, High Renaissance and Baroque Periods - Features of a typical Renaissance palace, eg. Palazzo Ricardi, Study of the contribution of the following architects: Brunelleschi, Michaelangelo, Andrea Palladio, Example - St. Peter Rome, Villacaprain Vicenza.
- High Renaissance Architecture-French and English Renaissance- architectural character in the classical & Rococo period - Example – Chateau de Chambord, Louvre, Paris – Domestic British architecture- Study of the works Sir Christopher Wren, & Inigo Jones, Example - St. Paul's Cathedral, London. Banqueting House, Whitehall.

Module III: Baroque Architecture and Neo-Classical Period -1 Week

Dynamism and systemization of Baroque architecture vitality and spatial richness with underlying systematic organization. Definition of Neo-classic with taking few examples of the period. Study the buildings and structures relation to form, ratio, symmetry etc. Study of the different areas in France.

Module IV: Industrial revolution and modern Architecture movements (19th and 20th Century)-2

Weeks

Reasons for the evolution of Modern Architecture, origins-Neo Classicism-Enlightenment, Social revolutions, Historiography, Revivalism- Works of Soane, Ledoux, Boule, Durand & Schinkel. Industrial revolution and its impact – Emergence of new building typologies-New Materials and Technologies : history of steel, glass and concrete. Arts & Crafts movement in Europe and America; Art nouveau, and the works of Horta, Guimard, Gaudi and Macintosh; Organic Architecture -Early works of F.L.Wright. Chicago school; Art deco Architecture in Europe and America.

Presentations, paper writing and Essays exercise may be optionally be considered, recommended by the subject teacher at the end of the semester after the examinations

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:**Text:**

- “Glimpses of World History” by Pt. Jawahar Lal Nehru
- “Urban Pattern” by A.B. Gallion
- “The History of Architecture” by Sir Bannister Fletcher
- “The great age of world Architecture” -G.K. Hirasker

References:

- History of Architecture – J. E. Swain
- History of Architecture by Dora Couch
- A study of History – Almond Toynbee
- Traditions in Architecture – Dora Couch

BAR 406 BUILDING SERVICES-III (Acoustical System)

Course Code: BAR 406

Credit Units: 02

L/2-T/0-P/0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the process and are able to manage building acoustical services provisions in construction sites.
CLO 2	Synchronize the construction activities with installation of building services.
CLO 3	Select the suitable system for particular requirements of buildings
CLO 4	Understanding the importance of sound energy and its impact on building design and also able to control noise within the interior and from exterior sources.
CLO 5	Plan and able to design and read acoustical layout required for different types of buildings

B. Syllabus

Course Objectives:

- To acquaint students about acoustical requirements and consideration for building design right from residential to the theatre type of building.

Course Contents:

Module I: Terminology in Acoustics- 1 weeks

Sound and its properties, audible sound, intensity and loudness, frequency and pitch, quality Reflection, absorption, transmission, diffusion, diffraction of sound ; Common acoustical defects: Echo, sound-foci, dead spots, sound shadows, resonance, insufficient loudness, external noise, reverberation and reverberation time.

Module II: Acoustic materials - 1 weeks

Sound absorbing materials and their applications– description and characteristics, types of absorbents and reflectors and their application, Market survey and sample collection.

Module III: Acoustical design case studies - 1 weeks

Study of existing designs to understand shapes/spaces and integration of acoustical equipment in the design.

Module IV: Noise control- 1 weeks

Environmental noise control: noise sources, airborne and structure-borne noise, transmission of noise, methods of environmental noise control, control of mechanical noise and vibrations, General idea of sound insulation. Noise control in specific types of buildings like – auditoriums, residential buildings, hotels, school, hospitals, offices, libraries.

Module V: Artificial Lighting- 1 weeks

Introduction to basic photometric concept: Light its behavior and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module VI: Design Exercise- 2 weeks

Acoustical design or case study of existing building such as auditorium, recording studio, theatre, cinema halls, hospitals or a multistory office building.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	C T	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Temp leton, Duncan & Saunders, David, "Acoustic Design", The Architectural Press, London, 1987.
- Temp leton (ed.), "Acoustics in the Built Environment", Butterworth, London, 1993.
- NBC of India
- K.A.Siraskar-A cousticsin building design
- Building Construction - B.C. Punmia
- Building Construction - Rangawalla
- Building Construction and M aterials – Gurcharan Singh
- Architectural Acoustics: E. David
- An Introduction to Building Physics: Narsmhan
- Fundamentals of acoustic by Kinsler, Lawrence E and others
- Enviromental acoustic by Doelle, Leslie L.
- Knudson and Harris, `Acoustical Designing to Architecture`.
- David Egan, `Architectural Acoustics` Ross publishers, 2008.
- Ducan Temp leton et all `Acoustics in the Built Environment, Architectural press1997

BAR 408 ARCHITECTURAL CLIMATOLOGY

Course Code: BAR 408 Credit Units: 02 L/1-T/0-P/2 Teaching hours: 03

A. Course Learning Outcome

CLO 1	Understand the factors that determine microclimate of a region and shape the site - climate.
CLO 2	Predict the climatic zone of a given site on the basis of climatic data and establish the characteristics of the suitable architectural typology for that zone (Knowledge Application for Site Analysis)
CLO 3	Understand thermal comfort conditions required inside built environment
CLO 4	Understand heat exchange process in a building
CLO 5	Devise passive control of heat gain and loss in a building through appropriate architectural design solutions for different climatic zones to achieve energy conservation.

B. Syllabus

Course Objective:

To acquaint students to various concepts of climate analysis and its use in Architecture. To familiarize students with human thermal comfort as an essential function of building. Students shall learn using the natural climatic elements to achieve their maximum utilization for the minimum dependence on the artificial means.

Course Contents:

Module I: Introduction to Climate

Importance of climate in architecture, Factors affecting climate.
Elements of climate- Solar radiation, temperature, wind, humidity and precipitation and their measurement.

Module II: Tropical Climate

Climatic zones, Characteristics of tropical climate, macroclimate and microclimate.

Module III: Human thermal comfort

Study of body's heat production and heat loss, comfort zone, bio-climatic chart and effective temperature, Isoleths. Solar passive techniques: cooling and heating.

Module IV: Day light and shading devices

Natural light, glare, day light factor and day lighting in tropics.
Method of recording the position of sun in relation to earth, solar chart, shadow angle protractor and its application in design of shading devices.

Module V: Orientation, Ventilation and air movement

Requirement, size and position of openings, air flow pattern inside and outside buildings. Orientation of buildings in relation to sun and wind.

Examination Scheme:

Components	A	CE	CT	EE
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Weightage (%)	05	25	20	50
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Text Books /Reference Books/Journals/Other Study Material:

Text:

- Manual of tropical housing and building, Koenisberger Solar power, Behling
- The climatic data handbook, Bhargava and Chand

References:

- Climate responsive Architecture, Arvind Krishan Architecture as response, Gree.

BAR 409 BAMBOO ARCHITECTURE

Course Code: BAR 409

Credit Units: 02L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	to understand the benefits of building with bamboo and remember the various application and joints in bamboo.
CLO 2	importance of sustainably growing and harvesting bamboo and how to build structures to last a lifetime with best practice for crafting with bamboo.
CLO 3	Understand and analyze the various treatment and construction method of bamboo
CLO 4	Analyze and interpret a range of innovative structural systems to help make it easy for us to begin designing with bamboo.
CLO 5	To create designs that are functional, beautiful, and bring nature into the built environment.

B. Syllabus

Course Objective:

To familiarize the students with sustainable building material bamboo and its application in present technological change. The student shall learn the use of Bamboo for various kind of construction and application.

Course Contents:

Module I: Introduction to Bamboo as a Material

Introduction to bamboo and its different types and properties. General uses of Bamboo. Discussing bamboo growth and forms. Studying about bamboo as a material since history and its application being a versatile and fibrous material. Botanical Classification, Types based on Geographical distribution, climatic and soil conditions. Difference between Bamboo, Cane and Reed. Comparison of bamboo with wood. Harvesting, Storage and Drying of Bamboo. Active and Passive methods of Bamboo Preservation and Treatment. Working with Bamboo. Cutting, Sawing and Scorch Drilling of Bamboo. Types of Joints in Bamboo Construction. Shaping and Bending of Bamboo. Treatment of Bamboo Surface using Bleaching and Dyeing methods.

Module II: Bamboo as a Construction material.

Studying the grading of bamboo and its selection and size of bamboo for structure. The different traditional tools used for construction with their application. All the joinery in the structure based on types of lashing and types of shear keys.

Bamboo Reinforced Foundation. Bamboo Flooring. Bamboo Trusses & Roof Skeleton. Bamboo Shingles. Bamboo Walls. Bamboo Doors & Windows. Bamboo Furniture. Bamboo as a Scaffolding material. Bamboo Footbridges and Bridges. Reed Boards & Bamboo Ply.

Construction details in Bamboo. Types of Binding, Joints & Connections. Various steps involved - required sizes of members - methods of joining bamboo for various applications.

Module III: Building System & Component

Studying bamboo treatment for longer life of shelter. Analyzing the consideration for site selection. Detailing the construction of bamboo substructure and superstructure plus covering envelop with reference to latest technology.

Module IV: Bamboo products

Bamboo products such as Mats (Chatai), laminates, furniture, flooring, lampshades, furniture etc.

Module V: Live Exercise of Documentation, Workshop & Site Visit

Designing a bamboo structure residential/institutional/recreational etc. based on new technologies and innovations in the field. Case study of Bamboo Houses and Buildings.

Site visit to Built environments that have used Bamboo as a Construction material especially in Assam, Meghalaya, Auroville and Kerala.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- The Book of Bamboo by David Farrelly
- Building with Bamboo: A Handbook by Jules J.A. Jansen
- *Bamboo Style* by Gale Beth Goldberg

References:

- *Bamboo* by Susanne Lucas
- *Bamboo Architecture & Design (59 Case Studies)* by Eduard Broto
- *New Bamboo: Architecture and Design* by Marcelo Villegas

BAR 410 ARCHITECTURE DOCUMENTATION

Course Code: BAR 410

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the qualities of building spaces and their elements
CLO 2	Learn the methods involved in documentation like scaled drawings, photographic documentations, mapping, etc
CLO 3	Analyze the buildings visually and record the context and need
CLO 4	Evaluating and assessing the building properties and terminologies
CLO 5	Compile and assess the recordings

B. Syllabus

Course Objectives:

- To familiarize the students with various aspects, issues and considerations related to the documentation of architecture and its characteristics so that its heritage and inherent values can be identified and recorded.

Course Contents:

Module I: Introduction to Architectural Documentation - 2 weeks

Introduction to documentation of historical buildings includes not only measured photographic survey, but also surveying of the qualities of building spaces and their elements. Identification and understanding the use and purpose of the documentation.

Module II: Methodology- 3 weeks

Detailing the purpose, scaled drawings, photographic documentation, visual analysis, classification and mapping of the spaces and their elements. The originality of these spaces and elements are evaluated within the frame of research results that are previously published, site surveys made. Use of modern equipment such as 'CANVAS' and its interface with I-pad and AutoCAD etc to be understood.

Module III: Analysis - 3 weeks

Visual analysis consisting of analysis of spatial element and architectural elements need be understood. The spaces grouped according to their functions and the elements grouped according to their types. Visual analysis of onsite elements, outside elements need to be recorded. The context of the building need to be understood and recorded.

Module IV: Evaluation &Characterstics - 3 weeks

Distinguishing the modern with traditional architecture in terms of elements, details etc. Sketching and tabulating the spatial characteristics and their types

Module V: Compilation & Assessment - 3 weeks

Classification and comparison is an effective way to decipher architectural characteristics of a historical Building with its originalities and alterations. The compilation should be as realistic as possible without the opinion of the compiler to retain the authenticity of the project.

NOTE-Students may be assigned a case study to assess the understanding of the subject.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	C E	CT	EE
Weightage (%)	05	2 5	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Glenn E. Wiggins, Manual of Construction Documentation: An Illustrated Guide to Preparing Construction Drawings, 1989, Whitney Library of Design.
- John H. Stubbs, Robert G. Thomson, Architectural Conservation in Asia: National Experiences and Practice.
- Wiley, Landscape Architecture Documentation Standards: Principles, Guidelines, and Best practices, 2016, John Wiley & Sons Inc.
- Architectural Heritage, New Technologies in Documentation: Council of Europe, 1990

BAR411 BARRIER FREE ARCHITECTURE

Course Code: BAR 411 Credit Units: 02L/2-T/0-P/0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	To learn about Importance of Barrier free Architecture and uses in various types of buildings.
CLO 2	To know standards and norms for the Barrier free design.
CLO 3	To understand the importance of Barrier free design using Case studies of Design
CLO 4	To Evaluate existing public building and residential building using norms and Standards
CLO 5	To Redesign existing public building using norms and Standards

B. Syllabus

Course Objectives:

The objective of course is to learn the principles of barrier free design and concepts of universal design. It Provides an idea about barrier free construction principles in buildings while understanding of the key aspects and systems of specially able persons built space in architecture.

Course Contents:

Module I: Special Abilities

Understanding the different human impairments such as visual, mobility and hearing and also understanding the abilities of such differently able persons. To understand the architectural requirements of such persons.

Module II: Introduction to Architecture for specially able

Defining the basic concepts of barrier free design, need for barrier free concepts in architecture, concepts of universal design and types of disabilities. Design principles for barrier free architecture and accessibility for all.

Module III: Barrier free elements for outdoors and Urban Design

Design elements outside the building like curb ramps, pedestrian crossing, public toilets, and parking, signage, flooring and street furniture. Case examples of Barrier free architecture in India and across the globe. To study the anthropometrics and dimensions of mobility devices, special fixtures for barrier free design. Barrier free construction materials and dimensions for flooring, walls, doors, windows, staircases, elevators, toilets, entrances and corridors.

Module IV: Laws

Knowledge of different laws prevailing within India and in other countries. Understanding implication of different laws on design of spaces.

Module V: Case Study, Presentation & Design elements

Barrier free architecture in Public Buildings – dimensions and standards. Case Study of Barrier free elements in Public buildings, Photographic documentation and Presentation. Incorporation of barrier free elements in project being pursued in architectural design.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Guidelines and Space Standards for Barrier Free Built Environment for Disabled and Elderly Persons – Central Public

Works Department, Ministry of Urban Affairs & Employment, India, 1998

- IS – 4963 (1987), Recommendations for buildings and facilities for Physically Handicapped

AND 004 AANANDAM-IV

Course Code: **AND 004** Course Type: **Compulsory**

Credit Units: **02**

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants are to** be given (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

**GUIDELINES FOR GCSP (Group Community Service Project)
ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)**

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.
5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to<=54hrs (30-40 marks)**
- **O grade >54 hrs to<=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

BCS 401 COMMUNICATION SKILLS II

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS401	1:0:0	1	1

A. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Identify steps to professional communication
CLO 2	Identify the key components of meeting, agendas and meeting minutes
CLO 3	Understand the key skills and behaviors required to facilitate a group discussion/presentation
CLO 4	Polish current affairs & rapport building

B. SYLLABUS

Topic
Enhancing Speaking Skills (Public Speaking)
Resume Building-1
GD-2 (Specifically: Social & Political)
Presentations-2

EXAMINATION SCHEME:

Components	Public Speaking	GD	Poster Presentation	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Essential Telephoning in English, Garside/Garside, Cambridge
- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*. S.K. Kataria & Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008. Print
- Krishnaswamy N, *Creative English for Communication*. Delhi: Macmillan Publishers India Ltd. Print. 2007.

BEHAVIOURAL SCIENCE - IV

(RELATIONSHIP MANAGEMENT)

Course Code: BSS 405

CreditUnits: 01

Course Learning Outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Identify the basis of interpersonal relationship.
2. Describe the importance of interpersonal relationship and bridging individual differences.
3. Recognize the development and strategies for effective interpersonal relationship.

Explain and apply the theories of relationship concepts of impression management. **Course Objective:**

To understand the basis of interpersonal relationship

To understand various communication style

To learn the strategies for effective interpersonal relationship

Course Contents:

Module I: Understanding Relationships

Importance of relationships

Role and relationships

Maintaining healthy relationships

Module II: Bridging Individual Differences

Understanding individual differences

Bridging differences in Interpersonal Relationship – TA

Communication Styles

Module III: Interpersonal Relationship Development

Importance of Interpersonal Relationships

Interpersonal Relationships Skills

Types of Interpersonal Relationships

Module IV: Theories of Interpersonal Relationships

Theories: Social Exchange, Uncertainty Reduction Theory

Factors Affecting Interpersonal Relationships

Improving Interpersonal Relationships

Module V: Impression Management

Meaning & Components of Impression Management

Impression Management Techniques (Influencing Skills)

Impression Management Training-Self help and Formal approaches

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; JOS-Journal of Success; HA-Home Assignment; P-Presentation; V-Viva; Q-Quiz; FC- Flip class; MA- Movie Analysis; CS- Case study; A-Attendance

Text & References:

- Vangelist L. Anita, Mark N. Knapp, Inter Personal Communication and Human Relationships: Third Edition, Allyn and Bacon
- Julia T. Wood. Interpersonal Communication everyday encounter
- Simons, Christine, Naylor, Belinda: Effective Communication for Managers, 1997 1st Edition Cassell
- Goddard, Ken: Informative Writing, 1995 1st Edition, Cassell
- HarvardBusinessSchool, Effective Communication: United States of America
- Foster John, Effective Writing Skills: Volume-7, First Edition 2000, Institute of Public Relations (IPR) Beebe, Beebe and Redmond; Interpersonal Communication, 1996; Allyn and Bacon Publishers

FOREIGN LANGUAGE 401 FRENCH - IV

Semester 4 Course Code: FLT 401/411 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

- To do the shopping
- To ask and express one's needs
- To present one's eating habits
- To understand a label
- To ask the price
- To order at the restaurant
- To organise a meeting
- To propose to someone to do an activity
- To understand the advertisement of a conference
- To understand the names of different stations
- To speak about one's schedule
- To express one's professional wish
- To formulate a project
- To read a notice board

Course Contents:

Unité 3 La science au quotidien Page : 62-84 Leçons 10, 11 & 12

Contenu Lexical:

1. La nourriture
2. Les ingrédients
3. Les expressions de quantité
4. Les expressions familières avec les noms de fruits et les légumes
5. Les expressions pour proposer une invitation
6. Le processus de fabrication de quelques éléments
7. Les expressions pour parler d'un projet

Contenu Grammatical:

1. Manger et boire au présent
2. L'article partitif
3. Les prépositions de lieu
4. Les verbes pronominaux
5. La date, l'heure et le jour: les prépositions
6. La nominalisation

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionnaire, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 401/ 411 FOREIGN LANGUAGE GERMAN

Semester 4: Course Code: FLG 401/411

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- talk about different professions
- express positive and negative aspect of different professions.
- talk about daily routine of a job
- enquire about direction.
- use preposition in sentences.
- understand the visiting cards etc.

Course Content:

Vocabulary Content:

- Professions
- Workplaces
- Professional Tasks like writing mail, make phone calls etc.
- Locations (right left, etc.)
- Public places

Grammar Content:

- Possessive article in accusative.
- Introducing prepositions in dative, accusativ cases and changing prepositions in dat + acc.
- Usage of preposition : in through, to , at etc

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: Lessons from 11 onwards from Deutsch als Fremdsprache -1B, INBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 401/ 411 FOREIGN LANGUAGE SPANISH

Semester 4: Course Code: FLS 401/411 Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To talk about relations
- To express obligation
- To enquire about direction
- To be able to describe your locality
- Telephonic conversation etiquettes
- Dialogue between two friends/sales man and client etc.

Course Content:

Vocabulary Content:

Family, friends, directions, way(going straight, left, right etc.) Temple, hospital, restaurant, church, hospital, Town hall, parks, shopping mall, etc.

Grammar Content:

Revision of present indefinite, continuous and near future tense.

Double negation – No Nunca, Ningun/a, Nada, nadie etc.

Tener que / Hay que

Expressions with Tener and Estar.

Use of Apetecer, Llevarse bien o mal con alguien / Caer +bien/mal + a alguien

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha

Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero,

Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 401/411 FOREIGN LANGUAGE CHINESE

Semester - IV

Course Code: FLC- 401/411 Credit Units: 02

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Fourth semester the students will be able to consolidate their proficiency of HSK-I and will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters, sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out conversation in the target language.
- Manipulate basic grammatical structures such as: 疑问代词 etc.
- Master and use most essential vocabulary items of day to day use and office related vocabulary; approx 70 Characters including 50 characters of HSK level –II
- Refer Chinese dictionaries.
- Translate a Chinese paragraph with the help of dictionaries and translation software.

COURSE CONTENTS

1. Revision of Important expressions
2. Expression of welcome
3. Expression of time: past, present & future
4. Expression of right or wrong.
5. Questioning and answering simple questions about medical care
6. Questioning and answering simple questions about sports & entertainment
7. Office related vocabulary , expressions & email writing
8. Referring Chinese dictionaries (hard and electronic dictionaries)
9. Translation with the help of dictionaries & translation software
10. Practice of model test series of HSK-I
11. CBT package
12. Listening
13. Conversation based on above topics
14. Chinese poetry

VOCABULARY CONTENT

1. Vocabulary will include approx 70 Characters including 50 Characters of HSK-II level.
1. Vocab related to welcome, tenses, right wrong etc and office related vocabulary will be covered during this semester.

GRAMMATICAL CONTENT

1. Interrogative pronouns 疑问代词 什么, 哪儿, 谁, 为什么, 怎么样, 哪 什么时候, 多少, 几,
2. Money 表示钱数
3. Weight 表示重量
4. Measure words 量词
5. Adverbs 副词
6. 时间副词: 正在
7. 频率副词: 再

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text books & References

1. Learn Chinese with me book-II. (Major Text Book)
2. Module on HSK-II. (suggested reading)
3. Practical Chinese Grammar for foreigners. (suggested reading)
4. Chinese Dictionaries: Chinese to English & English to Chinese. (reference books)
5. Office Talk (suggested reading)

MTARC 404 GRAPHIC SKILLS– III (Computer aided)

Course Code: MTARC 404 Credit Units: 03 Teaching hours: 03

C. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse & produce manual drawings of interpenetration of different solids in different positions and at different angles.
CLO 2 :	Understand the importance and use of perspective drawing in architecture; Anatomy of perspective-cone of vision, station Points and produce one point and two point perspective drawings manually through plan method and grid method.
CLO 3 :	Calculate and draw sciography, using different grades of shade and shadow in elevation and perspective views.
CLO 4 :	Apply the presentation techniques using different mediums such as color/ ink, as per light position. Also understand the use of basic plantation, vehicles, human beings etc to introduce scale to building perspectives.

SYLLABUS

Course Objective:

- To introduce students with computer and its application in architecture.
- To train students in drafting and presentation techniques using Auto-CAD.
- To train students how to make 2-D presentation and render using photoshop.

Course Contents:

Module I: Intro to Computer Graphics and basic application of 2D drafting Software - 1 week

Introduction to Auto CAD and its interface. Auto CAD co-ordinate system, inputting points, basic Auto CAD terminology, basic drafting commands.

Module II: Auto Cad (2-D): basic commands and introduction to use of printing equipment's and hardware -2 weeks

To setting up a drawing environment; setting up the paper size setting unit setting grid limit, drawing limit, snap controls. Two- dimensional drafting work to be handled in detail on Auto Cad. Basic Drafting commands (Related to drafting of line to All geometrical shapes).

Module III: Auto Cad (2-D): modifying commands - 3 weeks

Basic commands related to drawing properties "lay er control change properties, line-weight control". Use of Display Commands, editing commands, construction commands, enquiry commands etc., Hatching & texting in drawing, Working on layout & x-ref etc. Drafting of Plan(s), Elevation(s) and Section(s).

Module IV: Auto Cad (2-D): advanced commands-3 weeks

Draw, edit and create a complete set of architectural drawings for a dwelling unit using AutoCAD Plan(s), Elevation(s) and Section(s) in detail. Create final presentation and documentation of 2D drawings in AutoCAD.

Familiarizing the use of printers, plotters their hardware and other related systems. Various Settings & different mode to print Auto CAD drawing. Importing & exporting the drawings from one software into other.

Module V: Use of photo editing Software - 4 weeks

Introduction to Photo editing as well as preparation of 2-D presentations and rendering views on Photoshop.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Manuals of AutoCAD – Autodesk Inc.
- Computer graphics and design, Radhakrishnan InsideAutoCAD -parker, denial& rice
- Adobe Photoshop user guide/manual.
- Manuals of AutoCAD – Autodesk Inc.

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2019-24

Total Credits = 287

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

FIFTH SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/ T/ ST /P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 501	Design –V	CC	PC	0	8	0	12	8
BAR 502	Materials & Construction Technology – V	CC	BS & AE	1	1	1	3	3
BAR 503	Structural Design & Systems – V	CC	BS & AE	2	0	0	2	2
BAR 504	Graphics Skills – V (Computer Aided)	CC	SEC	0	0	4	2	4
BAR 505	Building Bye - Laws & Codes Practices	CC	PC	2	0	0	2	2
BAR 506	Building Services – IV	CC	BS & AE	2	0	0	2	2
Domain Elective – III (Select any One DE)								
BAR 507	Building Appreciation	DE	PE					
BAR 508	Energy Conservation Architecture	DE	PE	2	0	0	2	2
BAR 509	Digital Architecture	DE	SEC					
BCS 501	Communication Skills – III	VA	SEC	1	0	0	1	1
BSS 505	Behavioural Science – V (Group Dynamics and Team Building)	VA	SEC	1	0	0	1	1
	Foreign Language – V							
FLT 501	French	VA	SEC	2	0	0	2	2
FLG 501	German							
FLS 501	Spanish							
FLC 501	Chinese							
	Open Elective/Minor Track	OE/MT	OE	3	0	0	3	3
	TOTAL			16	9	5	32	30

BAR 501 DESIGN – V

Course Code: BAR 501 Credit Units: 12

L/0-ST/8-P/0 Teaching hours: 08

A. Course Learning Outcome

CLO 1	To Recognizing the previous semester learning outcomes like anthropometric, ergonomics, space a, locations, site analysis and active and passive design consideration for the different climatic Zones
CLO 2	To implementing the basics of design problem and analysis the different similar projects through Literature Studies, site visit, case studies, and other relevant studies.
CLO 3	To critique the existing knowledge and attributed knowledge through student self learning and standardize them for further creation
CLO 4	To produce given project based on to develop the architectural project in terms of architectural drawings, models, etc.
CLO 5	To attributing the design centric theoretical knowledge and practical knowledge like case studies of the building weather applicable or not.

B. Syllabus

Course Objectives:

- To impart significance of context in Architectural Design through response to climate, environment, **bylaws** and culture
- To introduce basics of planning of small campuses/complex involving more than one building blocks.
- To introduce considerations for achieving Sustainability through Architectural Design.

Course Contents:

Module I: Introduction

Introduction to context as strong determinant of architecture of any location with examples, Climate and Culture as comprising factors of context; Project introduction for studio exercise

Module II: Case studies, Site Studies and Literature Studies

Study of a vernacular settlement with emphasis on socio-economic characteristics, climate and other geomorphic factors, local materials, building techniques, building typology, urban form, spatial analysis etc; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. ***An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.***

Design exercise can include problems having multi - building blocks complex such as a tourist resorts/ three-star hotel, youth hostels, Craft workshops and Centers, Haats, Social upliftment /empowerment

centers etc with emphasis on climatic design. Sites may be chosen in different climatic regions in India except in hilly regions etc.

Examination Scheme:

Components	A	S1	S 2	CT	EE	
Weightage (%)	05	15	20	10	20 Viva	30 EE

Text Books /Reference Books/Journals/Other Study Material:

- ‘Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect’s Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, McGraw Hill Book Company, New York.
- Broome, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- <https://www.architecture.com/knowledge-and-resources/resources-landing-page>

BAR 502 MATERIALS & CONSTRUCTION TECHNOLOGY – V

Course Code: BAR 502

Credit Units: 03

L/1-T/1-P/1

Teaching hours: 03

A. Course Learning Outcome

CLO 1	To remember properties & application of different finishing materials like ACP, PVC, Gypsum, Glass, Fiberglass, Glass bricks, Metals, Stone, Ceramics, Exposed brick work, Paints, POP, Polish, and Varnishes etc.
CLO 2	To understand the criteria of applying latest materials & construction details of different building component like flooring, false ceiling, false partition and special doors.
CLO 3	To apply visual & textural properties of latest finishes & hardware's in building interiors and exterior.
CLO 4	To evolve innovative designs of Interior & exterior components like flooring, false ceiling, false partition and special doors.
CLO 5	To prepare construction details of designed components.

B. Syllabus

Course Objective:

- To familiarize students with different materials in flooring, roofing and interior and exterior finishing and their use in building works.

Course Contents:

Module I: Flooring and paving: type and construction detail – 3 weeks

Soft and hard flooring Stone, Tile, Indian Pattern Stone (IPS) Flooring, Concrete pavers & Stamping, Wood, Epoxy, Vinyl, Carpets etc.

Classification, Manufacturing, Market availability and prices, Advantages/ Disadvantages, design and detailing etc.

Module II: False ceiling type and construction detail– 3 weeks

POP, Gypsum board, Acoustic panels, Wood, Metal etc.- Classification, Manufacturing, Market availability and prices, Advantages/ Disadvantages, Design and detailing etc.

Module III: Exterior and interior finishes– 3 weeks

Latest finishing materials and their applications in construction- ACP, PVC, Gypsum, Glass, Fiberglass, Glass bricks, Metals, Stone, Ceramics, Exposed brick work, Paints, POP, Polish, Varnishes

Module IV: Partition and paneling– 3 weeks

Partitions and Paneling, Cupboards/Cabinets in

different materials **Module IV: Special Details– 2**

weeks

Sliding door, Folding door, Revolving Door, sliding and folding door with hardware and their combinations' Details such as nosing/railing /grills/balusters in different materials etc.

Exercises: Field trips, market survey of available materials, technology and hardware, preparation of study reports and presentation of seminars, preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Building construction W.B.McKay Building construction R Berry
- Building construction Chudleys
- Building construction Francis D.K. Chings

BAR 503 STRUCTURAL DESIGN & SYSTEM- V

Course Code: BAR 503

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To impart the knowledge of structural design of a reinforced concrete structure using a working stress method.
CLO 2	To learn to design RCC beams, columns, slabs as per codal provisions by using a working stress method.
CLO 3	To understand the principles involved in analysis and design of reinforced concrete structures.
CLO 4	To impart the knowledge of yield line theory

B. Syllabus

Course Objective:

- To understand the Design of R.C.C. structures by using IS: - 456: 2000.
- To help the students for design the structural members like: - beam, column & slabs by using IS:456:2000 (based on working stress method) & implement in analytical software likes: - STAAD Pro V8i.

Course Contents:

Module I: Working stress method-4 weeks

Introduction, plain & reinforced concrete, objectives of structural design, Code recommendation for working stress method, stress- strain curve for ductility & brittle material, understanding the concept of elasticity. Behavior of concrete under compression & tension, creep & shrinkage of concrete, behavior in flexure.

Module II: Design of beams & one-way slabs-3 weeks

Introduction, requirements of flexural reinforcement, requirements for deflection control, Design of singly & doubly reinforced rectangular sections by using IS :- 456: 2000.

Module III: Design of two-way slabs-3 weeks

Design of wall- suspended two-way slabs, design of beam- supported two-way slabs, design of column-supported slabs, reinforcement details in column- supported two-way slabs.

Module IV: Design of Compression members-2 weeks

Introduction, estimation of effective length of a column, Code requirements on slenderness limits, minimum eccentricities & reinforcement, design of short column under- axial & uni-axial compression Design of column under axial compression with biaxial loading, design of slender column.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- M.V. Naik, Building Construction – Materials.
- Khurmi R.S., Strength of Materials.
- Khurmi R. S., Applied Mechanics and Strength of Materials.
- P.N. Khanna, Civil Engineering Handbook.s

- Sushil Kumar, Khurmi, Punmia, R.C.C. Design.
- Negi, Design of Steel Structure.
- Salvadori and Heller, Structure in Architecture.
- E. P. Popov, Mechanics of materials.
- R. Park and T. Paulay, Reinforced concrete structures.
- M.L. Gambhir, Concrete technology.
- N. Krishna Raju, Design of reinforced concrete structures.
- S. Unikrishnapillai&devdasmenon,.Reinforced concrete design.
- IS: 456- 2000
- SP: 16- 1980
- Morgan, Elements of Structure.
- Salvadori, Structures in Architecture.
- Mackey, WB, Building Construction Vol. 1-4.
- Chudley, Construction Technology Vol. 1-6.
- Mitchell, Elementary Building Construction.

BAR 504 GRAPHICS SKILLS – V (Computer aided)

Course Code: BAR 504 Credit Units: 02 L/0-ST/0-P/4 Teaching hours: 04

A. Course Learning Outcome

CLO 1	To remember various tools or shorthand commands used in Autodesk Revit Architecture, 3Ds Max, Rhino and grasshopper.
CLO 2	Understand to develop higher-quality, more accurate architectural designs and models; use tools specifically built to support Building Information Modelling workflows.
CLO 3	To apply the knowledge of Structural, Mechanical, Electrical, Plumbing, Communications, Security, Fire Protection system into BIM-based designs.
CLO 4	To analyse the importance of Revit Architecture in the field of Architecture and construction industry.
CLO 5	To evaluate Building Information Models based on critical thinking and problem solving skills.
CLO 6	To create Building information modelling solutions and parametric models.

B. Syllabus

Course Objective:

- To train students to create 3D in Revit.
- Understand different aspects of collaborative modeling, BIM based scheduling and estimating
- will have hands-on experience with advanced BIM solutions, which support collaborative and concurrent teamwork; view of the building industry

Course Contents:

Module I: Learning detailed 3D creation using Revit (Building Information Modelling (BIM) software)- 3 Weeks

Introduction about BIM, Introduction to Autodesk Revit Architecture, Revit File Types, Exploring User Interface, Building Elements, starting a New Project and importing other files in Revit, Drawing Plan as per Dimension. Creating detailed 3D (Exterior & Interior) of an Architectural project and generating its Plan(s), Elevation(s) Section(s), view(s) a complete set of architectural drawings using Revit.

Module II: Learning 3D Rendering using Revit-3 Weeks

Advanced 3D creation and rendering in Revit. Material application, Lighting, Camera setting, Background, Scenic development for still 3d images and their final editing in Photoshop etc.

Module III: Learning 3D Animation using Revit-1 Week

Using Revit for developing 3D animation (walk through) for Architectural significance. Complete scenic development, material and lighting as well as camera positioning for moving images. Saving and viewing animations.

Module IV: Creating Complex forms/ shapes and printing-3 Weeks

Massing Introduction; Creating In-Place Masses using Forms, Extrusion, Revolve, Sweeps. Composing sheet and final presentation on Revit.

Importing and exporting Revit file into other software.

Module V: Learning BIM software Revit for Complex forms/ shapes-4 Weeks

Introducing a BIM Strategy document, Model management, Project team collaboration techniques, Transmittal and model issue protocols, Basics of large model sub-division, Exercise on work sets and task allocation

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Autodesk Revit user guide/manual.
- Autodesk Revit Architecture: Eric.

BAR 505 BUILDING BY LAWS, CODES & PRACTICES

Course Code: BAR 505

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Importance of the Development controls, building byelaws and codes and practices as applicable in the country.
CLO 2	To be able to Translate the building byelaws and codes to the architectural design in BAR 501.
CLO 3	To analyse the effect of building byelaws on the building design and the residents
CLO 4	Analyse and apprise the benefit of application of the building byelaws and the codes

B. Syllabus

Course Objectives:

- To study the development controls as applicable to building design. To acquaint the students to compulsory building bye-laws and permits.

Course Contents:

Module I: Introduction of By-Laws - 3 weeks

Introduction to Building Bye Laws and regulation, their need and relevance, general definitions such as building height, building line, FAR, Ground Coverage, set back line et all. Role of various statutory bodies governing building works like development authorities, municipal corporations etc. Introduction to Master Plan and understanding various land uses like institutional, residential etc. and related terminology

Module II: Application of By-Laws - 4 weeks

Interpretation of information given in bye laws including ongoing changes as shown in various annexure and appendices. Application of Bye Laws like structural safety, fire safety, earthquake safety, basement, electricity, water, and communication lines in various building types.

Module III: Introduction of Codes & Practices - 3 weeks

Introduction to various building codes in professional practice emphasizing the importance of codes and regulations to protect public health, safety and welfare and to ensure compliance with the local authority.

Module IV: Application of Codes & Practices - 4 weeks

Understanding the applications of various codes as per various building types. Conducting a comprehensive code search process and representing the above analysis by preparing detailed code data sheets as applicable in the domain which has been chosen for the research.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- 'Delhi Building Bye-Laws – Nabhi Publications D.D.A.– Delhi Master Plan
- Unified Building by laws of 2017 Rajasthan
- Various IS Codes

BAR 506 BUILDING SERVICES- IV

Course Code: BAR 506

Credit Units: 02

L/2-ST/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To analyse the importance of fire safety in a building.
CLO 2	To understand the different aspects of materials in terms of fire safety.
CLO 3	To accumulate awareness of fire safety norms
CLO 4	To be able to do comparison between different fire detection systems and cctv equipment.
CLO 5	To design a fire fighting and cctv system for a building.

B. Syllabus

Course Objectives:

- To acquaint the student with the fire safety regulation and security systems to be adopted in the buildings. Study the development codes and bye-laws of fire safety regulations, and study about the different methods and materials for treatment in buildings for fire safety.

Course Contents:

Module I: Fire Safety- 1 weeks

Introduction: basic understanding about fire, growth decay curve. Causes of fire in buildings, types of fire, spread of fire, production of smoke and poisonous gases. Fire safety and preventive measures.

Module II: Fire properties of materials- 2 weeks

Basic fire properties of materials i.e. ignitability, combustibility, surface spread of flame, fire propagation, toxicity etc.: General behavior of materials, combination of fire retardant and non-combustible materials.

Module III: By-laws for firefighting - 2 weeks

Firefighting regulations with reference to National Building code. Fire escape, stairways and escape routes, dry and wet risers, Water demand for firefighting, storage tanks, fire hydrants etc.

Module IV: Fire extinguishing- 1 weeks

Study of Fire detection systems, smoke detectors, heat detectors, fire alarms etc. Fire extinguishing systems, Unit fire extinguishers, Chemical and foam extinguishers, Chemical and foam extinguishers.

Module V: Advance Security Systems - 1 weeks

Communication systems in buildings, CCTV, conduits to accommodate the systems. Security and Surveillance. Remote control for security systems and automation

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	C T	EE
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Weightage (%)	05	25	20	50
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Text Books /Reference Books/Journals/Other Study Material:

- Fire Safety: National Building Code of India 1983, An Introduction to Building Physics: Narsmhan
- Fire Safety in Buildings by V.K. Jain
- Brannigan, F. L. & Corbett, G. P. (2008). Brannigan's Building Construction for the Fire Service. Sudbury, MA: Jones & Bartlett Publishers.

BAR 507 BUILDING APPRECIATION

Course Code: BAR 507

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To introduce students to critical appreciation through informal discussion & site visits and to analyse the evolution of building and its necessity.
CLO 2	To understand the critical appreciation of various building forms, building textures and buildings.
CLO 3	Analyze, interpret and respond to architectural examples done by architects from past and present.
CLO 4	Identify and describe appropriate systematic and scientific strategies to examine historical built forms and methods.
CLO 5	Develop critical thinking skills, ability to reflect and explain the meanings of architectural works.

B. Syllabus

Course objective:

The objective of the course is to introduce the students to the practice of appreciating architectural built forms.

Course contents:

Module I: Introduction

Introduction to building appreciation and analysis of the evolution of buildings and its necessity. Introduction also includes guidelines and parameters to appreciate any building.

Module II: Aesthetic Interpretation

The interpretive understanding of aesthetic experience provides with the opportunity to develop their interpretive skills and heighten their aesthetic responses to various building forms, building textures and building expressions. Analyze, interpret and respond to architectural examples done by architects from past and present. This also includes appreciation of historical works and background of previous era.

Module III: Historical Perspective

Examining historical perspectives help realize the need to understand the past and thoughtfully consider the future to contextualize current knowledge about buildings and their elements. Identify and describe appropriate systematic and scientific strategies to examine historical built forms and methods.

Module IV: Guidelines for Building Appreciation

Develop critical thinking skills, ability to reflect and explain the meanings of architectural works

Understand how architectural building works shape and reproduce social ideas, values and concerns and how they interact with and influence society, history and culture.

Note: Students shall be given an example of Building appreciation to record their experiences

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Kenneth Lindley, Appreciation of Architecture: Landscape and Building (C.I.L.) Paperback – February, 1972
- Carol Davidson Cragoe, How to Read Buildings: A Crash Course in Architectural Styles, Rizzoli, 2008 Francis D.K. Ching , A Visual Dictionary of Architecture, Wiley, 1996
- Kevin McCloud, Grand Designs Handbook: The blueprint for building your dream home, Collins ,2009

BAR 508 ENERGY CONSERVATION ARCHITECTURE

Course Code: BAR 508

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	demonstrate a good ability to calculate the energy balance of buildings
CLO 2	evaluate different opportunities to save energy with measures regarding both building technology and building services engineering in both new and existing buildings
CLO 3	assess whether there is a potential conflict between energy conservation and indoor climate for different energy saving measures
CLO 4	analyze and interpret results both critically and independently regarding energy and indoor climate in buildings based on values from both calculations and measurements
CLO 5	demonstrate a good ability to work independently on investigating energy and indoor climate issues for buildings and to present the results both orally and in writing in well-prepared technical reports.

B. Syllabus

Course Objectives:

- To familiarize students with principles, techniques and guidelines for planning and design of energy conserving architecture.
- Study of solar energy systems and other alternative sources of energy being used in architectural applications.

Course Contents:

Module I: Introduction - 2 weeks

Classification and characteristics of energy resources, Use and exploitation of resources, Resource use in architecture / exploitation of resources for development, Resource shortage and constraint, Concepts and need for conservation, Renewable, non-renewable resources and alternate sources of energy. Need and necessity of energy conservation.

Module II: Energy conservation Architecture - 3 weeks

Principles of energy conservation, Pattern of energy use in buildings, Technologies and methods of conservation, Economic, technological and environmental implications. Ambient energy and lifecycle requirement of energy in different types of buildings. Use and possibility of alternate sources of energy.

Module III: Conservation of other resources - 3 weeks

Conserving building materials, water, land etc. in architecture, methods of conservation and their implication. Understanding the concept of zero energy buildings.

Module IV: Design of ECA - 3 weeks

Fundamentals of planning and design, Elements and principles of design, Study of design problems, Application of relevant principles for design solutions, Innovative and appropriate construction technologies. Use of landscaping elements in energy conservation.

Module V: Exercise - 3 weeks

Students shall workout a practical exercise of converting one of their designs into energy conserving building.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Alternative Natural Energy Sources in Building Design: Davies and Schubert.
- Design with nature: I. McHarg
- The Ecological Context: H. McHale.
- Energy Conservation Standards: for building design, construction and operation, S. Fred Dubin

Online Resources

- <https://www.IGBC.com>
- <https://www.ECBC.com>
- <https://www.GRIHA.Org>

BAR 509 DIGITAL ARCHITECTURE

Course Code: BAR 509 Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To understand the difference between conventional design approach and Digital design process.
CLO 2	To understand use of different software, digital design tools and techniques for different-different digital design processes.
CLO 3	To apply digital design tools and techniques for the development of complex products, building interiors and exterior.
CLO 4	To evolve innovative digital architectural components by using logical and mathematical model.
CLO 5	To create physical structure evolved by digital design process.

B. Syllabus

Course Objective:

- To familiarize student with digital architecture

Course contents

Module I: Digital Architecture

Introduction to Digital Architecture, Digital Architecture terminologies, digital theories and History of Digital Architecture, Difference between conventional design approach and Digital design process,

Module II: Digital Architecture software:

Introduce to digital Design Process, Software as design tools, Associative modeling, Concept of artificial intelligence, Application of expert system in architecture.

Module III: Digital Techniques in Architecture

Building Automation System, Current trend and innovation, Effect of building automation on functional efficiency, Components of Building Automation, Application of 3D printing machines and techniques.

Module IV: Parametric design:

Relation of **Architecture and Algorithm**, Basic Application of algorithmic techniques in design methodologies, coding principles, artificial life, material intelligence

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Contemporary Processes in Architecture – by Ali Rahim
- Digital Cities AD: Architectural Design – Prof. Neil Leach
- Performative Architecture : Beyond Instrumentality – by BrankoKolarevic
- Versatility and Vicissitude: Performance in Morpho-Ecological Design- by Michael Hensel
- Biosensors for environmental monitoring – by Ursula Bilitewski, Anthony Turner
- Biosensor principles and Application – by LoicJ.Blum, Pierre R.Coulet
- Digital Tectonics – Prof. Neil Leach
- Contemporary techniques in Architecture – by Ali Rahim
- Digital Fabrications: Architectural and Material Techniques- by Lisa Ewamoto

BCS 501 COMMUNICATION SKILLS - III

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS501	1:0:0	1	1

B. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Create right selection of words and ideas while also choosing the appropriate channel of formal communication.
CLO 2	Demonstrate the ability to analyse a problem and devise a solution in a group.
CLO 3	Demonstrate proficiency in the use of written communication.
CLO 4	Recognize the mannerisms and methodology of Interview and GD to become more expressive in their body language and verbal performance.

B. SYLLABUS

Topic
Email Writing (Briefing, Do's & Don'ts & Practice)
Corporate Dressing & Body Language (Verbal & Non-Verbal Cues & its role in Interview Selection)
Interview-1 (Briefing, Do's & Don'ts, Questions, Mock Sessions)
GD-3(Practice Sessions)

EXAMINATION SCHEME:

Components	Email Writing	GD	Personal Interview	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Essential Telephoning in English, Garside/Garside, Cambridge
- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria&Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008.
Print
- Krishnaswamy N,*Creative English for Communication*. Delhi: Macmillan
Publishers India Ltd. Print. 2007.

BSS 504 BEHAVIOURAL SCIENCE V (Group Dynamics and Team Building)

Course Code: BSS 501

Credit Units: 01

Teaching hours: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) should be able to:

1. Recognize their personality and individual differences and identify its importance of diversity at workplace and ways to enhance it.
2. Recognize effective socialization strategies and importance of patriotism and taking accountability of integrity.
3. Recognize different types of human rights and its importance.
4. Identify Indian values taught by different religions.
5. Identify long term goals and recognize their talent, strengths and styles to achieve them.

Course Objective:

To inculcate in the students an elementary level of understanding of group/team functions To develop team spirit and to know the importance of working in teams

Course Contents:

Module I: Group formation

Definition and Characteristics

Importance of groups

Classification of groups

Stages of group formation

Benefits of group formation

Module II: Group Functions

External Conditions affecting group functioning: Authority, Structure, Org. Resources, Organizational policies etc.

Internal conditions affecting group functioning: Roles, Norms, Conformity, Status, Cohesiveness, Size, Inter group conflict.

Group Cohesiveness and Group Conflict

Adjustment in Groups

Module III: Teams

Meaning and nature of teams

External and internal factors effecting team

Building Effective Teams

ConsensusBuilding

Collaboration

Module IV: Leadership

Meaning, Nature and Functions

Self leadership

Leadership styles in organization

Leadership in Teams

Module V: Power to empower: Individual and Teams

Meaning and Nature

Types of power

Relevance in organization and Society

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS**-Journal of Success; **HA**-Home Assignment; **P**-Presentation; **V**-

Viva; **Q**-Quiz; **FC**- Flip class; **MA**- Movie Analysis; **CS**- Case study; **A**-Attendance

Text & References:

- Organizational Behaviour, Davis, K.
- Hoover, Judith D. Effective Small Group and Team Communication, 2002, Harcourt College Publishers
- Dick, Mc Cann & Margerison, Charles: Team Management, 1992 Edition, viva books
- Bates, A. P. and Julian, J.: Sociology - Understanding Social Behaviour
- Dressers, David and Cans, Donald: The Study of Human Interaction
- Lapiere, Richard. T – Social Change
- Lindzey, G. and Borgatta, E: Sociometric Measurement in the Handbook of Social Psychology, Addison – Welsley, US.
- Rose, G.: Oxford Textbook of Public Health, Vol.4, 1985.
- LaFasto and Larson: When Teams Work Best, 2001, Response Books (Sage), New Delhi
- J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 2, Group (1996); Pfeiffer & Company
Smither Robert D.; The Psychology of Work and Human Performance, 1994, Harper Collins College Publishers

FLF 501 FOREIGN LANGUAGE FRENCH - V

Semester 5 Course Code: FLT 501/511 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To understand the TP
- To understand an experiment
- To read the chemical equations
- To identify the chemical formulas
- To understand the instructions of a project
- To express a desire
- To understand a testimony
- To understand and read an exercise of mathematics
- Read and note the equations

Course Contents:

Unité 4 Formation Scientifique Page : 85-99 Leçons 13, 14 & 15

Contenu Lexical:

1. La chimie: les elements chimique et le matériel
2. La formulation des équations chimiques
3. Le corps humain
4. Les transports en commun
5. Les signes et formulations mathématiques
6. Les verbes utilisés dans les exercices de mathématiques

Contenu Grammatical:

1. L'infinitif pour exprimer un ordre ou un conseil (dans les consignes)
2. La nominalization
3. Savoir ou connaître au présent
4. Les pronoms relatives (qui, que, qu')
5. L'infinitif dans les consignes

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam

10	15	10	10	5	50
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Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionnaire, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 501 GERMAN - V

Course Code: FLG 501/511

Credit Units: 02

Teaching hours: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- tell where they work and live
- tell location of their offices and house
- explain, how they reach their work place
- ask and tell the location of thing or person in a house like behind, in front of etc.
- describe the office things like printer, files etc

Course Content:

Vocabulary:

- Workplace
- Location like 1st floor, ground floor.
- Ordinal numbers
- Things and furniture in a office
- Means of transportation

Grammar:

- changing preposition in dative and accusative case
- Verbs related to changing prepositions like to put, to lay etc
- Dative and accusative preposition
- Modal verb :must and can

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: ZielspracheDeutschalsFremdsprachePart 1

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 501SPANISH - V

Semester 5: Course Code: FLS 501/511

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To talk about a pre decided plan
- To talk about a plan yet to materialize
- To propose a plan
- To talk about what they have done today/during vacations etc.
- Reading texts about Spanish festivals
- Writing composition about Festivals

Course Content:

Vocabulary:

Vocabulary related to leisure time, going out with friends, traveling, shopping, club, transport, decoration and celebration.

Grammar:

Introduction of direct/indirect object pronouns
(Pensar + infinitive),
(Estar pensando en + infinitive)
(Por qué no + verbo / Te Parece + Infinitivo..etc)
(Haber + participio Pasado)
Introduction of pretérito perfecto

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005
Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 501 CHINESE V

Semester - V Course Code: FLC- 501/511 Credit Units: 02

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Fifth semester the students will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.etc.
- Carry out conversation in the target language based on the topics learnt.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use, programme specific and internet related vocabulary; approx 80 Characters including 50 characters of HSK level –II
- Type Chinese document.
- Express their opinion and ask opinion of others in Chinese “de”.

COURSE CONTENT

1. Revision of vocabulary
2. Detailed study of greetings, farewell & personal information (HSK-II topics 1 & 2) etc.
3. A brief description of mood & colours
4. Expression of opinions
5. Asking the opinion of the others
6. Listening of dialogues
7. Conversation based on topics learnt
8. CBT package “huozhe” “haishi”
9. Programme specific vocabulary and expressions
10. Chinese typing and making soft copy of a Chinese document
11. Important Chinese sites and internet related vocabulary

GRAMMAR CONTENT

1. Pattern: 因为……所以…… “de”.
2. Preposition 介词: 在
3. Auxiliary verbs; 助动词

4. Modal Particle 语气助词:了

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text Books & References

1. Learn Chinese with me book-II. (Major Text Book)
2. Module on HSK-II. (suggested reading)
3. Practical Chinese Grammar for foreigners. (suggested reading)
4. Internet Chinese. (suggested reading)
5. Office Talk (suggested reading)
6. Elementary Chinese Reader Book-I (suggested reading)

MTARC 504 GRAPHICS SKILLS – IV (Computer Aided)

Course Code: MTARC 504

Credit Units: 03

Teaching hours: 03

A. Course Learning Objective (CLO)

CLO1	Remember various tools or short hand commands used in SketchUp, AutoCAD-3D, V-Ray.
CLO2	Understand to develop high er-quality, more accurate architectural designs, and models; use tools specifically built to support 3D design-creation-rendering-animation based application. Apply the knowledge of various aspects of building Services & Construction techniques into 3Ddesigns.
CLO3	Apply the knowledge of various aspects of building Services & Construction techniques into 3D designs.
CLO4	Analyze the importance of 3D design creation rendering animation-based application in the field of Architecture and construction industry.
CLO5	Evaluate 3D Modelling based design on critical thinking and problem-solving skills.
CLO6	Create3DdesignmodelsofanArchitecturalProject.

B. Syllabus

Course Objective:

To learn drawing 3D-drawings through computers and taking advantage of it for rendering and presentations of the views.

Course Contents:

Module I: Introduction to (3-D) software: Exterior and Interior – 2 weeks

Introduction to basic 3-D software of architectural significance AutoCAD-3D and their basic usage (creating conceptual exterior and views of an Architectural Project).

Creating detailed Interior and views of a 3D project using Auto CAD.

Module II: Introduction to (3-D) software: Exterior and Interior -3 weeks

Introduction to basic 3-D software of architectural significance Google SketchUp and their basic usage (creating conceptualexterior and views of an Architectural Project).

Creating detailed Interior and views of a 3D project using Google SketchUp.

Module III: Introduction to Rendering software: Exterior-3 weeks

Use of V-Ray for Rendering 3D models of SketchUp and their final editing in photoshop.

Module IV: Introduction to Rendering software: Interior-3 weeks

Use of V-Ray for Rendering 3D models of SketchUp and their final editing in photoshop.

Module V: Introduction to Animation-3 weeks

Creating animation (walkthrough) of 3D models on SketchUp.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Manuals of AutoCAD – Autodesk Inc.
- Computer graphics and design, Radhakrishnan Inside AutoCAD- parker, denial& rice
- Google SketchUp user’s guide.
- Adobe Photoshop user guide/manual.
- Google SketchUp for Interior Designers – Daniel John Stine
- Rendering in SketchUp – Daniel Tal V-ray user’s Guide.
- Lumion user’s guide/manual.
- Architectural Design with SketchUp – Alexander Schreyer

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2019-24 & 2020-25 Onwards

Total Credits = 287

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

SIXTH SEMESTER

Course Code	Course Title	Univ. Category	CoA Category	L/T/ST/P Per Week			Credits	Teaching hours
				L	ST	P		
BAR 601	Design – VI	CC	PC	0	8	0	12	8
BAR 602	Materials & Construction Technology – VI	CC	BS & AE	1	1	1	3	3
BAR 603	Structural Design & Systems – VI	CC	BS & AE	2	0	0	2	2
BAR 604	Quantity Surveying & Specification	CC	PC	2	0	0	2	2
BAR 605	Landscape Design & Site Planning	CC	PC	2	0	0	2	2
BAR 606	Building Services - V	CC	BS & AE	2	0	0	2	2
Domain Elective – IV (Select any One DE)								
BAR 608	Intelligent Buildings	DE	PE	2	0	0	2	2
BAR 609	Vaastu in Architecture	DE	PE					
BAR 610	Architecture Pedagogy	DE	PE					
BCS 601	Communication Skills – VI	VA	SEC	1	0	0	1	1
BSS 605	Behavioural Science – VI (Stress and Coping Strategies)	VA	SEC	1	0	0	1	1
	Foreign Language -VI	VA		2	0	0	2	2
FLT 601	French							
FLG 601	German		SEC					
FLS 601	Spanish							
FLC 601	Chinese							
	Open Elective/Minor Track	OE/MT	OE	3	0	0	3	3
TOTAL				18	9	1	32	28

BAR 601 DESIGN – VI

Course Code: BAR 601 Credit Units: 12

L/0-ST/8-P/0

Teaching hours: 08

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and need of the design. Learn the principles, methods, process, and concepts of design. Appreciate the requirements of design guidelines.
CLO 2	Evaluate architectural design concepts' applicability in various contexts by studying cases.
CLO 3	Apply the learning of the previous semester and theoretical or practical design to evolve a unique concept for a real architectural design project.
CLO 4	Evolve specific architectural design guidelines, policies, and recommendations for the project.
CLO 5	Create a design proposal for the given project in terms of presentation drawings, 3D model; 3D views, etc., as per the given requirements.

B. Syllabus

Course Objectives:

- To understand Design constraints pertaining to buildings requiring integration of basic services and structures; building on hilly terrain(contours); buildings forming a complex
- To investigate design issues pertaining to above typologies
- To create architectural design for above typologies

Course Contents:

Module I: Introduction

Introduction to parameters that control design criteria for buildings that require integration of basic services and structures; constraints and design strategies for building on hilly terrain and designing for variety of buildings that are part of same complex with examples. Project introduction for studio exercises.

Module II: Case studies, Site Studies and Literature Studies

Case Studies – primary and secondary; Site and surroundings survey- location, local climatic conditions, topography, existing landscape, socio- cultural impact on design; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, integration with structures and services, efficiency of design to be worked out and finalized.

Module V: Presentation

Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. *An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.*

Design exercise can include projects like Housing, Auditorium, Museum, Institute campus on Hills/plains, shopping malls etc.

Examination Scheme:

Components	A	S1	S 2	CT	EE	
Weightage (%)	05	15	20	10	20 Viva	30 EE

Text Books /Reference Books/Journals/Other Study Material:

- ‘Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect’s Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, McGraw Hill Book Company, New York.
- Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- [https:// www.architecture.com/knowledge-and-resources/resources-landing-page](https://www.architecture.com/knowledge-and-resources/resources-landing-page)

BAR 602 MATERIALS & CONSTRUCTION TECHNOLOGY – VI

Course Code: BAR 602

Credit Units: 03

L/1-ST/1-P/1

Teaching hours: 03

A. Course Learning Outcome

CLO 1	Understand the design intent of the architect.
CLO 2	Be able to read construction drawings.
CLO 3	Communicate with consultants and vendors.
CLO 4	Develop and convert the design intent into a set of good for construction drawings.

B. Syllabus

Course Objective:

- To acquaint the students with working drawing in construction work.
- To expose the students to preparation and usage of working drawings on site.
- To familiarize with requirement of the working drawing, its essentials and levels of details required so that work could be executed at site without any further assistance.

Course Contents:

Module I: Introduction to Working and submission Drawing – 1 week

Introduction to the topic and its relevance in the construction field. Aspects such as – construction terminology, building bye-laws, requirements of submission and completion / compounding of projects to be discussed.

Module II: Dimensions system – 2

weeks Dimension system at building and site level

Module III:

Working Drawing I– 3 weeks

Plans, section and elevation

Module IV: Working Drawing II– 3 weeks

Typical structural detail. Excavation and shuttering working drawing and detail

Module V: Working Drawing III - 2 weeks

Toilet / kitchen & staircase details

Module VI: Working Drawing IV - 2

weeks Flooring handling pattern,

Landscaping's **Module VII: Roof**

drainage, flashing - 2 weeks Detail of

terracing for flat roofs.

Water proofing and rainwater disposal.

Exercises

Making complete set of working drawings and details for a small two storied building designed in the previous semester, with necessary changes made as per the local bye-laws.

List of drawings-

Architectural drawing-Site Plan, All Floor Plans, Elevations, Sections, Doors and Windows schedule and details,

Structural drawing- Foundation Layout and details

Services drawing-Electrical and Plumbing layouts, HVACs layout.

Details drawing-Kitchen, Toilet, staircase details, Flooring Pattern, Details of grills, Parapet or railings, typical wall section with complete details.

Examination Scheme:

Components	A	C E	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Elements of Structure by Morgan
- Structures in Architecture by Salvadori
- Building Construction by Mackay WB Vol. 1-4 Construction Technology by Chudley Vol. 1-5

BAR 603 STRUCTURAL DESIGN & SYSTEM- VI

Course Code: BAR 603

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Investigate the tensile strength and design capacity of various steel elements in structures.
CLO 2	Create his/her own judgement regarding analysis method required for specific type of problem
CLO 3	Develop his/her interest in design of steel structures field.
CLO 4	Apply the design methods to understand the mechanism of existing structures.

B. Syllabus

Course Objective:

- To understand the design of Steel structures by using: - IS 800: 2007/1984.
- To help the students for understanding the design of steel structures members like: - beam, columns & girders by using IS: - 800; 2007 (based on limit state method) & implement in analytical software's like: - Tekla Bentley version.

Course Contents:

Module I: Limit state method-2 weeks

Introduction, steelwork connections: - rivet, weld, bolt & pinned connections, failure & strength of a welded joint, working stresses in rivet joint, modes of failure of a riveted joint

Module II: Design of tension members-2 weeks

Introduction, types of tension member, net sectional area, net effective areas for angles & tees in tension. Permissible stresses, design of members subjected to axial tension & bending, lug angles.

Module III: Design of compression members-2 weeks

Introduction, modes of failure of a column, buckling failure: - Euler's theory, Ideal end conditions and effective length factors, radius of gyration & slenderness ratio, various column formulae, IS codes formulae, common shapes of compression members, strength of compression members, general specification for compression member, design of compression member

Module IV: Girders-2 weeks

Introduction, loads acting on girder, permissible stresses, types of girders & crane rails.

Module V: Advanced design for shear in beams-3 weeks

Design of advance R.C.C. Structures: - Strip & yield line method, Shear friction, horizontal shear transfer, composite concrete beams, design of shear walls, strut- & tie model, truss model, deep beams, bearing & shearing walls & corbels.

Module VI: Design for earthquake resistance-3 weeks

Effect of confining the concrete & introducing the famous models, flexural hinges & their lengths ultimate deformation & ductility of members with flexure, moment curvature relationship, cyclic behavior of beam- column member, redistribution of moments in reinforced beams, design of beam column joint.

Examination Scheme:

Components	A	H	C	V	CT	EE
Weightage (%)	05	10	10	05	20	50

Text Books /Reference Books/Journals/Other Study Material:

- | | |
|---|---|
| <input type="checkbox"/> P.N. Khanna, Civil Engineering Handbook. | <input type="checkbox"/> K. R. Arora, Advance concrete design. |
| <input type="checkbox"/> B.C. Punmia, Design of steel structures. | <input type="checkbox"/> IS: - 3370, IS: - 1893. |
| <input type="checkbox"/> Negi, Design of Steel Structure. | <input type="checkbox"/> Special publication -6 (SP-6) |
| <input type="checkbox"/> Salvadori and Heller, Structure in Architecture. | <input type="checkbox"/> Birla publication, Steel tables |
| <input type="checkbox"/> E. P. Popov, Mechanics of materials. | <input type="checkbox"/> Morgan, Elements of Structure. |
| <input type="checkbox"/> J. Sterling Kinney, Indeterminate structural analysis. | <input type="checkbox"/> Salvadori, Structures in Architecture |
| <input type="checkbox"/> C.S. Reddy, Basic structural analysis. | <input type="checkbox"/> Mackay WB, Building Construction Vol. 1-4 |
| <input type="checkbox"/> R. Park and T. Paulay, Reinforced concrete structures. | <input type="checkbox"/> Chudley, Construction Technology Vol. 1-6 |
| <input type="checkbox"/> M.L. Gambhir, Concrete technology. | <input type="checkbox"/> Elementary Building Construction by Mitchell |
| <input type="checkbox"/> N. Krishna Raju, Design of reinforced concrete structures. | <input type="checkbox"/> Everet, Structure and Fabric. |
| <input type="checkbox"/> IS: 800- 2007 | <input type="checkbox"/> Tekla software. With Bentley version V8i. |
| <input type="checkbox"/> SP: 16- 1980 | <input type="checkbox"/> Morgan, Elements of Structure. |
| <input type="checkbox"/> N. Krishna Raju, Advance R.C.C. design. | <input type="checkbox"/> Salvadori, Structures in Architecture. |
| <input type="checkbox"/> A.k. Chopra, Dynamics of structures. | <input type="checkbox"/> Mackay WB, Building Construction Vol. 1-4 |
| <input type="checkbox"/> Chudley, Construction Technology Vol. 1-6 | <input type="checkbox"/> Mitchell, Elementary Building Construction. |

BAR 604 QUANTITY SURVEYING & SPECIFICATIONS

Course Code: BAR 604

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Prepare quantity estimates for building structures as per the specifications
CLO 2	Draft detailed specifications and work out rate analysis for all works related to building structures.
CLO 3	Prepare cost estimate and valuation of construction works.
CLO 4	Prepare tenders and contract documents. Evaluate contracts and tenders in construction practice.

B. Syllabus

Course Objectives:

- To familiarize the students with the theory and practice of estimation and quantity surveying. To develop the understanding of specification writing.

Course Contents:

Module I: Introduction - 1 week

Definition, importance and uses of specification – principles and practice; method of writing specification; form and sequence of clauses, calculation of length according to long & short wall method, center line method.

Module II: Material Specifications - 2 weeks

Writing detailed specification for various common building materials e.g., bricks, sand, lime, timber, glass, paints etc.; specification of new building materials.

Module III: Specifications of Simple construction - 2

weeks Writing detailed specification for various building

construction works. **Module IV: Schedule of Rates - 2**

weeks

Specification of BIS and other institutions; general Abbreviations used in specifications.

Module V: Introduction to Estimate - 2 weeks

Introduction to cost estimation and definitions of terms related to estimates.

Module VI: Types to Estimate - 2 weeks

Types of estimates, abstract and detailed estimates; detail estimates – methods of estimating; taking out of various items; preparation of bill of quantities – use of schedule of rates; analysis of rate and break up of material requirements.

Module VII: Cost accountancy & Book keeping - 2 weeks

Introduction to cost accountancy and book keeping.

Module VIII: Rate Analysis - 1 week

Principles of analysis of rates, rates of labour and materials, rate analysis in different building works.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Estimating and Costing in Civil Engineering: B. N. Dutta
- Estimation, Costing & valuation by M. Chakraborty.
- Handbook on Building Economics and Productivity, Central Building Research Institute, Roorkee: S.C. Singh and G.C. Sofat.
- Civil Engineering Handbook – P.N. Khanna
- R.C.C. Design – Khurmi, Punmia, Sushil Kumar

BAR 605 LANDSCAPE DESIGN & SITE PLANNING

Course Code: BAR 605

Credit Units: 02

L/2-ST/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Characteristics of various types of plants/trees/ shrubs/ creepers/ edges/ hedges etc., and their suitability for landscaping; plant selection criteria, planting design.
CLO 2	Definition, scope, landscape architecture in relation to architecture. Landscape design elements and principles, historical review of gardens in India, Persia, Japan, Italy, France and England, contemporary landscape design
CLO 3	To know Landscape design element such as sculptures/ benches/ umbrellas/ fences/ posts etc. their design, selection and incorporation in landscape/ site planning schemes. Characteristics of various types of plants/ trees/shrubs/ creepers/ edges/ hedges etc., and their suitability for landscaping; plant selection criteria, planting design.
CLO 4	To Evaluate the topography/ slope, hydrology/ drainage, geology/ soil, vegetation, views – on site/ off site and then consideration in design and planning.
CLO 5	To design the outside space in accordance with the understandings and elements of site planning.
CLO 6	To review, reflect, re-interpret and refine the effectiveness of the designed outdoor spaces

B. Syllabus

Course Objective:

To acquaint the student with the various natural elements used to design transitional and outside spaces and establish a linkage between nature and the built environment

Course Contents:

Module I: Introduction

Definition, scope, landscape architecture in relation to architecture. Landscape design elements and principles, historical review of gardens in India, Persia, Japan, Italy, France and England, contemporary landscape design

Module II: Characteristics and use of plants

Characteristics of various types of plants/trees/shrubs/creepers/edges/hedges etc., and their suitability for landscaping; plant selection criteria, planting design.

Module III: Site Analysis and planning

Analysis of site with respect to topography/ slope, hydrology/ drainage, geology/ soil, vegetation, views – on site/ off site and their consideration in design and planning

Module IV: Landscape Design and maintenance

Landscape design for various building types; landscaping parks and roads, rock gardens, terrace gardens, landscaped courts. Preparation of landscape schemes; Landscape construction. Maintenance & phasing of landscape schemes.

Module V: Landscape design elements

Landscape design element such as sculptures/ benches/ umbrellas/ fences/ posts etc. their design, selection and incorporation in landscape/ site planning schemes.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- An Introduction to Landscape architecture by M. Laurie. An Introduction to Landscape Design by H. V. Hubbard
- Fundamentals of Landscaping and Site Planning by James B. Root. History of Garden Design by D. Clifford
- Tropical Garden Plants in Colour by Bose and Chowdhury

References:

- Colour and Design for Every Garden by Ortloff and Raymore Design with Nature by I. Mcharg
- The Way We Live by Alfresco
- New Landscape Design by Robert Holden Fundamentals of Ecology by M. C. Dash. Landscape Detailing by Michael Ittlewood.

BAR 606 BUILDING SERVICES-V

Course Code: BAR 606

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and ethics of the field of building services. Appreciate the requirements of different types of building services. Learn the concepts of the building services systems
CLO 2	To evaluate the quantity and quality of services to be provided.
CLO 3	Identify the various appliances, fixtures and appurtenances. Learn about the popular techniques of the building sciences.
CLO 4	Study about the thumb rules and the byelaws of the services and learn how to apply the knowledge while designing the layout of the buildings and its execution
CLO 5	Develop reports and assignments containing write-ups, and sketches to express their understanding of building services during lectures and site visits.

B. Syllabus

Course Objectives:

- To Integrate of HVAC system with building design & its application. To expose the students to the areas of air-conditioning, heating and ventilation in buildings of various types so that their integration could be done in most appropriate manner right at the design stage.

Course Contents:

Module I: Ventilation- 1 weeks

Natural and artificial ventilation systems; estimation of ventilation requirements; mechanical ventilation in buildings; scheme and equipment required for ventilation spaces like industrial kitchens, underground garages, and multistoried buildings and parking spaces.

Module II: Air conditioning- 2 weeks

Principles of Air conditioning; concept of thermal comfort; physiological principles; reaction of human body to the thermal environment; principles of psychometric; psychometric chart; selection of indoor and outdoor design conditions; refrigeration and air cycle; cooling and heating load calculations; various systems of air conditioning; duct work and air conditioning layout, fittings and fixtures; evaporative cooling, fair conditioning and its suitability. Types of systems- cooling tower, geothermal heating and cooling

Module III: Equipment's- 1 weeks

Scheme and equipment required for HVAC; their placement and physical space requirements.

Module IV: Load Calculation- 1 weeks

Cooling and heating load calculations; Introduction to British thermal unit and other factors; various systems of air conditioning; duct work and air conditioning layout, fittings and fixtures; evaporative cooling.

Module V: HVAC Design- 2 weeks

Design and drawing of HVAC system for a building designed in previous semester.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Manohar Prasad, 'Refrigeration & Air conditioning'
- C.P. Arora, 'Refrigeration & Air conditioning'
- Modern Air-Conditioning, Heating and Ventilation: Carrer and G. Pitman.
- Air Conditioning and Ventilation, Servens and Fellows, John Wiley
- Ernest Tricomi-ABC of Air conditioning
- Basics of Air conditioning by ISHRAE
- All about Insulation by ISHRAE
- ISHRAE HVAC Handbook 1997 Part - 1 -Air Conditioning
- ISHRAE HVAC Handbook 2004 Industrial Ventilation Applications
- ISHRAE The Hand Book on Green Practices

BAR608 INTELLIGENT BUILDINGS

Course Code: BAR 608

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Concept of intelligent buildings and to acquaint the student with the factors to be taken into consideration to build an intelligent building a
CLO 2	Understand the basic concept of Artificial Intelligence and how it is helpful for building construction technologies.

B. Syllabus

Course Objectives:

To introduce the concept of intelligent buildings and to acquaint the student with the factors to be taken into consideration to build an intelligent building and basic concept of Artificial Intelligent and how it is helpful for building construction technologies.

Course Contents:

Module I: Introduction to intelligent buildings - 2 weeks

Definition of IB(Intelligent Building) according global and Indian context, Concepts, purpose and scope of intelligent building.

Module II: Intelligent Systems in Building - 3 weeks

Intelligent HVAC, Intelligent lighting, intelligent security, Intelligent firefighting, Intelligent openings, Intelligence with respect to telecommunications and network connectivity like WIFI etc....

Module III: Building Automation System - 3 weeks

Application, Current trend and innovation, Effect of building automation on functional efficiency, Components of Building Automation, Automation system in Building Services and their Integrated approach in design, maintenance and management system, Concept of artificial intelligence, Application of expert system in architecture.

Module IV: Expert System - 3 weeks

Introduction to expert system, objectives, features and components of expert system, Applications of Expert Systems, benefits and limitations of Expert Systems

Module V: Artificial Intelligence - 3 weeks

Introduction to artificial intelligent, intelligent behavior, Development of Artificial Intelligence, Concepts of Artificial Intelligence, Applications of Artificial Intelligence.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	C T	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Intelligent Building Systems, Authors: Ting-pat So, Albert, Wai Lok Chan
- Intelligent Buildings: An Introduction, Edited by Derek Clements-Croome
- Smart Buildings, Author Jim Sinopoli

- Intelligent buildings: applications of IT and building automation to high technology construction projects, Author: Brian Atkin
- Artificial intelligence: Building intelligent systems, Authors Parag Kulkarni, Prachi Joshi

References:

- Intelligent Building System for Airport, ASHRAE Journal V-39 N 11, Nov. '97 pp. 31-35
Maintenance System of Electrical Facilities Proceedings of the Annual Conference, 1997.

Online Resources:

- An Intelligent Expert Systems' Approach to Layout Decision Analysis and Design under Uncertainty
DOI: 10.1007/978-3-540-76829-6_12
- The use of expert system building tools in process planning. [https://doi.org/10.1016/0952-1976\(92\)90095-2](https://doi.org/10.1016/0952-1976(92)90095-2)
- Intelligent building, definitions, factors and evaluation criteria of selection. <https://doi.org/10.1016/j.aej.2018.07.004>
- <https://www.intelligentbuildings.com/>

BAR 609 VASTU IN ARCHITECTURE

Course Code: BAR 609

Credit Units: 02

L/2-T/0-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the philosophy and believes in Vastu
CLO 2	Learn the relationship between humans and cosmos
CLO 3	Learn the concepts of vedicvastu
CLO 4	Learn the site planning and planning approaches of vastu
CLO 5	Produce building plans as per vastu

B. Syllabus

Course Objectives:

- To educate the students on Vastu Shastra so that our own built environment should be in harmony with the energy of the inmates living in it.
- To expose the students to the various theoretical and practical aspects of VastuShastra. To familiarize with the ancient mode of designing a building in amalgamation with the latest technologies available.

Course Contents:

Module I: Introduction - 3 weeks

Introduction to Vastu, History of Vastu, Vedas and other ancient books, Growth of Vastu, Vastu and today, Scientific definition of Vastu, Solar Passage & Buildings with research referencing, Solar Energy, Humans & Buildings, Cosmic Energy & Flow.

Module II: Vedic Vastu - 3 weeks

Concept of Vedic Vastu, VastuPurush, Mandalas, Five Elements Theory, Planets & Directions.

Module III: Planning as per Vastu - 4 weeks

Direction and Corners, Eight directions, Importance of directions, Slope & Loading Pattern, Open space & balconies, Shapes, Vedic opinion on entries, Alternative opinion on entries, Main Door & Main Gate. Planning for Bedroom, Kitchen, Puja room, Bathroom, Children's room, Drawing Room, Living Room, Office Room.

Module IV: Land and Location as per Vastu - 4 weeks

Angles in a Plot & Building, VeedhiShoola, Angles & Extentions, Shermukhi&Gaumkhi plot, Good & Bad Location. Selection of land & soil test, Examination of the land as per Mayamata&Brahit Samhita, Types of Land as per Vedic books, auspicious land & Inauspicious land, Obstructions.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- 'B.B. Puri, Applied Vastu Shastra in Modern Architecture
- Michael Borden, Vastu Architecture: Design Theory and Application for Everyday Life
- Kathleen Cox, Vastu Living: Creating a Home for the Soul
- Talavane Krishna, TheVaastu Workbook: Using the Subtle Energies of the Indian Art of Placement
- Sherri Silverman, Vastu: Transcendental Home Design in Harmony with Nature
- Rohit Arya, Vaastu: The Indian Art of Placement
- Maharishi Vastu, Vastu City Planning: Sustainable Cities in Harmony with Natural Law
- Kathleen Cox, the Power of Vastu Living: Welcoming Your Soul into Your Home and Workplace
- Juliet Pegrum, TheVastuVidya Handbook: The Indian Feng Shui
- Kathleen Cox, Space Matters: Use the Wisdom of Vastu to Create a Healthy Home. 11 Top Designers Show You How
- Satish Grover, Traditional Indian Architecture
- Bubbar,D K, The spirit of Indian architecture: Vedantic Wisdoms of Architecture for Building Harmnious Space and Life

BAR 610 ARCHITECTURE PEDAGOGY

Course Code: BAR 610

Credit Units: 02

L/2-T/0-P/0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	To acquaint with research methodology, paper writing and presentation as tools to transmit knowledge
CLO 2	To familiarize students with the skills to evaluate architectural design and other art forms.
CLO 3	To introduce the students with the prevailing models of teaching-learning methods and their application in architectural design education.

B. Syllabus

Course Objectives:

- To acquaint students with the history of development of education methods in architecture.
- To introduce the students with the prevailing models of teaching-learning methods and their application in architectural design education.
- To familiarize students with the skills to evaluate architectural design and other art forms.
- To introduce research methodology, paper writing and presentation as tools to transmit knowledge

Course Contents:

Module I: History & development of architecture education - 2 weeks

Traditional teaching methods of India – Gurukul, Universities of Nalanda & Takshashila; Transmission of knowledge in architecture through temple architecture in ancient India; History of formal architecture education in West and in India. Peculiar requirements of Architecture Education, Requirements of generation of creative thinking.

Module II: Introduction to learning methods - 3 weeks

Aims and objectives of architecture education in India, Blooms Taxonomy, Levin's field theory, Carl Roger's theory of experiential learning, Peculiar requirements of Architecture Education; Models of Teaching: Advanced Organizer, Concept Attainment Model, Simulations – Use of advanced softwares to shape and visualize ideas, Synectics, Concept Mapping for organizing & communicating ideas, Basic aspects of classroom management

Module III: Design Process Pedagogy - 3 weeks

Various thinking skills, tools and techniques adopted by architects for deriving design ideas, Development of Design Thoughts, Experiential learning (case study methods) as guide in Design process, Use of synectics in the design studio, the essence of creativity in synectics, various forms of metaphoric thinking to activate “generative thinking.”

Module IV: Assessment of architecture - 3 weeks

Arts, skill and technique of visual perception and form analysis, communication of the aesthetics of architecture and other associated art forms in a journalistic manner.

Module V: Research Methodology, Paper Writing & Presentation - 3 weeks

Research methodology, proposing projects for research design, standardized methods of paper writing and presenting.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
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Weightage (%)	05	25	20	50
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Text Books /Reference Books/Journals/Other Study Material:

- S. K. Mangal (2009)“Essential of educational technology”, PHI Learning Pvt. Ltd., 2009.
- Bruce Joyce and Marsha Weils,“Models of Teaching”, Pearson; 9 edition (April 14, 2014)
- Klausmier and Ripple (1971)“Learning and Human Abilities” Harper &Row, New York.
- Eames Charles & Ray, „An Eames Anthology“, Yale University Press, Edited by Ostroff Denial.
- George Kneller(1971),“Philosophy of Education”
- John Wiley & Sons Inc; 2nd Revised edition
- J. S.Chauhan,“Advanced Education Psychology” SumitPrakashan
- J. C. Agrawala (2009), “Essential of educational technology” Vikas Publishing House Pvt Ltd, 01-Nov-2009
- Rizzoli (March 18, 2008);“How to Read A Building”Rizzoli (March 18, 2008); Bruce Joyce,“Models Of Teaching”,Pearson; 9 edition (April 14, 2014)
- New Trends in Architecture Education, By- Ashraf Salama

BCS 601 COMMUNICATION SKILLS - IV

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS601	1:0:0	1	1

C. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Demonstrate professional attitude needed for interview preparedness, power dressing, and respectful self orientation.
CLO 2	Showcase their leadership skills with effective team work.
CLO 3	Outline the basic etiquettes in expressing their personality individually and in group.

B. SYLLABUS

Topic
Resume Building-2
GD-4 (General & Abstract Topics)
Presentations-3 (Corporate Terms, HR Policies, Rules & Regulations)
Document Preparation for Job (CV Update according to profiles, Photo, Passport, IDs)
Mock Personal Interview-2

EXAMINATION SCHEME:

Components	Resume Writing	GD	Mock Personal Interview	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria&Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008. Print
- New International Business English, Jones/Alexander, Cambridge

BSS 605 BEHAVIOURAL SCIENCE – VI

(STRESS AND COPING STRATEGIES)

Course Code: BSS 605

Credit Unit: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Identify stress and that an individual come across.
2. Recognize the causes of stress in their lives.
3. Analyze symptoms and how they are affecting lives.
4. Create ways to effectively cope with it.

Course Objective:

- To develop an understanding the concept of stress its causes, symptoms and consequences.
- To develop an understanding the consequences of the stress on one's wellness, health, and work performance.

Module I: Stress

Meaning & Nature

Characteristics

Types of stress

Module II: Stages and Models of Stress

Stages of stress

The physiology of stress

Stimulus-oriented approach.

Response-oriented approach.

The transactional and interactional model.

Pressure – environment fit model of stress.

Module III: Causes and symptoms of stress

Personal

Organizational

Environmental

Module IV: Consequences of stress

Effect on behaviour and personality

Effect of stress on performance

Individual and Organizational consequences with special focus on health

Module V: Strategies for stress management

Importance of stress management

Healthy and Unhealthy strategies

Peer group and social support

Happiness and well-being

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS-** Journal of Success; **HA-** Home Assignment; **P-** Presentation; **V-** Viva; **Q-** Quiz; **FC-** Flip class; **MA-** Movie Analysis; **CS-** Case study; **A-** Attendance

Text & References:

- Blonna, Richard; Coping with Stress in a Changing World: Second edition

- Pestonjee, D.M, Pareek, Udai, Agarwal Rita; Studies in Stress And its Management
- Pestonjee, D.M.; Stress and Coping: The Indian Experience
- Clegg, Brian; Instant Stress Management – Bring calm to your life now

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FOREIGN LANGUAGE 601

Semester 6 Course Code: FLT 601 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To understand the essentials of an interview
- To present one research
- To present one university and professional course
- To speak about the professional projects
- To understand a remarkable topic
- To understand and ask questions
- To describe a person
- The content and the method of the report
- To make a plan of the report
- To write an introduction
- To understand a short technical message
- To reply to a survey

Course Contents:

Unité 5 Nouvelles technologies Page : 100-121 Leçons 16, 17 & 18

Contenu Lexical:

1. Le parcours académique
2. Le monde du travail
3. Le fibreoptique
4. Les adjectifs descriptifs
5. L'exposé
6. Les énergies renouvelable

Contenu Grammatical:

1. Le passé composé avec avoir
2. Quelques adverbes
3. Quelques indicateurs temporels
4. L'interrogation (forme standard et soutenue)
5. L'accord de l'adjectif (féminin, masculin et pluriel)
6. La place de l'adjectif
7. Les différents niveaux de langue
8. Le futur simple
9. Les questions avec << qu'est-ce que >>

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG601 GERMAN VI

Semester 6:

Course Code: FLG 601

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- express their likes and dislikes (buying groceries)
- ask price and quantity
- express their likes and dislikes in terms of cloths
- buy cloths in the shopping mall

Course Content:**Vocabulary:**

- How often- every day, sometime daily etc.
- Cloths
- Colours
- Groceries : fruits , vegetables etc
- Groceries materials : packets, bottle etc.
- quantity and weight
- currency

Grammar:

- Make question with which, how many etc
- Comparative many, good etc
- Introduction of adjective ending in accusative with definite and indefinite article
- Verb like
- Demonstrative

EXAMINATION SCHEME**Total: 100 marks**

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: Zielsprache Deutsch als Fremdsprache Part 2

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1 - Deutsch –Englisch**, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 601 SPANISH VI

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To express future plans and intentions
- To talk about tourist destination in Spain and India
- Reading texts about Spanish historical monuments
- To talk about dance and music.
- Reading text about Spanish Cities
- Writing email to your friend/family members

Course Content:

Vocabulary: Names of the famous Spanish cities, monuments, dance forms (Flamenco, salsa, tango) informal greeting in letter writing.

Grammar:

Revision of Indefinite/ continuous /perfect tense
Introduction of Future Tense.

ExaminationScheme:

Total: 100 marks

ContinuousEvaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 601 CHINESE VI

Semester - VI

Course Code: FLC-601

Credit Units: 2

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Sixth semester the students will be able to attain the proficiency of **HSK-II**. They will be able to:

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out effective conversation in the target language.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use: approx70 Characters including 50 characters of HSK level –II
- Put up suggestions, explain reason, and do comparison.
- Do translation with the help of dictionaries and translation software.

COURSE CONTENT

1. Revision
2. Put up suggestions
3. Making comparison
4. Explaining the reason
5. Grammar points & exercises
6. Listening practice
7. Conversation based on dialogues
8. CBT package
9. Translation of small passages from English to Chinese
10. Practice of model test series of HSK-II
11. Chinese government system (in English)

VOCABULARY CONTENTS

1. Vocabulary will include approx80 Characters including 50 Characters of HSK-II level.
1. Vocab related to suggestions, comparison, reason, will be covered during this semester.
2. By the end of sixth semester the students will be able to master **300 characters set for the HSK level-II**

GRAMMAR CONTENTS

1. Aspectual particle 动态助词：着
2. Interjection 叹词: 喂
3. Overlapping verbs 动词的重叠
4. Affirmative sentences 肯定句
5. Negative Sentences 否定句

MTARC 604 GRAPHICS SKILLS – V (Computer aided)

Course Code: MTARC 504 Credit Units: 03 Teaching hours: 03

A. Course Learning Objective (CLO)

CLO1	Remember various tools or short hand commands used in SketchUp, AutoCAD-3D, V-Ray.
CLO2	Understand to develop high er-quality, more accurate architectural designs, and models; use tools specifically built to support 3D design-creation-rendering-animation based application. Apply the knowledge of various aspects of building Services & Construction techniques into 3Ddesigns.
CLO3	Apply the knowledge of various aspects of building Services & Construction techniques into 3D designs.
CLO4	Analyze the importance of 3D design creation rendering animation-based application in the field of Architecture and construction industry.
CLO5	Evaluate 3D Modelling based design on critical thinking and problem-solving skills.
CLO6	Create3Ddesignmodels of an Architectural Project.

B. Syllabus

Course Objective:

- To train student to create 3D in Revit.
- Understand different aspects of collaborative modeling, BIM based scheduling and estimating
- will have hands-on experience with advanced BIM solutions, which support collaborative and concurrent teamwork; view of the building industry

Course Contents:

Module I: Learning detailed 3D creation using Revit (Building Informati on Modelling (BIM) software)- 3 Weeks

Introduction about BIM, Introduction to Autodesk Revit Architecture, Revit File Types, Exploring User Interface, Building Elements, starting a New Project and importing other files in Revit, Drawing Plan as per Dimension. Creating detailed 3D (Exterior & Interior) of an Architectural project and generating its Plan(s), Elevation(s) Section(s), view(s) a complete set of architectural drawings using Revit.

Module II: Learning 3D Rendering using Revit-3 Weeks

Advanced 3D creation and rendering in Revit. Material application, Lighting, Camera setting, Background, Scenic development for still 3d images and their final editing in Photoshop etc.

Module III: Learning 3D Animation using Revit-1 Week

Using Revit for developing 3D animation (walk through) for Architectural significance. Complete scenic development, material and lighting as well as camera positioning for moving images. Saving and viewing animations.

Module IV: Creating Complex forms/ shapes and printing-3 Weeks

Massing Introduction; Creating In-Place Masses using Forms, Extrusion, Revolve, Sweeps.Composing sheet and final presentation on Revit.

Importing and exporting Revit file into other software.

Module V: Learning BIM software Revit for Complex forms/ shapes-4 Weeks

Introducing a BIM Strategy document, Model management, Project team collaboration techniques, Transmittal and model issue

protocols, Basics of large model sub-division, Exercise on work sets and task allocation

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Autodesk Revit user guide/manual.
- Autodesk Revit Architecture: Eric.

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Architecture
2018-23 Batch

Total Credits = 272

STAGE -II PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credit

Studio (ST) - 1 Hr. = 1 Credit

Practical (P) - 2 Hrs. = 1 Credit

SEVENTH SEMESTER

Course Code	Course Title	Category	L/T/ST/P Per Week			Credits	Teaching hours
			L	T/ST	P		
BAR 701	Design – VII	CC	2	8	0	10	10
BAR 702	Materials & Construction Technology – VII	CC	1	2	0	3	3
BAR 703	Construction & Project Management	CC	1	1	0	2	2
BAR704	Housing &Town Planning	CC	1	2	0	3	3
Domain Elective – V (Select any One DE)							
BAR 705	Architectural Conservation	DE	1	1	0	2	2
BAR 706	Modular Construction Technology	DE					
BAR 707	Colors	DE					
Domain Elective – VI (Select any One DE)							
BAR 708	Bioclimatic Architecture	DE	1	1	0	2	2
BAR 709	Professional Presentation Techniques	DE					
BAR 710	Design of Logo &Signages	DE					
BCS 701	Communication Skills – V	VA	1	0	0	1	1
BSS 705	Behavioral Science – VII (Individual, Society & Nation)	VA	1	0	0	1	1
	Foreign Language -VII	VA	2	0	0	2	2
FLT 701	French						
FLG 701	German						
FLS 701	Spanish						
FLC 701	Chinese						
	TOTAL		11	15	0	26	26

BAR 701 DESIGN – VII

Course Code: BAR 701

Credit Units: 10 L/2-ST/8-P/0 Teaching hours: 10

A. Course Learning Outcome

CLO 1	Understanding of the theoretical and applied research methodologies and practices used during the campus design process.
CLO 2	Integrated Evaluations and Decision-Making Design Process: Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a campus design project. This demonstration includes problem identification, setting evaluative criteria, analysing solutions, and predicting the effectiveness of implementation.
CLO 3	Ability to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

B. Syllabus

Course Objectives:

- To understand Design constraints pertaining to **specialized high-rise/large span buildings requiring advanced services & structural systems.**
- To investigate design issues pertaining to Specialized buildings
- To create architectural design for specialized buildings

Course Contents:

Module I: Introduction to Specialized Buildings

Introduction to parameters that control design for specialized buildings requiring large span structures or advanced services with examples. Project introduction for studio exercises.

Module II: Case studies, Site Studies and Literature Studies

Case Studies – primary and secondary; Site and surroundings survey- location, local climatic conditions, topography, existing landscape, socio- cultural impact on design; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with conceptual block model and sketches for approval.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, integration with advanced structures or services or both, efficiency of design to be worked out and finalized.

Module V: Presentation

Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models. *An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.*

Design exercise can include projects like high-rise apartments, large span exhibition pavilions, industrial buildings/warehouses, hotels, hospitals, Transportation hubs (Bus Terminal, Railway Stations, Airports, Metro Station etc.)

Examination Scheme:

Components	A	S1	S 2	CT	EE	
Weightage (%)	05	15	20	10	20 Viva	30 EE

Text Books /Reference Books/Journals/Other Study Material:

- 'Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
- Neufert Ernst, (1970), Architect's Data, Crosby Lockwood and Sons, London.
- Chiara JD and Calender, (1983), Time Savers Standards for Building Types, McGraw Hill Book Company, New York.
- Broomer, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
- Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
- Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
- Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
- Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
- Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

- <https://www.archdaily.com>
- <http://www.architectmagazine.com>
- <https://www.architecture.com/knowledge-and-resources/resources-landing-page>

BAR 702 MATERIALS & CONSTRUCTION TECHNOLOGY – VII

Course Code: BAR 702

Credit Units: 03

L/1-T2-P/0

Teaching hours: 03

C. Course Learning Outcome

CLO 1	To understand the design intent of the architect.
CLO 2	To be able to read construction drawings.
CLO 3	To Communicate with consultants & the vendors.
CLO 4	To Develop and convert the design intent into a set of good for construction drawings.

D. Syllabus

Course Objective:

- To familiarize student with advance building materials and their construction details. Learning construction details of various building parts at advanced level.

Course Contents:

Module I: Advance material I – 2 weeks

Properties and application of different Glass and glass products: Plain, sheet, plate, textured, laminated, wired and shock resistant glass. Glass blocks, glass tiles, mirrors, heat reflecting glasses and Glass wool.

Plastics, Nylon, PVC, Bakelite, Polythene, glass fiber reinforced plastic

Module II: Basement construction – 4 weeks

Type-full/semi /2 or more basement floors.

Water proofing material and admixture.

Design and construction detailing of basement

Design and detailing of Basement Ramp, slope, drainage, lighting, ventilators and finishing etc.

Module III: Fast Pace Construction – 4 weeks

Methods, types of construction – beams & slab, waffle grid slab, drop beam and slab, flat slab, lift slab, cast - in-situ service and stair core – cross wall and box frame construction.

Module IV: Elevators and Escalators – 4 weeks

Elevators types and construction detail, Details of lift section, machine room equipment lift well and lift pit. Escalators: types and construction detail, Travellators and other modern modes of vertical movement.

Exercises: field trip and report, preparation of drawings on above topics

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Elements of Structure by Morgan
- Structures in Architecture by Salvadori
- Building Construction by Mackay WB Vol. 1-4
- Construction Technology by Chudley Vol. 1-6

BAR 703 CONSTRUCTION & PROJECT MANAGEMENT

Course Code: BAR 703

Credit Units: 02

L/1-ST/1-P/0

Teaching hours: 02

E. Course Learning Outcome

CLO 1	To remember the project management techniques for handling construction projects.
CLO 2	To apply knowledge of charts & critical path networking for planning the construction activities.
CLO 3	To analyse the resource allocation requirements for various construction projects.
CLO 4	To formulate project schedules & plans for typical civil construction projects.

F. Syllabus

Course Objectives:

- To introduce the students about need of CPM to handle complexity of design & construction; also the role of an architect in effective project management to handle cost overruns, timelines & quality etc.
- To familiarize students with various simple construction planning techniques such as bar charts & networking diagrams.
- To make students familiar with best construction practices, project scheduling & sequencing, equipment's & technologies etc.

Course Contents:

Module I: Introduction - 2 weeks

Defining a Project; Phases involved in Project life cycle i.e. from inception phase to the Post-construction phase, Project Appraisal, Project Delivery Methods, Various stakeholders in construction industry and their roles and responsibilities, Introduction to Project Management Knowledge Areas.

Module II: Construction Planning & Scheduling - 3 weeks

Preparation of Work Break Down Structures and Sequencing of Activities, Resource and Duration Estimating, Preparation of Schedules (using CPM, PERT, Gantt charts, precedence diagrams, etc.), Monitoring and controlling the schedules, Computer Applications for preparing and managing Schedules, Preparation of schedule for completion / submission of deliverables related to their current design exercise.

Module III: Cost & Resource Management - 3 weeks

Functions of Financial or Cost Management, The Concept of Time Value of Money, Techniques of Capital Budgeting, Cash Flow Statement, Preparation of cost baselines and their analysis & Earned Value Management.

Organizing work, staffing, delegation and decentralization, Human resource management, Customer Relationship Management (CRM), & Entrepreneurship Issues in Indian Construction Industry.

Module IV: Quality & Safety Management - 3 weeks

Evolution of Quality Management, quality assurance & control and ISO requirements, Introduction to concept of quality in building design, construction and project management, Tools for Quality Management, Introduction to construction site conditions in India, Impact of safe working environment on HR performance and their productivity, Legal, contractual and other guidelines for construction safety.

Module V: Tendering & Contract Administration - 3 weeks

Types of Tenders & Contracts, Inviting a Tender, Conditions implied on a Tender, Pre-qualification of contractors, Preparation of contract documents, Contract Conditions, Evaluation of contract bids and

Award, Arbitration & Alternative Dispute resolution mechanisms.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- IS 15883: Construction Project Management – Guidelines.
- A Guide to the Project Management Body of Knowledge by Project Management Institute, USA.
- Construction project management: a practical guide to field Construction Management by S. Keoki Sears, Richard Hudson Clough, Glenn A. Sears.
- CPWD, MES, FIDIC, JCT, ADB, World bank, etc.: General & Special conditions of contract and standard operating procedures.
- Contracts and their Management by B. S. Ramaswamy.

Online Resources

- <https://www.projectmanager.com/blog>
- <http://www.smartsheet.com>

BAR 704 HOUSING & TOWN PLANNING

Course Code: BAR 704

Credit Units: 03

L/1-ST/2-P/0

Teaching hours: 03

A. Course Learning Outcome

CLO 1	Understand and remember the fundamental concepts, definitions, and standards of town planning by learning the evolution and contemporary guidelines in practice.
CLO 2	Evaluation of the various planning theories, works of notable town planners and outstanding examples, and the different stages of the contemporary planning process.
CLO 3	Experience of the different stages of contemporary planning processes
CLO 4	Creation of reports and thematic maps for land use and master plans

B. Syllabus

Course Objectives:

- To Introduce the elementary science of town planning principles
- To familiarize students with evolution and development of town planning through history
- To familiarize the students with various aspects, issues and considerations related to housing design and community planning.

Course Contents:

Module I: Introduction to Town Planning - 3 weeks

Introduction to Human settlements, principles of human settlements in ancient, medieval, modern times. History of Town Planning and Urban design, Concept of Town planning, Evolution of settlements, form & pattern through historical process of development. Study of various City plan patterns viz; Linear, Radial and Grid Iron layout patterns, New modern ways of Planning, Socio-economic dynamics of urbanization. Industrial revolution and modern city, Garden City, Satellite town, Democratic city. Case studies of some recent planned cities like New Delhi, Canberra, Brazillia, and Chandigarh.

Module II: Planning Process - 2 weeks

Methodology of conducting town planning, surveys and analysis of data collected, use of G.I.S. site planning & urban development, Study of traffic characteristic ; Composition, speed, volume and direction of movement. Urban road systems and geometry, Capacity of roads and intersections, Road network & sections, climate, service & zoning, city scape & street scape.

Module III: Town Planning Theories- 3 weeks

Planning theories of the twentieth century, Current theories on physical planning. Planning theories of Sir Patrick Geddes, Kevin Lynch, Clarence Perry, Frank Lloyd Wright, Ebenezer Howard, Le Corbusier, Soria Y Mata, Lewis Mumford. Study of garden city, radiant city and Utopian concept. Neighborhood planning, elements of neighborhood, definition, formation, need & relationship with the town plan.

Module IV: Planning Standards - 2 weeks

Formulation of planning standards for land use, density, road and various community facilities at the local and town level. Study of Urban development plan formulation & Implementation (UDPFI) guidelines; Detailed understanding of the latest planning and housing acts and other planning regulation

Module V: Introduction to Housing - 2 weeks

Definition of house and housing. Housing and its importance in Architecture; Housing and its relationship with Neighborhood and city plan. Various aspects and issues related to housing.

Type of dwelling structures, Built form, socio-psychological and aesthetic implications and suitability of different types of dwellings, detached, semidetached houses, Flats and multistoried classification according to the type of access-corridor, gallery, direct grouped, combination of these access types. Definition of each of the above types, their suitability, advantages, disadvantages and social, economic and aesthetic implications. Sub-division techniques; proportions of plots and need of roads. Garages and parking areas. Housing situation in India, Various Govt. programmes

Module VI: Housing Design and Site Planning- 2 weeks

Criteria for site selection and housing layout considerations, Considerations of physical characteristics of site, climate and orientation, Importance of orientation and climatic factors in housing design. Location factors, legal and financial factors, norms and standards for dwelling community and neighborhood factors, shopping, education, health and recreational facilities.

Importance of topography in housing design. Problems inherent in steeply sloping sites, economic and aesthetic implications of the building along and against the contours, silhouette problems on a sloping site. Effects of plantation in the background and front of buildings on a sloping site. conservation of beauty spots, Roads in residential areas.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Principles and practice of Town and Country Planning, Kebble
- Urban and Regional Planning – A System Approach, J. B. McLoughin Town Planning in its social context, G. Cherry
- Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century by Peter Geoffrey Hall
- The Development of the Planning Process, J. F. Amos
- Ekistics: An Introduction to the Science of Human Settlements, C. A. Doxiadis Town Planning in Ancient India, BinodeDutt
- Urban Pattern, Arthur B. Gallion
- An Introduction to Housing layouts: Greater London Council
- Housing: J. Macsai.
- Low cost housing in developing countries by G. C. Mathur Laurie Baker by Gautam Bhatia

BAR 705 ARCHITECTURAL CONSERVATION

Course Code: BAR 705 Credit Units: 02 L/1-T/1-P/0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and ethics of the field of Architecture Conservation. Also, learn about the different aspects of buildings and their causes of decay.
CLO 2	Learning how to evaluate the value of a heritage site and the different approaches taken for architectural conservation.
CLO 3	Apply the learning of the divergent approaches of conservation in comprehending the world wide examples of architectural conservation.
CLO 4	Develop reports and assignments containing write-ups, and sketches to express their understanding of conservation projects after their site visits.

B. Syllabus

Course Objective:

To familiarize the students with various aspects of Architectural Conservation. To understand the role of a conservationist architect.

Course Contents:

Module I: Introduction

Necessity, Values and Ethics, Principles and Scope of architectural conservation.

Module II: Methodology of Conservation

Understanding basic principles of conservation such as (a) Prevention (b) Preservation (c) Conservation (d) Restoration (e) Rehabilitation (f) Reproduction (g) Reconstruction (h) Adaptation

Module III: Structural Aspects of Buildings

Understanding Structural elements: beams, arches, vaults and domes; trusses and frames; piers, columns and foundations etc. accessing their losses and ways to conserve the same for longer life of building.

Module IV: Causes of Decay in Buildings

Natural and human factors; Environmental influences – thermal effect, corrosion and oxidation; Disasters; Botanical and biological causes. Accessing the extent of decay and devising the means to recover.

Module V: Building Repairs

Structural repairs, carpentry; Repairs of plaster work, paint work; Glass and mosaic surface repairs; Repair of excessive moisture etc. Understanding fundamentals of repairs of conservation for different purposes.

Module VI: Professional Practice

Investigation, documentation and analysis and preparation of inspection reports, Preventive maintenance; Legal provisions; Management and phasing, presentation of heritage buildings. Cost estimation and cost control Rehabilitation and adaptive use of buildings.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

- Conservation of Buildings by J. H. Harvey
- An Introduction to Conservation by B. M. Feildon

References:

- A Critical Bibliography of Building Conservation by J. F. Smith.
- The Conservation of Historical Buildings by B. M. Feildon

BAR 706 MODULAR CONSTRUCTION TECHNOLOGY

Course Code: BAR 706

Credit Units: 02

L/1-T/1-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Analyse productivity and economics in modular construction techniques.
CLO 2	Implement modular construction practices.
CLO 3	Understand the limitations of modular construction techniques.
CLO 4	Understand reliable proportioning concepts in modular construction techniques.

B. Syllabus

Course Objectives:

- The course of Modular Construction is aimed at focusing on the study of use of pre-fabrication systems, systems developed by CBRI and other agencies, basic modular planning and the proportioning systems and using the skills in designing of buildings. In today's context when various components of building construction happens off site, it is important to design as per the units/modules, repetition of which gives a modularly coordinated design and helps in easy and fast construction. Thus, the student will be able to demonstrate knowledge of building construction and management with application of Modular coordination and pre- fabrication concepts in their design.

Course Contents:

Module I: Module Orientation to Modular Construction - 1 weeks

Defining the concept of Modular Construction

Introduction to system building, mechanization of production of different parts and components of building types of building sizes. Review of market to know availability of modular materials

Module II: Advantages & disadvantages of Modular coordination- 2 weeks

Classification of prefabrication systems developed CBRI, skeletal system, Brick panel system, non-structural elements, deviations in prefabrication.

Manufacturing of modules and their transport to the site.

Prefabrication; advantages, disadvantages and relevance in Indian context.

Shuttering and construction system for Use of RMC modular spaces and planning coordination requirements. of fixtures and components.

Module III: Modular planning of an interior space- 2 weeks

Introduction to modular practice, basic modular planning and component Module, modular number pattern introduction. System of proportion-introduction of various systems and comprehensive industrialized building-introduction and application.

Development of planning Module and structural Modules for various types of buildings in India.

Module IV: Review of works of masters on modular construction such as Le Corbusier etc. and presentation of areport.- 1 weeks

Module V: Mivan Shuttering-1weeks

Construction requirements for modular construction design of building as per the availability of interior modular component such as tiles/ kitchen cabinets etc. to avoid wastage. Shuttering and scaffolding requirements. Introduction of 'MIVAN' shuttering system for making multiple housing units and its economics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Duffy, F, Cave, C, Worthington, J. – Planning office space. Architectural Press, London,1976.
- Duffy, F. – New Office.Conran Octopus, London, 1997.
- Meel, J. V.- The European office: Office design and national context. 010 Publishers, Rotterdam, 2000.
- Harris, D. A. – Planning and designing the office environment. Van Nostrand Reinhold, New York, 1981.
- Neufert P, -NeufertArchitects'Data- Third Edition by Blackwell Science Ltd. Oxford 2000

BAR 707 COLORS

Course Code : BAR 308

Credit Unit : 02

L/1-T/1-P/0

Teaching Unit : 02

A. Course Learning Outcome

CLO 1	The impression of a color and the message it conveys is of utmost importance in creating the psychological mood or ambiance that supports the function of a space.
CLO 2	Exploring colour schemes and their application in a visual composition and in architectural forms and spaces
CLO 3	Theory and application of colours

B. Syllabus

Course Objective:

Learning the use of colours in Architecture. Understanding the impact of colours on human being and making its efficient use in architecture, its component and various products being used in buildings.

Course Contents:

Module I:

Study of classification of colours with different hues, values, and shades. Colour composition and properties. Colour wheel showing primary, secondary & tertiary colours. Chart showing Tints & tones of various colours, Colour combinations

Module II:

Exploring Colour Schemes and its application on Architectural Forms & spaces : Assignment on Colour shall be aimed at developing the skills to create Visually pleasing Colour Schemes based on principles of Harmony and Contrast and degree of Chromatism.

Module III :

Colour as an expressive element in architecture emphasize the character of a building and create harmony and unity, or it can be deliberately contrasting to enliven or emphasise. It may affect the way in which people respond to their surroundings and can enhance a mood of calm or elation.

Module IV:

Approaches to colour in architecture and design. The use of colour in architecture More Than Just Decoration. Examples of colour uses by masters and making a report.

Module V :

Color Psychology , Neuropsychological Aspects, Architectural Environments, Visual Ergonomics and Color. Sociological aspects related to different colours

Exercise: Parallel and angular exterior perspective views of objects of buildings in different colours medium rendered with appropriate colours showing shades and shadows. Effect of colour in relief compositions.

Students may be advised to use colours in interior and exterior rendering of different type shapes in different type shapes in different mediums to have firsthand experience.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Architectural Rendering Albert &Habe How to paint & draw Jaxtheimer
- COLOR, Environment, & Human Response by Frank H. Mahnke
- Color-Communication in Architectural Space by Meerwein, Rodeck, Mahnke
- The role of colour in architecture by James A M Bell.

BAR 708 BIOCLIMATIC ARCHITECTURE

Course Code: BAR 708

Credit Units: 02

L/1-T/1-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	design of buildings and spaces based on the local climate to provide thermal and visual comfort, using solar energy and other environmental sources
CLO 2	This course will introduce the students to the fundamentals of bioclimatic architecture and its main design principles.
CLO 3	Identified the variables of bioclimatic architecture principles as sun shading devices, passive cooling system, thermal mass strategies and ventilation strategies.

B. Syllabus

Course Objectives:

The aim of the course is to introduce the students to bio-climatic strategies as an important aspect of sustainable design, to understand in depth the factors affecting thermal comfort and creation of comfort conditions and the building physics associated with it. Aims to introduce concepts of smart and sustainable building design which relates to the respective climatic zone and to provide designers information on how to best to respond to the local climatic context.

Course Contents:

Module I: A global challenge to sustainable development – Climate change

Global, macro and micro level climate, Earth's energy balance, Climate changes – current scenario, International and national context, policy and legislative drivers for adaptation action, Plan Approaches for Sustainable Development and Lower Carbon Strategies, Managing Climate Change Challenges on Development

Module II: Elements of climate and analysis of climatic data

Elements of climate and its quantification, Factors affecting climate, Climatic zones and their characteristics, Implications of climate on building design, Urban climate, Microclimate, Climatic data and its interpretation, Tools for analyzing weather data, climatic aspects of human settlement, Designing an Adaptation Initiative, Tools and Methodologies for Designing an Adaptation Initiative.

Module III: Climate zones and criteria of building design

thermal comfort, heat transfer, thermal insulation and thermal control in buildings - Energy balance of human and built environment, Adaptive model of thermal comfort and its application to sustainable design of buildings. **Sustainable techniques adopted in traditional buildings** - Implementation of climate change adaptation through design and development, building planning and designing – Integrated Sustainable building design Tools for visualizing building energy implications of climates

Module IV: Bio Climatic Design Techniques

Designing for climate change, bio climatic design concepts and techniques – different stages, solar architecture, renewable energy, sustainable architecture, passive and active systems, for cooling heating and lighting, for site planning, building design, landscaping

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Contemporary Processes in Architecture – by Ali Rahim
- Digital Cities AD: Architectural Design – Prof. Neil Leach
- Performative Architecture : Beyond Instrumentality – by BrankoKolarevic
- Versatility and Vicissitude: Performance in Morpho-Ecological Design- by Michael Hensel
- Biosensors for environmental monitoring – by Ursula Bilitewski, Anthony Turner
- Biosensor principles and Application – by LoicJ.Blum, Pierre R.Coulet
- Digital Tectonics – Prof. Neil Leach
- Contemporary techniques in Architecture – by Ali Rahim

BAR709 PROFESSIONAL PRESENTATION TECHNIQUES

Course Code: BAR709

Credit Units: 02

L/1-T/1-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To introduce basis language skills for oral professional communication that enables effective technical and professional conversation.
CLO 2	To introduce the concept of tonality of the written word as a basic value for selection of terms and their composition in non-spoken forms of professional communication.
CLO 3	To help student in developing design portfolio of their own academic projects.

B. Course Learning Outcome

Course Objective:

- To introduce basis language skills for oral professional communication that enables effective technical and professional conversation.
- To introduce the concept of tonality of the written word as a basic value for selection of terms and their composition in non-spoken forms of professional communication.
- To orient students towards developing skills for an effective communication of his/her ideas, as well as to profess the values and ethics of the design profession especially with regards to interaction with people.
- To help student in developing design portfolio of their own academic projects.

Course Contents:

Module 1: Introduction to Architectural presentation

Definition of an Architectural Presentation; Stakeholders in an Architectural Project; Process of architectural design development and need of communication; Technical meetings; Professional presentation; Various modes of presentation

Module II: Professional Communication I-3 weeks

Dimensions of communication (Formal and Informal, upward, downward etc.; Types of professional communication, Letters, E-mail, Short messages, reports Planning, composing, and writing, Guide to effective writing.

Writing a short Research Paper/ report. This may include reportage of readings, site visits, field trips, conversations with experts and public, etc.

Module III: Professional Communication II-3 weeks

Importance of conversation, definition, process and feedback in communication, cultural influences as barriers to effective communication, features of effective communication . Listening and responding, Modes of one to one communication i.e. personal meetings, video conferencing, etc.; Ethics related to various forms of communications.

Planning and conducting conversations, interviews, preparation and rehearsal of oral statements for presentations, body language, effective listening, and telephonic communication.

Module IV: Introduction to Portfolio Design-5 weeks

Multiple forms of representation, written and visual, students will explore methods that facilitate describing and representing their design work. Understanding relationship between form and content, and more specifically, the understanding of particular modes of representation as different filters through which their work can be read. Recordings of materials, assembly, customization, reproduction techniques; graphic

design and composition; The page layout – organization and sequencing of project documentation. The traditional hard copy portfolio and the digital portfolio.

Examination Scheme:

Components	A	CE	C T	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Raman, M. & Sharma, S., Technical Communication : Principles and Practice, 2ndEd. Market, Mike, 2012. Technical Communication
- Rizvi, M. Ashraf, Effective Technical Communication, Anderson, Paul V., Technical Communication : A Reader- Centred Approach, 6 Ed.

BAR710 DESIGN OF LOGO & SIGNAGE'S

Course Code: BAR710

Credit Units: 02

L/1-T/1-P/0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Solve complex design problems using creative thinking and analytical skills
CLO 2	Develop and demonstrate their understanding and skillful use of the elements and principles of visual design
CLO 3	Gain skill to use the digital tools as a powerful means of communication for creation, modification & presentation
CLO 4	Learn ways to apply aesthetic sensibilities into their works and explore ways to balance between formal theories with practical applications.

B. Syllabus

Course objective:

- To acquaint the students with graphic design of symbols, logos and signage
- To familiarize the students towards its application in the field of architecture and built-environment globally

Course contents:

Module I: Introduction

Definition of Graphic design and its specialized industries; History of Visual communication, pivotal movements & designers that led to the development of Graphic Design industry dealing with Symbols, Logos and Signage as witnessed today.

Module II: Visual Design Fundamentals

Visual design elements and principles, theory of graphics and visualization, Colour theory, Typography and Photography;

2D and 3D visual elements for representation and transformations.

Module III: Design Process – Symbols and Logos

Creative thinking processes and methods; Typology fundamentals; designing, narrating and concept evolution for symbols and logos; Designing fundamentals of words, images, aesthetics, identity and expressions; Case Studies of famous examples of Logo and Symbol design;

Module IV: Design Process - Signage

Understanding importance of signage as per the building typologies; impact of commercial signage on users; ergonomics of informative signage; sign regulations, harmony with contextual urban design, architecture and environment, Design process and Case Studies of key informative and commercial signage.

Module V: Technology

Commercial Printing, materials & techniques for signage fabrication and erection, Signage lighting, Use of Graphic design softwares for designing symbols, logos and signage.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Chris Calori, David Vanden-Eynden, Signage and Wayfinding Design: A Complete Guide to Creating Environmental graphic design system, 2015 wiley
- Lisa Silver, Logo Design that Works: Secrets for Successful Logo Design, 2001, Rockport Publishers
- Michelle Galindo, Signage Design, 2011, Braun
- Edo Smitshuijzen, Signage Design Manual, 2007 Prestel Pub

BCS 701 COMMUNICATION SKILLS - VII

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS701	1:0:0	1	1

D. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Investigate their personal strengths and insights to be revealed in a Formal Setup of Communication.
CLO 2	Create right selection of words and ideas while choosing the appropriate channel of formal communication
CLO 3	Apply acquired knowledge with the appropriate selection of channel of formal communication.
CLO 4	Develop and empower self with the ease of using appropriate medium of communication.

B. SYLLABUS

Topic
Resume-3 (Revision/Updating)
Interview-3 (Mock Sessions-Technical & CRC)
Final-5 (Overall Revision)
Video & Conference Call Etiquettes (Virtual Interviews)
Formal SMS Drafting

EXAMINATION SCHEME:

Components	Hard Copy of the Resume	Video Recording of self shot introduction	Hand Written Detailed Answers on self-understanding of questions Part 1	Hand Written Detailed Answers on self-understanding of questions Part 2	Self Drafted SMS on paper	Attendance
Weightage (%)	20	20	20	20	15	05

SUGGESTED READINGS

- Raman Prakash, Business Communication, Oxford
- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria&Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008. Print
- New International Business English, Jones/Alexander, Cambridge

BEHAVIOURAL SCIENCE – VII (INDIVIDUAL, SOCIETY AND NATION)

Course Code: BSS705

Credit Units: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) should be able to:

1. Recognize their personality and individual differences and identify its importance of diversity at workplace and ways to enhance it.
2. Recognize effective socialization strategies and importance of patriotism and taking accountability of integrity.
3. Recognize different types of human rights and its importance.
4. Identify Indian values taught by different religions.

Identify long term goals and recognize their talent, strengths and styles to achieve them

Course Objective:

This course aims at enabling students towards:

- Understand the importance of individual differences
- Better understanding of self in relation to society and nation
- Facilitation for a meaningful existence and adjustment in society
- Inculcating patriotism and national pride

Course Contents:

Module I: Individual differences & Personality

Personality: Definition & Relevance

Importance of nature & nurture in Personality Development

Importance and Recognition of Individual differences in Personality

Accepting and Managing Individual differences

Intuition, Judgment, Perception & Sensation (MBTI)

BIG5 Factors

Module II: Managing Diversity

Defining Diversity

Affirmation Action and Managing Diversity

Increasing Diversity in Work Force

Barriers and Challenges in Managing Diversity

Module III: Socialization

Nature of Socialization

Social Interaction

Interaction of Socialization Process

Contributions to Society and Nation

Module IV: Patriotism and National Pride

Sense of pride and patriotism

Importance of discipline and hard work

Integrity and accountability

Module V: Human Rights, Values and Ethics

Meaning and Importance of human rights

Human rights awareness

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS-**Journal of Success; **HA-**Home Assignment; **P-**Presentation; **V-**Viva; **Q-** Quiz; **FC-** Flip class; **MA-** Movie Analysis; **CS-** Case study; **A-**Attendance

Text & References:

- Davis, K. Organizational Behaviour,
- Bates, A. P. and Julian, J.: Sociology - Understanding Social Behaviour
- Dressler, David and Cans, Donald: The Study of Human Interaction
- Lapiere, Richard. T – Social Change
- Lindzey, G. and Borgatta, E: Sociometric Measurement in the Handbook of Social Psychology, Addison – Welsley, US.
- Rose, G.: Oxford Textbook of Public Health, Vol.4, 1985.
- Robbins O.B.Stephen;. Organizational Behaviour

Course Learning Objective:

- Students will hone advanced language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of advance level.
- Students will be able to communicate with complex sentences.
 - To express the obligation
 - To suggest and give the advices
 - To speak about the recycling
 - To understand an interview and a project of research
 - To make a survey
 - To prepare for the oral communication
 - To prepare the posters
 - To understand and give the suggestions

Course Contents:

Unité 5 (Leçon 19 and 20) and Unité 6 Les examens et le stage Page : 122-143 Leçons 19, 20 & 21

Contenu Lexical:

1. Les déchets, le recyclage et le tri
2. Les emballages
3. L'informatique
4. L'ordinateur et ses périphériques
5. Les revisions
6. Les couleurs

Contenu Grammatical:

1. Les pronoms compléments d'objets directs (COD)
2. Le pronom <<on>>
3. Il faut/devoir
4. L'impératif
5. L'expression de la quantité
6. <<e train de>>/<<venir de>>
7. Le pronoms <<y>>

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionnaire, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

Foreign Language German

Semester 7: Course Code: FLG 701

Credit units : 02

Course Learning Objective:

- Students will hone advanced language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of advance level.
- Students will be able to communicate with complex sentences.

After successful completion of this semester, students will be able to:

describe their holidays or vacations (perfect tense)
talk about past events – What did you do yesterday? etc.
understand weather reports
express their opinion about weather.

Course Content:

Vocabulary:

Vacation places like sea shore, mountains etc.
Adjectives to describe weather
Seasons
Weather conditions

Grammar:

Perfect tense of both regular and irregular verb
Prepositions with places like sea, mountains, island etc.
Use of impersonal subject pronoun for describing weather: es

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: Themen Part 1

References: **Studio D A1** by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1 - Deutsch –Englisch**, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

Foreign Language Spanish

Semester 7: Course Code: FLS 701 Credit units : 02

Course Learning Objective:

- Students will hone advanced language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of advance level.
- Students will be able to communicate with complex sentences.
- To be able to give order, command and make request. Formal and Informal
- Use of imperative in different types of situation: In a bar/ Classroom/ Market etc.
- To express prohibitions and permissions
- To be able to talk about actions in past indefinite tense
- Reading texts about Sports in Spain
- To be able to talk about past events – What did you do yesterday? Etc

Course Content:

Vocabulary:

Vocabulary related to bar, pub, restaurant.

Grammar:

Introduction of imperative in all forms

Affirmative and Negative Imperatives: Tú and Usted

Imperatives with irregular verbs: Poner, venir, hacer etc.

Prohibitions and permissions: Se puede/ no se puede

Imperative with direct object pronouns

Introduction of Preterito indefinido- Verbs conjugations

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group Didascalia, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Architecture
2018-23 Batch

Total Credits = 272

STAGE -II PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credit

Studio (ST) - 1 Hr. = 1 Credit

Practical (P) - 2 Hrs. = 1 Credit

EIGHTH SEMESTER

Course Code	Course Title	Category	L/T/ST/P Per Week			Credits	Teaching hours
			L	T/ST	P		
BAR 801	Practical Training	NTCC	0	0	0	21	0

BAR 801 PRACTICAL TRAINING

Course Code: BAR 801

Credit Units: 21

L/0-T/0-P/0

Teaching hours: 00

A. Course Learning Outcome

CLO 1	To make students acquire the practical experience which will concoct them for their likely responsibilities, immediately after qualifying B. Arch. Course.
CLO 2	Students are expected to learn with the realm of architectural discipline ranging from generation of idea, preparation of drawings to the final execution of design on site.

B. Syllabus

Course Objectives:

- The intent of the 'Professional Training' is to make students acquire the practical experience which will concoct them for their likely responsibilities, immediately after qualifying B. Arch. Course.
- Students are expected to learn with the realm of architectural discipline ranging from generation of idea, preparation of drawings to the final execution of design on site.

Course Contents:

At the end of the 7th Semester, and as a part of the Academic Curriculum, the students of the **Bachelor's of Architecture** are

required to undergo a compulsory **Practical/Field Training** for a period of **6 Months**.

Module I: Nature of works expected during the training

To the following but not necessarily containing all-

- Preparation of:
 - Sketch designs, presentation drawings etc.
 - Municipal drawings according to the byelaws.
 - Workings drawings and details.
 - Estimates, bill of quantities & specifications.
- Discussions with:
 - Clients
 - Structural Consultants
 - Services Consultants
- Inspection and management of site:
 - Preparation of Models, perspectives and photographs
 - Preparation of Reports, progress charts etc.
 - Other administrative works

Module II: Content of Training Report

Following contents will be followed for both intermediate and final submissions:

After completion of practical training, the trainee is required to submit the following in a hard copy. Training report should contain:

- Office profile
- Listing of current project being undertaken
- Project wise details of work undertaken by student
- Trainee's own assessment and experience about office, working, projects etc.

All projects listed in the report should compulsorily correspond with the list of projects mentioned in the monthly log. Copies of drawing shall be attached as annex to support the content of the report. The drawing prints shall be obtained with the permission of the office and stamped/sealed by the 'Supervisor'/Head of the firm/office.

Assessment:

The Practical/Field Training will be supervised by the faculty from time to time by making regular visits to the places of the training to get a first-hand feedback about the students' work & discipline etc. In addition,

the office will be requested to submit a confidential report about discipline/behavior/punctuality, which will be part of marking system.

Submission

At the end of Practical/Field Training each student will submit a portfolio* of his/her work along with the aspects which the student has learnt to enhance his/her professional capability.

The portfolio will be assessed by an internal Jury where each student will be given time to display, present & conclude the experience gained.

***: A portfolio shall include written report, blue print/photocopies of the practical work done and or photographs of the work executed during this period.**

Note: The Practical/Field Training will be organized by the School; however a student will be allowed to choose a place of his/her preference for which prior approval of the School will be required.

Examination Scheme:

Components	S	VIVA
Weightage (%)	50	50

NINTH SEMESTER

Course Code	Course Title	Category	L/T/ST/P Per Week			Credits	Teaching hours
			L	T/ST	P		
BAR 901	Architectural Design – VIII (Urban Design)	CC	2	8	8	14	18
BAR 902	Materials & Construction Technology – VIII (Advanced Building Construction)	CC	2	2		4	4
BAR 903	Housing	CC	1	1		2	2
BAR 904	Dissertation	CC		1	2	2	3
Domain Elective – IX (Select any One DE)							
BAR 905	Product design	DE	1	1	-	2	2
BAR 906	Cost Effective Architecture	DE					
BAR 907	Prefabrication	DE					
	TOTAL		6	13	10	24	29

NINTH SEMESTER

BAR 901 Architectural Design – VIII (Urban Design Studio)

Course Code: BAR 901

Credit Units: 14

Teaching hours: 18

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and need of the urban design. Learn the principles and concepts of the urban design. Appreciate the requirements of urban design guidelines.
CLO 2	Evaluate urban design concepts applicability in different-different contexts by studying cases.
CLO 3	Apply the learning of the previous semester and urban design to evolve a unique. Concept for a real urban design project.
CLO 4	Evolve specific urban design guidelines, policies and recommendations for the project.
CLO 5	Create an urban design proposal for the given project in terms of presentation drawings, 3D model; 3D views etc as per the given requirements.

B. Syllabus

Course Objective:

Student shall learn the urban design concept and shall learn to design on the site taking the offsite consideration. On the site they shall learn to design taking the surroundings and areas beyond the boundaries also consideration.

Course Contents:

Module I: Introduction to Urban Design concept

Introduction to urban design concepts and their relation with the Architecture.

Module II Case studies

Students shall visit live site, take photographs and measurements and learn to identify landmarks, vista etc. Basic urban design element and present a report.

Module III: Development regulations

Understanding of development regulations, Master Plan and other legal restrictions and making presentations.

Module IV: Process of urban design

Learning the process of urban design, delineation of the study area, making detailed analysis, mapping the area, identifying the important onsite and offsite elements, heritage structures and working out inferences.

Module V : Design formulation

Working out the alternative proposals of the area delineated in module IV. Preparation of vision statement, analyzing the proposal and working out detailed design giving the necessary interventions.

Module VI: Design Programme :

Phasing out the development, preparing and comparison of existing situation to the proposed images, possibilities of development

Design exercise can include urban development/ redevelopment schemes, Neighborhood unit or similar assignments. The design shall include detailing of one of the building. Students shall submit Presentation drawings and a model with views

Design Problem shall include application of courses taught in previous semester such as material & Constructions technology and Building services.

Components	A	S1	S2	C T	Viv a	EE
Weightage (%)	05	15	20	10	20	30

Examination Scheme:

Text & References:

Text:

- Emerging concepts in urban design space design – Broadban, G
- Image of the city - Lynch K.
- Urban Pattern – S. Gallion
- A Pattern Language – Angel King Fiksdahi
- Urban Planning, Theory and Practices- M.Pratap Rao

References:

- Site Planning- K. Lynch
- Site Planning by Simonds

BAR 902 Materials & Construction Technology – VIII (Advanced Building Construction)

Course Code: BAR 902

Credit Units: 04

Teaching hours: 04

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and need of the urban design. Learn the principles and concepts of the urban design. Appreciate the requirements of urban design guidelines.
CLO 2	Evaluate urban design concepts applicability in different-different contexts by studying cases.
CLO 3	Apply the learning of the previous semester and urban design to evolve a unique. Concept for a real urban design project.
CLO 4	Evolve specific urban design guidelines, policies and recommendations for the project.
CLO 5	Create an urban design proposal for the given project in terms of presentation drawings, 3D model; 3D views etc as per the given requirements.

B. Syllabus

Course Objective:

Understanding different technology used in latest construction methods and Studying modern construction techniques.

Course Contents:

Module I: Introduction to Pre-Fabrication Technology

Introduction to the topic and its relevance in the construction field. Aspects such as – construction terminology, types, Applications, Detailing. Site visits and material collection from Pre-Fabrication manufacturing units and live examples.

Module II: Introduction to Pre-Stressed Technology

Introduction to the topic and its relevance in the construction field. Aspects such as – construction terminology, types, Applications, Detailing. Site visits and material collection from Pre-Stressed manufacturing units and live examples.

Module III: Advanced Glazing systems

Structural Curtain wall –Design, detailing and specifications, Staircase and railing in glass-details of junction fixing etc. Market survey of available materials, technology and hardware. Students shall

Module IV: Advanced Architectural details

Advance details of grooves, beading and patterns in furniture and fixtures and their continuity, understanding the use of modern fixtures and hinges as applied to various building material. Students shall prepare details of some of works done by them in the previous years.

Module VI: Miscellaneous metals such as copper, stainless steel etc. and their advanced application in buildings

such as cladding, piping etc along with three detailing of their construction..

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

- Building Construction – Materials by M.V. Naik
- Strength of Materials – Khurmi R. S.
- Applied Mechanics and Strength of Materials – Khurmi R. S.
- Civil Engineering Handbook – P.N. Khanna
- R.C.C. Design – Khurmi, Punmia, Sushil Kumar
- Design of Steel Structure – Negi
- Structure in Architecture – Salvadori and Heller

References:

- Elements of Structure by Morgan
- Structures in Architecture by Salvadori
- Building Construction by Mackay WB Vol. 1-4
- Construction Technology by Chudley Vol. 1-6
- Elementary Building Construction by Mitchell
- Structure and Fabric by Everet

BAR 903 Housing

Course Code: BAR 903

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To define basic elements of housing, interrelationships between human needs and housing subsystems,
CLO 2	To outline various housing policies and programmes; zoning regulations and development norms
CLO 3	To understand the concept of demand and supply in housing
CLO 4	Feasibility analysis of housing project through pre design calculations & critical appraisal of existing housing schemes
CLO 5	To develop suitable design of a neighbourhood based on the basis of knowledge acquire.

B. Syllabus

Course Objective:

To familiarize the students with various aspects, issues and considerations related to housing design and community planning.

Course Contents:

Module I: Introduction to housing

Definition of house and housing. Housing and its importance in Architecture; Housing and its relationship with Neighborhood and city plan. Various aspects and issues of housing.

Module II: Types of dwellings

Type of dwelling structures, Built form, socio-psychological and aesthetic implications and suitability of different types of dwellings, detached, semidetached houses, Flats and multistoried classification according to the type of access-corridor, gallery, direct grouped, combination of these access types. Definition of each of the above types, their suitability, advantages, disadvantages and social, economic and aesthetic implications. Sub-division techniques; proportions of plots and need of roads. Garages and parking areas.

Module III: Energy-efficient and cost effective housing

Cost reduction in housing: techniques and related issues, alternative building materials. Energy efficient housing.

Module IV : Govt Policies and intervention Housing

situation in India, Various Govt programmes

Module V: Local Considerations

Importance of topography in housing design. Problems inherent in steeply sloping sites, economic and aesthetic implications of the building along and against the contours, silhouette problems on a sloping site. Effects of plantation in the background and front of buildings on a sloping site. conservation of beauty spots, Roads in residential areas.

Module VI: Housing Design and Site Planning

Criteria for site selection and housing layout considerations, Considerations of physical characteristics of site, climate and orientation, Importance of orientation and climatic factors in housing design. Location factors, legal and financial factors, norms and standards for dwelling community and neighborhood factors, shopping, education, health and recreational facilities.

Examination Scheme:

Components	A	CE	CT	EE
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Weightage (%)	05	25	20	50
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Text & References:

Text:

- An Introduction to Housing layouts: Greater London Council
- Housing: J. Macsai.
- Low cost housing in developing countries by G. C. Mathur
- Laurie Baker by Gautam Bhatia

References:

- Housing: an environment for living, Keiser, Marjorie Branin
- Housing and Buildings in hot-humid and hot-dry climate.

BAR 904 Dissertation

Course Code: BAR 904

Credit Units: 02

Teaching hours: 03

A. Course Learning Outcome

CLO 1	Identification of research area and preparation of research proposal
CLO 2	Literature study and data collection
CLO 3	Analysis of site and data
CLO 4	Prepare research methodology
CLO 5	Preparation of reports and drawings

B. Syllabus

Course Objective:

The objective is to introduce students to the research based project and its analysis. A research study will be undertaken by each student of different topics of immediate relevance to the professional knowledge. The study would include a thorough literature survey as well as data collection from the field service or by contact with practicing Architects, Interior designers and public at large as clients. Each student will prepare an analytical research project based on the above information and submit in the form of a well-complied document duly illustrated with relevant diagrams, sketches and informatics presentation.

Note: Dissertation can be treated as a preamble as the base of the thesis done on individual basis so the students could learn to work on research project

Course Contents:

Module I: Introduction

Introduction to the dissertation project and get the project/ topic approved by the school and respective faculty giving suitable justifications and reasons for the research. The proposal of research should include the aims, objectives, methodology, limitations, bibliography, site etc. at the time of approval of topic.

Module II: Collection and Analysis of Data (Case Study)

Site and surroundings survey- location, local climatic conditions, topography, existing landscape, socio- cultural impact on design. Study the site potentials in term of energy conservation and natural conditions.

Module III: Analysis of Data

Research analysis and data collection, Justification to topic selected. Detailed study of functions, Study of relationship of built and open spaces, interlinking of various activities.

Module IV: Methodology

Methodology of research, Data analysis, Data compilation.

Module V: Presentation

Preparation of analysis report with suitable drawings for discussion

Submission: The submission will be in the hard Bound A-4 Size Report. The research should include the followings:

Selection of Dissertation topic	Justification to topic selected	Site analysis and justification
Methodology of research	Research analysis and data collection	Climatic conditions
User requirements and standards	Analysis	Inferences
Conclusions	Recommendations/ Suggestions	Bibliography

Examination Scheme:

Components	A	C	P1	Viva
Weightage (%)	05	15	30	50

Text & References:***Text:***

- Site Planning Standards, J. D. Chaiara.
- Time Saver Standards, J. H. Callender and J. D. Chaiara
- Architectural Graphic Standards, C. G. Ramsey
- Neufert's Architects Data, V. Jones, Ed. Gen.

References:

- Intention in Architecture, N. S. Christian
- Form and Structure, D. Philip and O. Frei
- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Planning – the Architect's handbook, E and E.O

Domain Electives – IX

BAR 905 Product design

Course Code: BAR 905

Credit Units: 02

Teaching hours: 02

C. Course Learning Outcome

CLO 1	Comprehend Design Process for developing Products.
CLO 2	Employ ergonomics in Product Design
CLO 3	Select appropriate production technology
CLO 4	Develop an innovative product prototype.
CLO 5	Employ material understanding in Product Design

D. Syllabus

Course Objective: To expose the students to the various theoretical and practical aspects of ergonomics and product design

Course Contents:

Module I: Ergonomics

Definition of human factors, Application of human factors data, Human activities – their nature and effects, man-machine system and physical environment.

Module II: Human control system

human performance and system reliability, information input and processing, , visual display, visual discrimination, Alphanumeric and related displays, visual codes and symbols, Auditory, tactual and olfactory mechanism, applied anthropometric, physical space and arrangement.

Module III: Product Design

Form, colour, symbols, user specific criteria; material, technology and recyclability; packaging; multiple utility oriented approach to product design; design of household elements, tools and devices; element design for the physically and mentally repaired. Creative thinking –creativity and problem solving- creative thinking methods- generating design concepts-systematic methods for designing –functional decomposition – physical decomposition – functional representation –morphological methods-TRIZ- axiomatic design

Module IV: Product Design Applications

Design Definitions and Design Spectrum, Product Attributes – Function and Emotion, Product configurations and Component relationships, Product Analysis – Diachronic, Synchronic, Understanding and Analyzing contexts, parallel situations, future situations, Understanding modularity and modular systems, 3D lattice and structures, Design of Modular System ,abstract design, Process of conception and its documentation. Identifying customer needs,voice of customer,customerpopulations,hierarchy of human needs,need gathering methods – affinity diagrams – needs importance-establishing Product Design characteristics-competitive benchmarking- quality function deployment- house of quality- product design specification-case studies

Module V: Industrial application of Product Design

Industrial Product design, human factors design, user friendly design, design for serviceability, design for environment, prototyping and testing, cost evaluation, categories of cost, overhead costs, activity based costing methods of developing cost estimates, manufacturing cost, value analysis in costing

Exercise :Hands on Workshops on Product Design Studio, Case Studies on Product Design Development and Value Engineering

Examination Scheme:

Components	A	CE	CT	EE
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Weightage (%)	05	25	20	50
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Text & References:

Text:

- A-Level Product Design, Will Potts
- Materials and Design: The Art and Science of Material Selection in Product Design, Michael Ashby, Kara Johnson
- Human Factors in Product Design, W.S. Green
- Product Design: Graphics with Materials Technology, Lesley Cresswell

References:

- Creativity in Product Innovation, Jacob Goldenberg, David Mazursky
- Building Product Models, Charles M. Eastman
- Building Better Products with Finite Element Analysis, Vince Adams, AbrahamAskenazi

BAR 906 Cost Effective Architecture

Course Code: BAR 906

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Appreciate the need for achieving low costs in construction for increasing affordability.
CLO 2	Determine the factors that add up to and increase project costs.
CLO 3	Learn the cost-effective space planning and architectural design strategies for both urban and rural context
CLO 4	Develop acumen for searching material alternatives for building construction.
CLO 5	Compile existing cost-effective construction techniques that can be applied in projects to control costs.

B. Syllabus

Course Objective: To familiarize the student with cost-effective construction for building economy. To develop an understanding of different issues, types and techniques involved in the design and construction of low cost structures

Course Contents:

Module I: Introduction

Basic shelter issues in India and Affordability, Need for achieving low costs in building construction – Low cost vs. Quality. Factors constituting building costs, Controlling parameters for achieving Cost Effective Architecture – land, space, materials, design, construction techniques, construction time & labour.

Module II: Understanding needs of economically weaker sections

Cultural study of economically weaker sections in India in different pockets like slums & existing EWS & LIG housings, space usage pattern studies, study for modifications and alterations done by dwellers in existing EWS & LIG Schemes.

Module III: Architectural Planning & Design for Cost Effective Architecture – Space Optimization

Site planning and Architectural Design as tools for Cost Effective Architecture, Space planning Norms of National Building Code, India for Economically weaker Sections in Urban and Rural Areas; National building organization – Recommendation of Housing and Urban Development Corporation, Space optimization as a process of cost reduction, Multiple use of space. Multiple use of furniture.

Module IV: Building Materials, Construction techniques & Time Optimization for Cost Effective Architecture

Local materials and traditional technologies, Improved traditional technologies, Innovative Materials and construction methods developed Laurie baker; CBRI Roorkee, HUDCO, Anangpur Building Centre, Development Alternatives, Auroville Building Centre and many others for different types of walling, roofing and foundation with materials like Pressed soil blocks, soil cement blocks and other alternative materials – fly ash brick, gypsum byproducts, Ferro cement products, bamboo, jute stalk etc; Ways to cut down the use of unwanted building materials, Project time optimization to reduce project costs, Use of effective project management techniques.

Module V: Studies and Comparative Analysis for Cost Effectiveness

Case studies presentations of low cost/ cost effective projects and their comparative cost analysis with conventional projects.

Examination Scheme:

Components	A	CE	CT	EE
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Weight age (%)	05	25	20	50
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Text & References:

- Alternative Construction, Contemporary Natural building Methods: Edited by Lynne Elizabeth and CassandrAdams.
- Low cost housing in developing countries by G. C. Mathur
- How the other half builds – Vol 1, 2 & 3 by Vikram Bhatt et al.
- National Building Code of India, 2005 – PART 3 – ANNEX C, E & F
- Laurie Baker – Life, work, writings by Gautam Bhatia
- Low Cost Housing – An analytical Study of the current practices & techniques by Vastu Shilpa Foundation
- CBRI Publications – Book 1-9
- Low Cost Housing competitions 1974 – 96 by HUDCO
- How to reduce building costs by Laurie Baker

BAR 907 Prefabrication

Course Code: BAR 907

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To understand the importance of prefabrication techniques A- modern way in construction industry.
CLO 2	To understand the importance of prefabrication techniques A- modern way in construction industry.
CLO 3	To understand the design considerations in the process of prefabrication techniques.
CLO 4	Apply the joining techniques in prefabrication techniques to create the communication between the structural elements for a building.

B. Syllabus

Course Objective:

To acquaint the students to Prefabrication in construction, industrialized construction and design of prefabricated elements. To familiarize the students with construction method/ techniques used for these elements in building works.

Course Contents:

Module I: Introduction

Need for prefabrication, advantages and disadvantages of prefabrication, Principles, Materials, Modular coordination, Standardization, Systems, Production, Transportation and Erection.

Module II: Prefabricated Components

Behavior of structural components, Large span constructions, Construction of roof and floor slabs, Wall panels, Columns, Shear walls.

Module III Design Principals

Disuniting of structures- Design of cross section based on efficiency of material used – Problems in design because of joint flexibility – Allowance for joint deformation.

Module IV Joint In Structural Members

Joints for different structural connections – Dimensions and detailing – Design of expansion joints. Basic Construction and fixing details used for various prefabricated panel/ elements, their applications, types, pricing, advantages & disadvantages

Module V: Design For Abnormal Loads

Progressive collapse – Code provisions – Equivalent design loads for considering abnormal effects such as earthquakes, cyclones, etc., – Importance of avoidance of progressive collapse.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

1. CBRI, Building materials and components, India, 1990
2. Gerostiza C.Z., Hendrikson C. and Rehat D.R., “Knowledge based process planning for construction and manufacturing”, Academic Press Inc., 1994

References:

1. Koncz T., “Manual of precast concrete construction”, Vol. I, II and III, Bauverlag, GMBH, 1976.
2. “Structural design manual”, Precast concrete connection details, Society for the studies in the use of precast concrete, Netherland Betor Verlag, 2009

TENTH SEMESTER

Course Code	Course Title	Category	L/T/ST/P Per Week			Credits	Teaching hours
			L	T/ST	P		
BAR 1001	Project (Thesis)	CC	4	8	12	18	24
BAR 1002	Professional Practice & Management	CC	1	1		2	2
Domain Elective – IX (Select any One DE)							0
BAR 1003	Architectural Journalism	DE	1	1		2	2
BAR 1004	Building Economics & Legislation	DE					
BAR 1005	Virtual Architecture	DE					
TOTAL			6	10	12	22	28

TENTH SEMESTER

BAR 1001 Project (Thesis)

Course Code: BAR 1001

Credit Units: 18

Teaching hours: 24

A. Course Learning Outcome

CLO 1	To illustrate the ability to designs a project responsive to the contextual and program requirements
CLO 2	To demonstrate systematic & methodological learning from various stages of the research & design process.
CLO 3	To communicate the ideas clearly using writing, verbal and visual presentation
CLO 4	To evaluate & compare data gathered from pre-design research
CLO 5	To demonstrate application of various codes, standards and regulations governing the project.
CLO 6	To illustrate the ideas clearly using a detailed physical Model.

B. Syllabus

Course Objective:

To provide the students an opportunity to research and develop a design scheme for a project of their choice and approved by the school maintaining professional working standards and attain a professional level approach with extensive details. To attain independent professional approach analysis based design projects achieving high level of workability, efficiency and aesthetics in 3-D form with all the services properly worked out.

Course Contents:

Module I: Introduction

Introduction to the thesis design and get the project approved with the finalization of thesis guide/s. (Consent to be taken from internal and external guide both). The project research should include the followings:

Aim and Objective of study and Justification to topic selected	Case studies selected	Suggestions
Methodology of research	Analysis of study	Concept and planning of your own design
Limitation and scope of research	Conclusions of study	Bibliography

Module II: Research

Extensive research specific to project through the primary and secondary data collection. Conduct the case studies with extensive study and analyze to get a clear picture of the existing example. Detailed site

study is to be conducted simultaneously.

Module III: Concept Development and Designing

Development of concept at various stages and levels with conceptual model and 3-D sketches to be studied. Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module IV: Specifications and Estimation

The project estimation with all the necessary specifications to be detailed and studied to get a clear picture of the cost of the project. The details should include all the interior and exterior details.

Module V: Presentation

Complete project development and analysis report to be compiled containing all the details of the project. Presentation in terms of 3-D drawings and detailed Model to be submitted. Mode of presentation may be mutually devised by co- coordinators and student that may be project specific.

Examination Scheme:

Components	A	P	S	External Jury/Viva
Weightage (%)	05	25	20	50

The thesis project to be evaluated through open jury comprise of thesis guide and external expert members.

Text

&

References:

Text:

- Site Planning Standards, J. D. Chaiara.
- Time Saver Standards, J. H. Callender and J. D. Chaiara
- Architectural Graphic Standards, C. G. Ramsey
- Neufert’s Architects Data, V. Jones, Ed. Gen.
- Towards a Human Architecture, A. Bruce
- Architectural Graphics: C. Leslie Martin
- Perspective for the Architect: Themes and Hudson
- Interior Design: Ahmed Kasu
- Architectural Graphics – Ching Frank
- Engineering Drawing – P.S. Gill

References:

- Form and Structure, D. Philip and O. Frei
- Architectural Graphic standards editor – Boaz Joseph
- Planning – the Architect’s handbook, E and E.O.
- Time Saver standards for building types, Editor Joseph D.C. and John Callender.
- Practical Plane and Solid Geometry – H. Joseph and Morris
- Architectural Thesis done by other people

BAR 1002 Professional Practice & Management

Course Code: BAR 1002

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Identify different professional bodies and Statutory Bodies in India, their functioning, importance and role towards the profession and role of the professional towards these bodies
CLO 2	Analyse and critically evaluate the requirements of a professional office/ corporate office to be ready to establish/join one.
CLO 3	Select and implement one of the practice types to be able to establish one's own practice
CLO 4	Demonstrate awareness of laws and bylaws related to the profession

B. Syllabus

Course Objective-To acquaint the students about different Professional and Legal bodies related to the Architecture Profession, their role and importance to a professional

To make the students understand the professional intricacies, professional responsibilities and conduct, legal obligations and implications so that at the end of their studies the Students is familiar of their responsibilities as a professional.

Module I –Professional Bodies- Familiarization with different Professional Bodies directly and indirectly related to architecture profession such as The Indian Institute of Architects (IIA), The Council of Architecture (COA), The Indian Institute of Interior Designers (IIID), International Union of Architects (UIA), Architects Regional Council Asia (ARCASIA), South Asian Association for Regional Cooperation of Architects (SAARCH), The Indian Society of Landscape Architects (ISOLA), The Institute of Engineers (India) (IEI) , The Institute of Town Planners India (ITPI) etc.

Module II Discussions in Detail about the IIA, its formative History, Its bye laws, rules and regulations, membership procedure and categories, IIA Elections, Functions and formation of the IIA Council, Importance of IIA, Activities of IIA and Awards by IIA.

Module III Architects Act 1972 and COA - Detailed study of the Act, different clauses and their consequences. Study of the Intellectual Property Right Act. The Council of Architecture- its formation procedure, functions role and responsibilities, members of the council, rules and regulations of the COA. Minimum Standards of Architectural Education as set up by the COA.

Module IV Code of Professional Conduct and scale of professional charges and Setting up of Office as lay down by the COA and modified from time to time. Procedures to be followed by an architect for the safe running of the Practice. Awareness about Architectural Competitions and the Procedure lay down by the COA. Does and Don'ts for Architectural Competitions.

Module V Tendering and Contracts for Construction of Buildings-types, details of a tender document, procedure to be followed for calling tenders, tender analysis, election of the contractor and award of the work. Important terms such as EMD, Security Deposit, Defect Liability, Insurance etc. Types of the Contracts, legality of the Contract, important clauses of the Contract, role of the owner, architect and the contractor in fulfillment of the contract

Module VI Valuation of Fixed Assets-Introduction, Techniques, elements and factors affecting

valuation, Methods, Types – renewal or lease/ extension of lease, standard rent, easement right, dilapidation, valuation of landed property, comparable cost of scale, purchase and mortgage, Capital gain tax, wealth tax, property tax and other taxes

Module VII Arbitration- Arbitration, Arbitrator, nature of arbitration, appointment, conduct, powers and duties of arbitrator and umpire amended from time to time. Procedure of arbitration, Claims – Fire insurance, damages with specific relevance to insurance. Injunction- Easement and its definition, interim, payment and mandatory injunctions.

Module VIII Acquisition and Ownership-Acquisition, Principles of acquisition, Purpose, Elements of acquisition – market value method and physical method of valuation.

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

- COA documents.
- Architect's Act 1972
- Architectural Practice in India – Prof. Madhav Deobhakta
- Construction Project Management – K.K. Chilkar
- Construction Planning and Management – M.B. Dhir& S.P. Ghilot

References:

- Professional Practice in India – S.K. Sahu
- Code of Architectural Practice – B.M. Basu
- Project Management with CPM and PERT – Moder and Philipese
- Construction Method and Techniques – MullickMullind

Domain Electives - X

BAR 1003 Architectural Journalism-

Course Code: BAR 1003

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Identification of research area and preparation of research proposal
CLO 2	Literature study and data collection
CLO 3	Analysis of site and data
CLO 4	Prepare research methodology
CLO 5	Preparation of reports and drawings

B. Syllabus

Course Objective:

Architectural Journalism aims to provide foundations for writing about architecture and design. This course deals with the basics of news writing, news structure, editing and presenting and discusses the elements and principals of writing. This course is intended to help those, who have inclination for writing to develop their skills to enable them to record, analyze and evaluate architecture both in its theoretical and practical forms. To understand the process of documenting a projects in the field of architecture.

Course Contents:

Module I: Journalism in general

Journalism in general, Theories of journalism, Techniques and processes, Contemporary Architectural journalism

Module II: Basics of Writing

News – Source, Elements, News Values and Impact, Journalism – History, Focus on India, Journalism and Society

News Writing – Style and principals. Types of leads & Body text, News Structure – 5W 1H, Inverted Pyramid, Diamond and Hourglass style of news writing, Understanding your reader, Writing in perception of the user, Career in Architectural journalism

Module III: Writing about design and architecture

Overview of journalistic assignments. Design – Analysis and Writing, Writing review and critical analysis, Collecting information and presenting data, Elements of architecture: the form, the materials, the design concept or the key planning – Idea Creation, Documenting of projects, Brining Flair and Objectivity in Writing, Architectural Criticism, Writing on interior and construction, Writing on urban planning and sustainability, Interview and Personal Writing, Writing facts and establishing debate, Corporate Reporting, Press Meeting and press releases

Module IV: Editing and Presentation

Prof reading techniques – Languages, Grammar and Style, Electronic Copyediting, Writing Headlines and captions Writing an editorial and opinion , Style sheet, Constructing Narrative , Writing for various

media – Print, Visual and Online, Lay-out – Newspaper and Magazine, Introduction to Publishing Softwares.

Module V: Magazine Writing

Introduction to magazine journalism and writing, Reviews of famous architectural magazine and writers, Principles of writing magazine story, Feature writing , Using pictures and graphics,

Project :Student must prepare two features; one for newspaper and other for the magazine about a project and an architect.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Miller, Randy & Wilber, Rick (2002). *Modern Media Writing*. Wadsworth Publishing
- Sharma, Sangeet (2013). *Architecture, Life & Me*. Rupa & Co. Delhi.
- Wray, Cheryl (1997). *Writing for Magazines: A Beginner's Guide*. McGraw Hill.
- Architectural Criticism and Journalism by Majd Musa and Mohammad Al-Asad (1 March 2007)
- Challenges to the Epistemology of Journalism: The Architecture of the Contemporary Mediascape (Economy and Society... by George Lazaroiu (15 August 2012)

Magazines:

- **Metropolis Magazine**, architecture and design
- **Plan**, architecture, design, art and urban planning
- **Surface Magazine**, architecture, design, and fashion

BAR 1004 Building Economics & Legislation

Course Code: BAR 1004

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To help the students for understand the concept of building economics behavior and requirements of buildings with emphasis laid on the principles of various costs & economic performance of building
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B. Syllabus

Course Objective:

To understand Architectural projects as an economic function and understanding their evaluation techniques. To study the development controls as applicable to building design. To acquaint the students to compulsory building bye-laws and permits.

Course Contents:

Module I: Introduction

Concepts of economics: Utility, Demand & Supply, Wants, Cost, Value, Price, Micro and Macro Economics. Meaning and scope of Building Economics.

Module II: Project Costing and Benefits of buildings

Elements of cost components, initial costing, future costing, different types of costs and their impact on building projects. Monetary and non-monetary benefits of buildings.

Module III: Economic performance of buildings

Types of economic performance; accounting for risks & uncertainty; techniques of performance analysis; cost benefit analysis, incremental analysis, bread-even analysis; life cycle cost analysis, rate of return analysis.

Module IV: Value Engineering & Feasibility Analysis

Concept, application to architectural projects, Real Estimate PRO-FORMA Analysis, Concept and types of feasibility, feasibility analysis.

Module V: Introduction

Introduction to the subject and role of various statutory bodies governing building works. Building terminology at various levels – Individual, Neighborhood, city level in terms of Master Plan and Development Plan. Applicability of bye-laws and their interpretation, information regarding recent changes in building bye-laws taking different examples of different cities like Delhi, Bhopal, Mumbai etc.

Module VI: Building Requirements

General building requirements, structural safety and services i.e. Fire safety norms, building construction requirements, Basement bye-laws and all the other related norms and standards in terms of electricity, water, telephone etc.

Module VII: Permit and Sanctions

Sanction requirements for buildings, Completion and submission of forms to various different government departments, fulfilling the requirements and all the necessary documents to be submitted,

Get the clearance and NOC from the various agencies during and after the construction.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

- Building Economics for Architects, Thorbjoern Mann
- The Economics of Building: A Practical Guide for the Design Professional, Robert E. Johnson
- Design and Construction: Building in Value, Rick Best, Gerard de Valence

References:

- Best Value in Construction, Kelly
- Design and the Economics of Construction, D.D. Jaggar, R. Morton
- Delhi Building Bye-Laws – Nabhi Publications
- D.D.A. – Delhi Master Plan

BAR 1005 Virtual Architecture

Course Code: BAR 1005

Credit Units: 02

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To familiarize students with recent trends that led to development of virtual architecture with development of virtual reality and simulation technology
CLO 2	To train students in basic and advance softwares for architectural visualization

B. Syllabus

Course Objective:

- To familiarize students with recent trends that led to development of virtual architecture with development of virtual reality and simulation technology
- To train students in basic and advance softwares for architectural visualization

Course Contents:

Module I: Introduction

Definition of virtual architecture, historic developments tracing influence of virtual reality and simulation technology on the contemporary architecture, advantages and disadvantages, major movements, key architects and architectural examples of this era.

Module II: Basic Modeling and Rendering

3D Cad Modeling, Wire frame, mesh, solid and superficial Management of the 3d scene, Poly-mesh modeling and for dividing surfaces, 3D animation, Basic surface materials, Elaboration of the image, direct analysis and experimentation of the most solid and fruitful techniques of modeling and of management of 3D geometries in the AutoCAD

Module III: Advanced Module

BIM- Parametric modeling, Management of the 3d scene, Exterior and interior lighting, studio setup, Advanced surface materials, Creation of 3d models starting from a photogrammetric relief, Photorealistic rendering, 3D vegetation – environment design, Grammar of the direction, Elaboration of the image, Video compositing, Storyboard, Video mounting, Video post-production, Color correction, Multipass and animation, Visual effects, 3D spaces

Module IV: Advanced architectural visualization:

Tools for photorealism, During the advanced module of the Masters, students will explore techniques of BIM technology, modeling inside the Revit software.

Module V: Project

Students will work on the research of the photorealism and of the quality of the image inside the 3DS Max software, also thanks to the addition of a V-Ray output engine: this is a couple that since many years is the real standard in many productive realities all around the world.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Conway Lloyd Morgan, Giuliano Zampi, Virtual Architecture, 1995, McGraw-Hill Inc.,US
- Marta Jecu, Architecture and the Virtual, 2015, Intellect
- Don Cameron, Greg Regnier, The Virtual Interface Architecture, 2002, Intel Press
- Daniela Bertol, David Foell, Designing digital space: an architect's guide to virtual reality, 1997, Wiley
- Michael Beigl, Disappearing Architecture: From Real to Virtual to Quantum, 2005, Springer Science & Business Media

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Interior Design

Batch 2021-25 Onwards

Total Credits = 232

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

FIRST SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	St Per Week	P per week		
BID 101	Design-I	CC	0	6	0	9	6
BID 102	Materials & Construction Techniques - I	CC	1	1	1	3	3
BID 103	Art & Graphics- I	CC	0	0	2	1	2
BID 104	Graphics Skills -I	CC	0	0	4	2	4
BID 105	History of Built Environment	CC	2	0	0	2	2
BID 106	Interior Workshop	CC	0	0	2	1	2
BID 107	Theory of Design	CC	2	0	0	2	2
BID 108	Structural Design & Systems – I	CC	2	0	0	2	2
BID 109	Presentation Techniques	CC	0	0	2	1	2
AND 001	Aanandam-I	VA	0	0	4	2	4
BCS 101	English	VA	1	0	0	1	1
BSS 105	Behavioural Science – I (Understanding Self for Effectiveness)		1	0	0	1	1
	Foreign Language - I	VA	2	0	0	2	2
FLF 101	French	VA				0	0
FLG 101	German					0	0
FLS 101	Spanish					0	0
FLC 101	Chinese					0	0
	TOTAL		11	7	15	29	33

BID 101 DESIGN – I

Course Code: BID 10 Credit Units: 09 L-0/ST-6/P-0 Teaching hours: 06

A. COURSE LEARNING OUTCOME:

CLO 1 :	Interpret and Implement “Design” as a problem solving process.
CLO 2 :	Recognise and Execute visual form, functional space, anthropometrics, technology, economy, culture and environment as key parameters of Architecture.
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5:	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Objectives:

- To create visual compositions using elements and principles in theory of design and understand its application in built-environment
- To measure, draw and comprehend relationship between human dimensions and those of built-environment.
- To investigate forms and subsequently analyze existing built-forms and spaces through Measured drawings so as to derive design criteria from the Case Studies
- To create interior design for single purpose space employing the interior design process
- To practice direct application of learning in BID107 Theory of Design

Course Contents:

Module I: Design of 2D & 3D Compositions - 3 weeks

Exercise to design compositions with 2D Shapes and 3D Forms (geometric and irregular) using elements and principles of design

Module II: Transformations and Form Analysis– 3 weeks

Transformations of Forms -Addition, Subtraction, Extrusion – Space division, Space derivation, positive and negative spaces , Form Analysis, 2d representation of 3d form in terms of plan, section and elevation, Application in built- environment such as Façade design, Door elevation, Carpet design; Floor tile design & floor design, Mural design etc.

Module III: Anthropometrics - 2 weeks

Human dimensions – static and dynamic; proportions, space dimensions for various human postures and activities; Modular and Golden Section

Module IV: Measured Drawings of Architectural Spaces – 2 weeks

Importance of Case Study in design learning, Study of various existing interior spaces through

preparation of measured drawing with furniture layout

Module V: Design and Representation of Single purpose space unit – 4 weeks

Design project of Single Space unit structure with respect to Visual Language of Form (Art), Functional Space, Material & Structure (Technology) and culture; Suggestive Studio Projects involving activity spaces such as Living area, sleeping area, washroom, cooking area etc. – for example, cabin design, Entrance gate, kiosk, Toilets, Kitchen, Study room, Exhibition stall etc.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text Books /Reference Books/Journals/Other Study Material:

1. Interior Design Illustrated, Francis D K Ching
2. Interior Design Visual, Maureen Mitton 2nd Edition
3. ‘Ching Francis, (1979), Architecture Form, Space and Order, Van Nostrand Reinhold Company, New York.
4. Neufert Ernst, (1970), Architect’s Data, Crosby Lockwood and Sons, London.
5. Chiara JD and Calender, (1983), Time Savers Standards for Building Types, McGraw Hill Book Company, New York.
6. Broome, F. Gerald (1974) Elements of Design: Space, Davis Publications Inc., Worcester, Massachusetts.
7. Wagenknecht, Kay and Herte (1989) Site + Sculpture – A collaborated design Process, Van Nostrand Reinhold, NY.
8. Allen, Edward and Iano, Joseph (2006), The Architect's Studio Companion: Rules of Thumb for Preliminary Design, Wiley; 4th edition.
9. Frederick, Matthew (2007), 101 Things I Learned in Architecture School, The MIT Press.
10. Pearson, David (2001), New organic architecture: the breaking wave, University of California Press.
11. Fawcett, Peter (2003), Architecture: design notebook, Architectural Press, 2nd edition

Online Resources

1. <https://www.roomsketcher.com>
2. <https://www.interiordesign.net>
3. <http://www.homify.in>

BID 102 MATERIALS AND CONSTRUCTION TECHNIQUES - I

Course Code: BID 102 Credit Units: 03 L-1/ST-1/P-1 Teaching hours: 03

Course Learning Outcome:

CLO 1 :	To define basic building elements.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3:	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings
CLO 4 :	To be able to use composite materials in a structure.
CLO 5 :.	To be aware of the properties and applications of the various materials

SYLLABUS:

Course Objective:

- To understand the use of traditional building materials in simple building works.
- To familiarize students with basic building components, their function and behavior under various conditions with specific reference to “Load Bearing Construction”

Course Contents:

Module I: Building Materials and Construction Technology - 3 weeks

Introduction to components of building from foundation to roof: Foundation, plinth, plinth beam, damp proof course (D. P.C.), sill, lintel, beam and slab, parapet, mummy etc. Detailed Section through 2 story building, Introduction to various methods, technology, materials, tools and equipment commonly used in – Excavation, Masonry works and carpentry.

Module II: Clay and Clay products, Stone - 2 weeks

Mud including stabilized earth, burnt bricks, brick tiles, blocks, lime and its product, stone and its varieties etc,
Classification, availability, preparation and uses of above materials and their structural, visual and textural properties.

Module III: Brick and Stone Masonry -3 weeks

Terminology: Bricks and its types, bats and closures used in different Brick Bonds

Bonding: Types of bonds: English, Single, double, Flemish and rat trap bond.

Corbelling, String courses and decorative brickwork.

Stone masonry: Types of stones, dressing and different bonds in stone, Random Rubble, Coursed Rubble, Ashlar.

Module IV: Stone and brick masonry Foundation - 3 weeks

Foundations: Need for foundations, its preliminary design criteria.

Detail of spread foundation for load bearing walls of various thicknesses.

Module V: Openings - 2 weeks

Openings – Types and construction details of Lintels, arches, sill, jam etc. necessary to make openings

Exercises: preparation of drawings on above topics.

Examination Scheme

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

1. Building construction W.B.McKay
2. Building construction R Berry
3. Building construction Chudley
4. Building construction Francis D.K. Ching.

BID 103 ART & GRAPHICS – I

Course Code: BID 103 Credit Units: 01 L-0/T-0/P-2 Teaching hours: 02

A. Course Learning Outcome:

CLO 1 :	Analyse & evaluate the stress - strain relations for beam element under various loading & support conditions.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3:	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings
CLO 4 :	To be able to use composite materials in a structure.
CLO 5 :	To be aware of the properties and applications of the various materials

B. SYLLABUS:

Course Objective:

The course will enable the students to develop an understanding of the elements of art; a basic vocabulary for describing visual art, a general understanding of the role art has played throughout history, and contemporary trends.

Course Contents:

Module I: The Language of Visual Experience

Visual elements, Principles of design, evaluating art and its purpose in simple exercise of sketching.

Module II: Art as Cultural Heritage

From the earliest art to the Bronze Age, The Classical and Medieval West, Renaissance and Baroque Europe, Traditional arts of Asia, the Islamic world and eastern world. Sketches of buildings from history.

Module III: The Modern World & The Postmodern World

Late Eighteenth and Nineteenth Centuries, Early Twentieth Century, Modern art Movements Post modernity and Global Art .Sketches , painting based on history.

Module IV: Art Factors Influencing Architecture

Various art factors influencing the architecture, Study can be made by taking a particular region, preferably India. Evolution of shelter forms in regions of the world and examples of Vernacular Architecture in the world, with particular reference to India.

Module V: Rendering in different mediums

Application of painting techniques –water/oil, pen & ink, pencil in preparation of Exterior & interior Views

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

1. Lazzari, Margaret and Donna Schlesier. Exploring Art. 2nd Edition. Clark Baxter, Belmont, CA, 2005.
2. Responding to Art: Form, Content, & Context by Robert Berson.

BID 104 GRAPHIC SKILLS – I

Course Code: BID 104

Credit Units: 02 L-0/ T-0/ P-4

Teaching hours: 04

A. COURSE LEARNING OUTCOME:

Course Learning Outcome:

CLO 1 :	Understand and remember the fundamentals of drafting
CLO 2 :	Understand the fundamentals of geometry
CLO 3 :	Understand the principle and different types of projections and views
CLO 4 :	Learning the techniques of surface development
CLO 5 :	Produce presentations on all the four cognitive learning outcomes.

B. SYLLABUS:

Course Objective:

To familiarize the students with various drawing tools to give basic knowledge of drafting and lettering techniques. To provide a clear understanding about the scale of measurement and orthographic projections used as drawing technique.

Course Contents:

Module I: Introduction to basics drafting, Lettering & Scales

Introduction and setting to the drawing equipment, Concept of line, its types, Line thickness quality, grade, divisions and angles, Concept of polygons, circles, geometrical curves, helix etc., Concept of Dimensioning & dimension line, BIS codes of drawings. Free hand and Architectural lettering, proportion of letter size as per scale and size of the sheet. Scales: Engineers scale, Graphical scale and Representation factor (R.F). Scales on drawings. Types of scales: Plain scale and Diagonal scale.

Module II: Projection- Point, Lines, Planes

Definition, meaning and concept, Principles and Methods of projection. Projection of point, Lines & planes.

Module III: Projection-Solid

Projections of regular rectilinear and circular solids (prisms, pyramids, cones, cylinders, spheres etc.) in different positions. Sections of regular rectilinear and circular solids in varying conditions of sectional plane.

Module IV: Surface Development

Introduction and Methods of development of surfaces. Development of lateral surfaces of right solids like Cubes, Prisms, Cylinders, Pyramid, Cone etc.

Module V: 3D Drawing Views

Types, uses & advantage. Isometric, Axonometric & oblique view -solids, compositions& buildings.Metric drawings, projections and their dimensions.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

BID 105 HISTORY OF BUILT ENVIRONMENT

Course Code: BID 105

Credit Units: 02 L-2/T-0/P-0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyze and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Examine the developments in the use of materials with different eras.
CLO 3:	Analyze the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS:

Course Objectives:

- To make them understand the importance of study history of Architecture, development of civilizations and evolution of design as a by process of it
- To familiarize students with the factors influence the development of architecture in the history. Such as socio-economic, historical political influences of that time.
- To inform them about the technologies, materials used in the historical developments and their impact on the present day knowledge of architecture and design.
- To familiarize them the regional architecture.

Course Contents:

Module I: Introduction to History of Human Settlements and Its Importance - 2 weeks

Pre-Historic Period till 3000B.C. - The type of settlement development during the period taking few examples of the different periods – Neolithic, Mesolithic, Bronze age, Iron Age with advancements of construction techniques, material used , human progression over the time period.

Module II: Introduction to Valley Civilization-1 - 4 weeks

Nile Valley Civilization (3000 B.C. – 100 A.D.)- Introduction to Egyptian Architecture and civilization, building characteristics and developments over the period in respect of different styles, construction technology, building materials used, evolution of form with significant changes over the time period.

Examples like- Tomb Architecture- Mastabas, Pyramids, Temples at Giza , Thebes ,Karnak Etc.

Mesopotamian Civilization (2500 B.C. – 600 B.C.)- Mesopotamian Civilization comprising of Babylonian, Assyrian, Akkadian Sumerian civilization in respect of buildings styles, construction technology, building materials used, evolution of form and art work development with significant changes over the time period

Examples like - Forts ,Temples ,Dwellings ,Ziggurats at Uruk ,Ashur ,Babylon etc.

Module III: Introduction to Valley Civilization-2 - 4 weeks

Indus Valley Civilization (3300B.C. – 300 B.C.)- The era of development in the Indus valley. Development of Harappan civilization. Iron Age of India explaining with examples of planning and buildings, construction technology, building materials used, evolution of form and art work development with significant changes over the time period. **Vedic Architecture (1750 B.C.)-** The Aryan civilization- explain with examples of the buildings, construction technology, building materials used, evolution of form and art work development with significant changes over the time period.

Module IV: INTRODUCTION TO TRADITIONAL ART AND ARCHITECTURE OF RAJASTHAN - 2 weeks

Introduction to Rajputana design from different regions with examples of Jaipur City and nearby areas:

Forts & Palaces – Amer Fort, City Palace , Nahargarh Fort, Udaipur Palace, Kumbhalgarh Fort , Mehrangarh fort etc.

Havelis – in Shekhawati like at Nawalgarh , Fatehpur , Ramgarh , Mandawa etc.

Stepwells & Temples – Chand Baori at Abhaneri , Ranakpur Temple , Dilwara Temple , Rani Sati Temple , Eklingji Temple Etc.

Introduction to Planning of Old Jaipur City with characteristics and material significance according to climate . Study the examples of vernacular buildings like Hawa Mahal , City Palace, Albert Hall , Jantar Mantar etc. with developing the understanding of different elements like jharokhas , jalis , chhatris etc. locally available materials , their application , construction techniques, evolution of form and characteristics changed over time period

Detailed Presentation exercise to be combined with local educational tour, heritage walks to be organized at regular intervals during the semester comprising of analysis of existing structures with respect

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	05	10	20	00	50

Text Books /Reference Books/Journals/Other Study Material:

1. Sir Bannister Fletcher, (1975) “The History of Architecture”
 2. G.K.Hiraskar (2018)“Great Ages of World Architecture”
 3. Yatin Pandya, (2005) “Concepts of space in Traditional Indian Architecture”
 4. Deependra Prashad, Saswati Chetia, (2007)“New Architecture and Urbanism: Development of Indian Traditions”
 5. Vibhuti Chakrabarti,(1998) “Indian Architectural Theory and Practice: Contemporary Uses of Vastu Vidya”
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BID106 INTERIOR WORKSHOP

Course Code: BID 106 Credit Units: 01 L0/T-0/P-2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To remember different tools used in carpentry, masonry and surface painting
CLO 2 :	To understand the technique of applying construction material such as brick, cement, wood, stone and its testing.
CLO 3:	To construct different building components like dome, arch and wall with various typologies.
CLO 4 :	To create new forms and structures using the learned techniques.

B. SYLLABUS

Course Objectives:

To introduce various building materials like carpentry, materials testing methods within the site and Working methods of Architectural components like Arches, Dome and Vaults etc.

Course Contents:

Module I: Introduction to carpentry - 4 weeks

Introduction to the carpentry tools, processes, joints and wood working machines. Preparation of various carpentry joints, fixing of plywood, commercial boards etc. and their application in furniture. Painting and polishing on different surfaces and textures

Module II: Introduction to Building materials - 6 weeks

Building materials Manufacturing process, on site quality tests of types of bricks, cement, lime, sand, aggregate. Types and uses of mortar and concrete. Superstructure: Types of bonds, ends and junctions, attached and detached piers, jointing and pointing in brick masonry and stone masonry.

Module III: Building Components and construction - 4 weeks

Types of arches in bricks and stone, centering of arches. Types of Dome, Construction method of Dome, Assembling of Glass curtain wall.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Cassells Carpentry and Joinery by Paul N. Hasluck
2. The Very Efficient Carpenter: Basic Framing for Residential Construction Paperback by Larry Haun
3. Complete Book of Framing: An Illustrated Guide for Residential Construction 2nd Edition by Scot Simpson
4. The Basics of Building with Arches, Vaults and Cupolas by Thierry Joffroy
5. Building of the Arch Enlarged 9th Edition by R. Artaega

BID 107 THEORY OF DESIGN

Course Code: BID 107 Credit Units: 02 L-2/T-0/P-0

Teaching Hours : 02

A. Course Learning Objective

CLO 1 :	To Illustrate The Knowledge of various principles elements design.
CLO 2 :	To critically analyse the 2D & 3D compositions.
CLO 3:	To analyse the differences between systematic and random design approach though developing understanding of design thinking.

B. Syllabus

Course Objectives:

- To enable student to develop understanding of “Design” as problem solving process for everyday life
- To enable student to interpret “interior Design” as integration of *Visual Form, Functional space, Human measure, building technology (material and structural systems), economy, culture and environment.*
- To enable student for direct application of design theories in studio projects of course BID101 Design –I

Course Contents:

Module I: Design and Built Environments - 2 weeks

Introduction to Design – Creative problem solving, Aspects of Design – Art and Science, Design for Built Environment, Role of Architect, Interior Designer& Engineer, Aspects of Interior Design– Visual Language of Form(Art) , Functional Space, Material & Structure (Technology) and culture.

Suggested Activities: i) *Student will be asked to use online and Library resources to select images of any one product from everyday life and images of any one building of his/her choice to investigate aspects of design embedded in them. Student will present the investigation and learning in the form of PowerPoint presentation.* ii) *Group reading and discussion from extracts of “A Pattern Language: Towns, Buildings, Construction – Christopher Alexander”*

Module II: Visual Language – 4 weeks

Introduction to how we see forms and perceive them and its importance in design, Visual Elements of Design - point, line, surface, solids, colour, texture etc; Principles of Design- Balance, Symmetry, Repetition, Rhythm, Datum, Hierarchy etc.; Built Forms and their aesthetics, Order-Character- meaning (symbolism) of Built Forms, Abstraction

Suggested Activities: i) *Student will be asked to do online search for optical illusions and present them in class to appreciate how we perceive things* ii) *Student will be asked to disintegrate/explode a given built form into its constituent elements by sequential representation in drawing from whole form to surfaces to lines till points.*iii) *Student will be asked to sketch any one internal elevation in vicinity to identify and disintegrate it into its constituent design elements. Student needs to present*

the identified design principle that binds the elements together in the selected internal elevation
iv) Students will be asked to search for built-forms that with strong association in cultural meaning and present them in PowerPoint .

Module III: Function: Activities, Spaces and Anthropometrics – 4 weeks

Types of Built- Environment - Enclosures; Human activities- space function; Types of Spaces – Primary, Supporting (Ancillary) and Link; Positive and Negative spaces; Relationship between Built-Form and Space & its function; Elements of Space making ; Anthropometrics – Human being as measure of everything, Modular and Golden Section.

Suggested Activities: i) In Group:- Rectangles of different sizes shall be marked in an open area and students shall be asked to use anthropometrics to suggest activities that can be done in the marked area. Students will enact the suggested activities within the area to evaluate their comprehension of space and anthropometrics ii) In Group : Students will be asked to create enclosure around the marked area and comprehend the psychological difference w.r.t space which the sense of enclosure creates in the user. Students shall now be asked to re-suggest the activities within the enclosure and enact them to evaluate their comprehension of space and anthropometrics iii) Composition using Golden Section

Module IV: Technology and Design - 2 weeks

Role of Material and technology in Design for Built- Environments; Brief introduction to types of Structural systems and their influence on built form; key materials used in Building Design (interior and exterior); Relationship between Material, Structure, function and form.

Suggested Activities: i) Student will be assigned a building/ built-form to deduce the influence of material and structure system on built-form

ii) Redesign of a given built-form by altering material and structural system to presented through conceptual sketch/ model

Module V: Design Process in Interior Design – 2 weeks

Iterative problem solving process of Design (Design Cycle); Design Process for Built-forms – sequence and stages; Different drawing types to represent different Design Stages – Bubble Diagram, Space Matrix, Conceptual Drawing, Presentation Drawing and Working Drawing.

Suggested Activities: i) Student will draw Design Process cycle, Bubble Diagram, Space Matrix, conceptual drawing and Presentation drawing for Studio Project in the course BID101Design-I

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

1. A Pattern Language: Towns, Buildings, Construction- Christopher Alexander
2. Structure in Architecture, Heller Robert
and Salvadori Mario

BID 108 STRUCTURAL DESIGN & SYSTEM- I

A. Course Learning Objective

CLO 1 :	Visualize the structures & its members in terms of internal spaces of building or room to identify the importance & use of structural members in building.
CLO 2 :	Analyse the cross- section & material properties for the structural members.
CLO 3:	Examine the classification of structures according to importance & use of internal spaces of building.
CLO 4:	Demonstrate the fundamental concept of principle of structures to understand the basic mechanics to visualize the structural design & its system.

B. Syllabus

Course Code: BID 108 Credit Units: 02 L-2/T-0/P-0 Teaching hours: 02

Course Objective:

To introduce the structural system in a building with all the basic components to understand the the functions of various elements and building technologies used in various types of buildings.

Course Contents:

Module I: Introduction to structures-2 weeks

Definitions of structure –Origin of structure –context for structure as an internal space of building: functional and aesthetic - outline of components and aspects of architectural form-site, structure, skin, materials, services etc.

Module II: Basic Elements of structures-2 weeks

Understanding fundamental elements such as beam, column, slab, footing, wall, flooring & false ceiling etc. The application of elements in residential as well as commercial types of buildings. Importance of each element in stability of overall building.

Module III: Principles of Structures-3 weeks

Understanding fundamental principles such as Law of parallelogram of forces, resolution of forces, law of triangular of forces, polygon of forces, Theorem of resolved parts resultant of number of concurrent coplanar forces, conditions of equilibrium, moment of forces. Moment and arm of a couple, theorems on couples.

Module IV: Classification of structures-3 weeks

Understanding fundamental classification such as load bearing structures & column frame structures. Based on frame the classification of structures are rigid joint frame structures & pin joint frame structures.

Module V: Materials used in structural members-2 weeks

Understanding fundamental classification of materials such as concrete, steel, wooden, reinforced cement concrete, stones, bricks, timber etc.

Examination Scheme:

Components	A	H	C	V	CT	EE
Weightage (%)	05	10	10	05	20	50

BID 109 PRESENTATION TECHNIQUES

Course Code: BID 109

Credit Units: 01 L-0/T-0/P-2

Teaching hours: 02

A. Course Learning Objective

CLO 1 :	Develop the understanding of various most relevant Presentation Techniques for the purpose of Design Project.
CLO 2 :	Develop the ability of lateral thinking required for visualizing the balance between various building materials & elements.
CLO 3:	Create better design solutions in an effective way by enhancing the observation and learning skills through existing projects.

B. Syllabus

Course Objective:

- To develop sound understanding of various presentation techniques used in an Architectural/ Interior design project.
- To learn the utility of pencil, ink and colors as a powerful tool of presentation skills.

Course Contents:

Module I: Introduction to Presentation Techniques

Introduction to various presentation techniques viz. lettering, formatting, rendering in pencil/ ink/ color, sketching, drafting & detailing, block modeling, sciography, photography, videography, computer based drafting, editing, detailing, modeling, documentation, Oral Presentation etc.

Module II: Rendering in Pencil

Concept & techniques behind rendering in different grades of pencil. Practice free hand basic pencil exercises viz. connecting random dots and underlining newspaper lines to learn drawing free hand lines, drawings 2d/3d compositions, basic patterns and rendering the same in pencil.

Module III: Rendering in Pen & Ink and Monochrome Rendering

Concept & techniques behind rendering in different grades/points of pen & ink. Practice exercises viz. drawings and rendering 2d/3d compositions, patterns, textures in pen & ink. Learn the concept & techniques of monochrome rendering with the help of pencils, charcoal, pen & ink.

Module IV: Use of Colors for Presentation

Concept, importance and techniques of colors in presentation. Study of Color wheel diagram, primary, secondary, tertiary, pastel, vibrant, tint colors. Practice exercises viz. making basic color compositions, patterns, textures etc.

Module V: Drawing Representation

Concept & techniques to highlight/represent different building materials. Use of line-weights/

line-types for different parts of the buildings in plan, elevation, section, site plan etc.

Module VI: Free-hand Sketching

Concept & techniques in free hand drawing of basic plans/ elevations/ sections/ building parts and also sketching natural & basic elements like plants, trees, human figures, animals, furniture, automobiles etc with the idea of scale & proportion in plan as well as in elevation/section.

Module VII: Views & its rendering and Block Modeling

Drawings basic 3D views and rendering the same in pencil, ink & colors with the concept of shades, shadows & sciography. Concept & techniques for basic block-modeling. Model making exercises using various materials e.g. handmade sheets. mount sheet/ board, sun board, compressed thermocol, MDF board, acrylic sheets, metal, soft wood etc.

Examination Scheme:

Components	A	CE	CT	EE
Weight age (%)	05	25	20	50

Text & References:

1. Architectural Graphics, C. Leslie Martin
2. Architectural Graphics, Francis D.K. Ching
3. Rendering with Pen & Ink: Robert W. Gill
4. The Color Source Book for Graphic Designers: Sadao Nakamiva
5. Time Saver standards for building types, Editor Joseph D.C. and John Callender
6. Neufert's Architect's Data
7. Architectural model making by Nick Dunn
8. Architectural Model Building by Roark T. Congdon

AND 001 AANANDAM-I

Course Code: **AND 001** Course Type: **Compulsory** Credit Units: **02** Credit Units: **02**

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants are to be given** (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

GUIDELINES FOR GCSP (Group Community Service Project) ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.

5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to <=54hrs (30-40 marks)**
- **O grade >54 hrs to <=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

BCS 101 ENGLISH

Course Code: BCS101

Credit Units: 01

Teaching hours: 01

Course Objective:

The course is intended to give a foundation of English Language. The literary texts are indented to help students to inculcate creative & aesthetic sensitivity and critical faculty through comprehension, appreciation and analysis of the prescribed literary texts. It will also help them to respond form different perspectives.

Course content :

Module I: Vocabulary	Use of Dictionary Use of Words: Diminutives, Homonyms & Homophones
Module II: Essentials of Grammar - I	Articles Parts of Speech Tenses
Module III: Essentials of Grammar - II	Sentence Structure Subject -Verb agreement Punctuation
Module IV: Communication	The process and importance Principles & benefits of Effective Communication
Module V: Spoken English Communication	Speech Drills Pronunciation and accent Stress and Intonation
Module VI: Communication Skills-I	Developing listening skills Developing speaking skills
Module VII: Communication Skills-II	Developing Reading Skills Developing writing Skills Written English communication Progression of Thought/ideas Structure of Paragraph Structure of Essays
Module IX: Short Stories	Of Studies, by Francis Bacon

	<p>Dream Children, by Charles Lamb</p> <p>The Necklace, by Guy de</p> <p>Maupassant A Shadow, by</p> <p>R.K.Narayan</p> <p>Glory at Twilight, Bhabani Bhattacharya</p>
Module X: Poems	<p>All the Worlds a Stage -</p> <p>Shakespeare To Autumn - Keats</p> <p>O! Captain, My Captain. - Walt Whitman</p> <p>Where the Mind is Without Fear - Rabindranath</p> <p>Tagore</p> <p>Psalm of Life - H.W. Longfellow</p>

Text & References:

1. Madhulika Jha, Echoes, Orient Long Man
2. Ramon & Prakash, Business Communication, Oxford. Sydney Greenbaum Oxford English Grammar, Oxford.
3. Successful Communications, Malra Treece (Allyn and Bacon) Effective Technical Communication, M. Ashraf Rizvi.

*** 30 hrs Programme to be continued for Full yea**

BSS 105 BEHAVIOURAL SCIENCE - I

(UNDERSTANDING SELF FOR EFFECTIVENESS)

Course Code: BSS105

Credit Units: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) should be able to:

1. Demonstrate awareness of self and the process of self-exploration.
2. Demonstrate knowledge of strategies for developing a healthy self-esteem.
3. Recognize the importance of attitudes and its effect on personality.
4. Identify the difference between healthy and unhealthy expression of emotions and develop emotional competence necessary for personal and professional life.

Course Objective:

This course aims at imparting:

- Understanding self & process of self exploration
- Learning strategies for development of a healthy self esteem
- Importance of attitudes and its effective on personality
- Building Emotional Competence

Course Contents:

Module I: Self: Core Competency

Understanding of Self

Components of Self – Self identity

Self concept

Self confidence

Self image

Module II: Techniques of Self Awareness

Exploration through Johari Window

Mapping the key characteristics of self

Framing a charter for self

Stages – self awareness, self acceptance and self realization

Module III: Self Esteem & Effectiveness

Meaning and Importance

Components of self esteem

High and low self esteem

Measuring your self esteem

Module IV: Building Positive Attitude

Meaning and nature of attitude

Components and Types of attitude

Importance and relevance of attitude

Module V: Building Emotional Competence

Emotional Intelligence – Meaning, components, Importance and Relevance

Positive and Negative emotions

Healthy and Unhealthy expression of emotions

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS-**Journal of Success; **HA-**Home Assignment; **P-**Presentation; **V-**Viva; **Q-**Quiz; **FC-** Flip class; **MA-** Movie Analysis; **CS-** Case study; **A-**Attendance

Text & References:

- Organizational Behaviour, Davis, K.
 - Hoover, Judith D. Effective Small Group and Team Communication, 2002, Harcourt College Publishers
 - Dick, Mc Cann & Margerison, Charles: Team Management, 1992 Edition, viva books
 - Bates, A. P. and Julian, J.: Sociology - Understanding Social Behaviour
 - Dressler, David and Cans, Donald: The Study of Human Interaction
 - Lapiere, Richard. T – Social Change
 - Lindzey, G. and Borgatta, E: Sociometric Measurement in the Handbook of Social Psychology, Addison – Welsley, US.
 - Rose, G.: Oxford Textbook of Public Health, Vol.4, 1985.
 - LaFasto and Larson: When Teams Work Best, 2001, Response Books (Sage), New Delhi
 - J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 2, Group (1996); Pfeiffer & Company
- Smither Robert D.; The Psychology of Work and Human Performance, 1994, Harper Collins College Publishers

FOREIGN LANGUAGE : Foreign Language French (Technology)

Semester 1 Course Code: FLT 101/111 (Tech French)

Credit Units: 02

Program Learning Outcomes:

- To produce global citizens speaking an International language in keeping with the institutional vision.
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.

To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts.
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

- To tell ones name and to spell it
- To understand the French keyboard
- To wish/welcome/identify/name someone
- To present oneself and someone else
- To fill a form
- To ask for information
- To understand and ask simple questions

Course Contents:

Unité 1 Premiers pas en France. Page: 1-17 Leçons 0, 1, 2 & 3

Contenu Lexical:

1. Les mots transparent (en sciences)
2. Quelques prénoms français
3. La prise de contact
4. La politesse
5. Les salutations
6. La famille
7. Les présentations
8. Quelques spécialités scientifiques
9. Les Chiffres de 0 à 20
10. Les ordinaux
11. L'adresse postale
12. L'adresse mail
13. Le numéro de téléphone

Contenu Grammatical:

1. Les accents
2. Etre au présent
3. Les articles indéfinis
4. Les pronoms personnels
5. Le féminin et le masculin
6. Les prépositions de lieu
7. Les articles définis
8. Avoir, étudier, habiter au présent, Les verbes du 1 er groupe au présent
9. Les adjectifs possessifs au singulier
10. Les pronoms toniques
11. L'interrogation

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 101/111 Foreign Language German

Semester 1:

Course Code: FLG 101/111

Credit units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of the course, students will be able to express simple vocabulary in oral and writing German language.

After successful completion of this semester, students will be able to:

- greeting formally and informally.
- self introduction
- countings from 1 To 100
- make simple sentences using present tense
- spelling names.
- describing objects with articles in the classroom

Course Contents:

Vocabulary:

- Personal information like age, name etc.
- Alphabets
- Greetings: Good morning, good afternoon, good evening, parting good bye Etc.
- describing objects with articles in the classroom

Grammar:

- Personal Pronouns
- Use of verbs >to be< and >to have< in simple present tense
- Use of regular verbs like to live, to go, to learn etc.
- Using definite and indefinite article in German in nominative case

- Interrogative pronouns > **who, what, where, where from, where to**<
- talk about gender, numbers and articles.
- Singular and plural
- Basic Phonetics: Consonants and Vowels

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: First 10 Lessons from Deutsch als Fremdsprache -1A, IBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: Studio D: Glossar A1 - Deutsch – Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 101/111 FOREIGN LANGUAGE SPANISH

Semester 1:

Course Code: FLS 101/111

Credit units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of the course, students will be able to express simple vocabulary in oral and writing. Students will be able to:

- Greet Formally and Informally
- Talk about gender, numbers and articles.
- Deal with basic Phonetics
- Introduce oneself and others
- Talk about Professions and nationalities
- Count from 1 To 20
- Get introduced to Hispanic Culture

Course Contents:

Vocabulary: Passport Form, personal information, age, Interrogative pronouns, Alphabets, to be able to spell names, surnames, Good morning, good afternoon, Good bye Etc. different professions, countries, nationalities, languages.

Grammar:

Subject pronouns

Use of verbs SER/ESTAR/TENER in simple present tense

Use of regular AR /ER/IR ending verbs.

Llamarse y dedicarse

Simple Negativesentences

ExaminationScheme:

Total: 100 marks

ContinuousEvaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) byMatideCerralozza Aragón, oscarCerralozza Gilli, Begoña Llovet Barquero, EdelsaGroup didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 101/111 FOREIGN LANGUAGE CHINESE

Semester I

Course Code: FLC- 101/111

Credit Units : 02

Program Learning Outcomes :

- To produce global citizens speaking an International language in keeping with the institutional vision .
- To give students a platform to understand Culture and Society of a different world.
- To enhance the possibilities of jobs in MNCs established in/outside the country.
- To enhance the possibilities of Studying Abroad

Aim: The Aims of Chinese language course at AUR is to equip students with the basic knowledge & skills in Chinese language so as to enable them to interact with Chinese speaking people and efficiently work in the Chinese environment and also to build a solid foundation for further studies in the language.

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

On the completion of first semester the students will be able to:

- Understand the nature and characteristics of Chinese language.
- Read Chinese Pinyin and Chinese Characters.
- Write Chinese Characters and sentences related to greetings & personal information.
- Speak Chinese dialogues related to greetings & personal information.
- Listen and understand simple Chinese words and dialogues of the text.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use; approx 70 Characters including 50 characters of HSK level -I.
- Understand China as a powerful nation.

COURSE CONTENT

1. Introduction to Chinese Language
2. Introduction to the Sound System , Initials and Finals
3. Table of sounds of Beijing Dialect
4. Tones
5. Writing System & Basic Strokes of Chinese Character
6. Rules of Stroke-Order of Chinese Character,
7. Expression of Greetings & Good wishes
8. Farewell
9. Asking & telling Personal Information : Name & Age
10. Personal Information : Residence
11. Personal Information : Family Members
12. Listening Skill & Practice
13. Conversation based on dialogues
14. China; an emerging world power (In English)

VOCABULARY CONTENT

Vocabulary will have approx 70 Characters including 50 characters of HSK-I level.

1. Vocab related to greetings & farewell; 你, 好, 再见。。。
2. Vocab related to personal information; 名字, 年纪, 家, 住, 爸爸。。

GRAMMATICAL CONTENT

1. Introduction to the sound system, initials and finals, sound table & tones.
2. Basic strokes of Chinese Character & stroke- order.
3. Conjunction 和.
4. Word order in Chinese sentence.
5. Adjective Predicate sentence.
6. 是sentence type (1).
7. Interrogative sentence with 吗.
8. Attributive & structural particle 的.

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text Books & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Chinese Reader (HSK Based) book-I (suggested reading)
3. Elementary Chinese Reader Book-I (suggested reading)

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Interior Design
Batch 2021-25 Onwards

Total Credits = 232

STAGE - I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

SECOND SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	St Per Week	P Per Week		
BID 201	Design – II	CC	0	6	0	9	6
BID 202	Materials & Construction Techniques - II	CC	1	1	1	3	3
BID 203	Art & Graphics- II	CC	0	0	2	1	2
BID 204	Graphics Skills -II	CC	0	0	4	2	4
BID 205	History of Interior Design - I	CC	2	0	0	2	2
BID 206	Building Services - I	CC	2	0	0	2	2
AND 002	Aanandam-II	VA	0	0	4	2	4
EVS 001	Environment Science	VA	4	0	0	4	4
BCS 201	English	VA	1	0	0	1	1
BSS 205	Behavioural Science – II (Problem Solving and Creative Thinking)	VA	1	0	0	1	1
	Foreign Language - II	VA				2	2
FLF 201	French	VA	2	0	0	0	0
FLG 201	German					0	0
FLS 201	Spanish					0	0
FLC 201	Chinese					0	0
	Minor Track	OE	3	0	0	3	3
	TOTAL		16	7	11	32	34

BID 201 DESIGN – II

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse functional spaces and the issues like clearances, lighting and ventilation, using the anthropometric study approach and work out Minimum and optimum areas for various functions.
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5 :	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Code: BID 201

Credit Units: 09 L-0/ST-6/P-0

Teaching hours: 06

Course Objective:

To impart ability to design single functional interior spaces by application of design principles learned in previous semester and to correlate with human activities.

Course Contents:

Module I: Study of single function internal spaces in built-environment for anthropometrics and human comfort/convenience. Project introduction for studio exercise

Module II : Case studies, Site Studies and Literature Studies

Case Studies – primary (existing single function interior spaces) and secondary (single function interior spaces through Literature); Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with bubble diagrams, circulation diagrams and sketches for discussion.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions on alternative sketch options. Design proposal to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Preparation of Presentation Drawings of the Final Design Proposal. Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models.

Suggested Design Exercise

The suggested design exercise - Bedroom, Living Room, Study Room, Reception Area, Travel Agent Office, Barber Shop, etc. Emphasis shall be on the composition, aesthetics and innovation. At least one major exercises and one minor design/time problems should be given. The final submission shall necessarily include a model.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal

Study tour conducted in previous semester shall be evaluated on the basis of report submission of study tour.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Water supply, waste disposal and environmental engineering, Chatterjee Water supply and sanitary engineering, Singh
2. Water supply and sanitation, Shah
3. S.C.Rangwala,“Water supply and sanitary engineering”, Chartar publishing house, Anand,1989.

References:

1. Design and practical handbook of plumbing, Mohan & Anand Plumbing Design and practice, Deolalikar
2. Civil handbook, Khanna
3. Building construction data Maintenance of buildings,Panchdhari
4. G.M. Fair, J.C. Geyer and D.Okun, “Water and Waste water engineering”, Volume II, JohnWiley & Sons, Inc. New York, 1968
5. Manual on sewerage and sewerage treatment, CPHEEO – Ministry of works and housing, NewDelhi, 1980
6. Renewable energy, basics and technology, supplement volume on integrated energysystems, Auroville, 1998

BID 202 MATERIALS AND CONSTRUCTION TECHNIQUES - II

Course Code: BID 202 Credit Units: 03 L-1/ST-1/P-1

Teaching hours: 03

A. COURSE LEARNING OUTCOME:

CLO 1 :	Distinguish between various type of wood though analysing their physical and chemical properties. Evaluate Cross sectional detail of a log Properties of Timber; Processing of Timber Evaluate and Identify use of timber & timber products in buildings
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Recognise the different types of openings made up of timber in day to day life & understand the construction techniques of making wooden doors and windows. Develop understanding regarding the different types of carpentry joints & their specific uses and evaluate the best suitable joint in openings. Understand the construction techniques of making wooden staircase. Understand the various types of wooden trusses, their different components and construction techniques of making wooden trusses.
CLO 4 :	Evaluating and Analysing with the market surveys, case examples or literature studies available.
CLO 5 :	Create details for constructing a wooden staircase. After evaluating and analysing various wooden joints , Students will create roof trusses, staircases, windows or door.

B. SYLLABUS

Course Objective:

- To acquaint the students about Timber as a building material and to familiarize them with construction techniques for use of the above materials in building work.

Course Contents:

Module I: Timber: Introduction- 2 weeks

Classification, Characteristics, Availability, Defects, Preservation and Applications.

Module II: Timber Doors- 2 weeks

Terminology, Classification, Types, Uses and Construction details. Battened, Lugged, Braced, Framed, Flush, Paneled, Glazed, Louvered and Wire-Gauged doors in single/ double shutter.

Module III: Timber Windows and Ventilators- 3 weeks

Terminology, Classification, Types, Uses and Construction details. Fixed, Casement, Panelled, Glazed, Louvered and Bay windows. Ventilators & its construction details.

Module IV: Wooden Staircases - 3 weeks

Terminology, Classification, Types, Uses and Construction details. Straight and Half-Turn Staircase.

Module V: Timber Products- 3 weeks

Introduction to different type of wood product-Softwood board, Hardwood board, Fiber board, Plywood, Mica, Veneer etc. Their manufacturing details, advantages, disadvantages, market Terminology, available Sizes, costs, Availability and Uses (Students shall required to do Market

Survey and make Presentations on above topics with detailed Report, Samples and Catalogs).

Exercises: Field trips, market survey of available materials. Preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

2. Building construction W.B.McKay
3. Building construction R Berry
4. Building construction Chudley
5. Building construction Francis D.K. Ching
6. Building construction Dr. B.C.Punmia

BID 203 ART AND GRAPHICS – II

Course Code: BID 203 Credit Units: 01 L-0/ST-0/P-2

Teaching Hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To develop the understanding of various most relevant Rendering to present drawings/ideas/expression for the purpose of a Design Project.
CLO 2 :	To create ability to identify the appropriate scale, proportion, aesthetic sense & balance between various elements/ components of social, economic, cultural and environmental aspects of design and to develop ability to represent the same with hand drawings/sketches etc.
CLO 3 :	To develop the ability of lateral thinking required for visualizing the balance between various building materials/colors & elements.
CLO 4 :	To develop ability to create better design solutions in an effective way by enhancing the observation

B. SYLLABUS

Course Objective:

The objective make the students aware of all the possible graphic skills used in interior design and provide a wider knowledge to the students about the various levels of graphic drawings. Familiarize with the principles and theories of graphics.

Course Contents:

Module I: Graphical representation

Graphical representation of furniture, human figures in 2D &3D, Rendering techniques for textures, materials, finishes, etc.

Module II: Sciography

Sciography in Interior Spaces & Furniture, Drawings solids, voids.

Module III: 3-D Graphics and Coloring

Models, 3-D forms: free standing paper models representing motives, shapes

Module IV: Painting

Theme based painting assignment.

Module V: Colored Rendering

Colored Rendering of given interior perspectives with shades and shadows using different mediums.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Text:

1. A Visual Dictionary of Architecture, Francis D.K. Ching
2. Creative Interiors (Design of Enclosed Space), Shashi Jain
3. Interior design illustrated, Francis D.K. Ching
4. Home Plumbing (The David & Charles Manual of), Ernest Hall
5. House Book (The Complete Guide to Home Design), Terence Conran
6. Architecture: Form, Space and Order Francis D.K. Ching

References:

1. Window Fashion, Charles T. Randall
2. Illustration + Perspectives (In Pantone Colors), Eiji Mitooka
3. Elements of Architecture, Meiss Pieree Von
4. Window Fashion, Charles T. Randall
5. Illustration + Perspectives (In Pantone Colors), Eiji Mitooka

BID 204 GRAPHIC SKILLS – II

Course Code: BAR 204 Credit Units: 02 L-0/T-0/P-4

Teaching hours: 04

A. Course Learning Objective

CLO 1 :	Understand and remember the fundamentals of drafting
CLO 2 :	Understand the fundamentals of geometry Understand the principle and different types of projections and views
CLO 3:	Produce presentations on all the four cognitive learning outcomes.

B. Syllabus

Course Objective:

To enable students to produce manual drawings perspective views of interior and Sciography. To impart the techniques of rendering required for effective presentation of interior views.

Course Contents:

Module I: Composition of solids

Composition of 3D and free forms. Create wall mural and interior sculpture.

Module II: Introduction to perspective – Plan Method

Importance and use of perspective drawing in interior; Anatomy of a perspective-cone of vision, station Points, picture plane, eye level, horizon line, ground line, vanishing point, etc; One point Perspectives Plan Method-simple form to interior views.

Module III: Perspective – Grid Method

One Point perspectives using Grid Method for faster production of Perspective Drawings.

Module IV: Sciography

Values in shades and shadows. Constructing plan shadows (point, line and plane), Constructing shadows in elevations (Point, line and Plane). Constructing shadows in perspective views. Short-cut methods for constructing shadows.

Module V: Introduction to Rendering (dry and Wet)

Presentation techniques in different types, medium and materials. Rendering perspectives in different media (Dry/water based color and ink etc.). Variation in color/ ink, as per light position. Use of basic plantation, human beings etc to introduce scale to interior perspectives.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

1. Architectural Graphics, C. Leslie Martin
2. Perspective and Sciography, Shankar Mulik
3. Interior Design, Ahmed Kasu
4. Architectural Graphics, Ching Frank
5. Engineering Drawing, N.D. Bhatt
6. Engineering Drawing – P.S. Gill

BID 205 HISTORY OF INTERIOR DESIGN - I

Course Code: BID 205

Credit Units: 02 L-2/T-0/P-0

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyze and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Examine the developments in the use of materials with different eras.
CLO 3:	Analyse the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS:

Course Objectives:

- To provide students a critical overview of the history of interior design, its connection to different periods and cultures, and its integral relationship with architecture and decorative arts.
- to give students a Global & Indian perspective of achievements and characteristics in interior design, and decorative arts and their relevance and impact on society.
- To develop an understanding of determinants that helped shape art forms & orders in Classical Periods & Indian architecture, interior design and decorative arts over time.

Course Contents:

Module I: Introduction- 2 weeks

How Design is a product of the period and culture that created it. Interior Design as a physical representation of political, religious, aesthetic, socio-economic, or other values shared by society. Interior design as a representation of specific ideals, and its influence on society and culture.

Module II: Study of history of Furniture Design - 3 weeks

Module content Characteristics & Significance of Furniture through the ages, History of furniture in the Middle Ages, 19th Century & 20th Century

Module III: Decorative arts of West: Gothic, Renaissance & Baroque Period- 2 weeks

Module content Interior Design elements, styles, schemes and art forms of Early Christian , Byzantine and Romanesque Period. Gothic, Renaissance and Baroque Period
Basic overview of Interior Design elements, styles, schemes and art forms like Rose Window, Vaults, etc.

Module I: Hindu: Temples, Buddhism & Mughal Period- 2 weeks

North and South Indian Styles and their different interior design elements, styles and decorative art forms. Developments in Rajputana (Rajasthan) period with respect to Interior Design Elements, Art Forms & Styles. Art forms of India - Madhubani Paintings, Tanjore Paintings, Kalamkari Work, etc.

Developments in Mughal period with respect to Interior design elements, arts forms and styles. Apprise about furniture and interior finishes, elements of mosque, etc.

Any important note or instruction for course coordinator

Examination Scheme

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	10	15	20	00	50

BID 206 BUILDING SERVICES-I

(Water Supply and Sanitation)

Course Code: BID 206 Credit Units: 02 L-2/T-0/P-0 Teaching hours: 02

A. Course Learning Objective

CLO 1 :	Understanding the scope, importance and ethics of the field of building services. Appreciate the requirements of different types of building services. Learn the concepts of the building services systems
CLO 2 :	To evaluate the quantity and quality of services to be provided.
CLO 3:	Identify the various appliances, fixtures and appurtenances. Learn about the popular techniques of the building sciences.
CLO 4	Study about the thumb rules and the byelaws of the services and learn how to apply the knowledge while designing the layout of the buildings and its execution
CLO 5	Develop reports and assignments containing write-ups, and sketches to express their understanding of building services during lectures and site visits.

B. Syllabus

Course Objectives:

- To acquaint students to basic principles of water supply, sanitation and plumbing by laws and systems.
- To assist them in design of plumbing systems at building to town level for different typologies.

Course Contents:

Module I: Water Supply- 2 weeks

Introduction to water supply- sources of water; impurities, purification and treatment of water, Need to protect water; and requirements of water supply for different building types- storage, distribution.

Water supply systems at City/ Settlement level; Distribution networks; schematic making of an overhead water reservoir for a town/city.

Module II: Drainage Systems - 3 weeks

Concept, design and detailing of drainage systems at micro and macro level- Introduction to municipal drainage systems at town level, Building/ Site planning for drainage systems, Rainfall, Storm water drains, gullies, open drains (construction, gradients, ventilation and maintenance etc.). Concept, design and detailing of rainwater harvesting systems. Self-cleansing velocity, invert levels, drains on sloping sites, sewage disposal system in unsewered localities- septic tank, soak pits, cesspools, aqua-privy, leeching pits for individual building of urban and rural areas.

Module III: Sanitation- Sewerage- 2 weeks

Purpose and principles, collection and conveyance of waste matter. Sewage treatment plants and bye products. Sewage system design at building and town level. Sanitary appliances, fixture, traps,

pipes and joints, drainage in non-municipal areas.Plumbing bye laws. Plumbing design of a toilet and kitchen

Module IV: Sanitation- Solid waste management - 2 weeks

Garbage types, collection and disposal- Purpose and methods (Incinerator, Dry disposal etc.). Garbage disposal in multi-story buildings, Treatment of industrial refuse, Refuse and pollution problems.R4 of waste management.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text & References:

Text:

1. A Visual Dictionary of Architecture, Francis D.K. Ching
6. Creative Interiors (Design of Enclosed Space), Shashi Jain
7. Graphic Interiors (Space Designed by Graphic Artists), Corina Dean
8. Interior design illustrated , Francis D.K. Ching

References:

1. Architectural Graphic standards, Boaz Joseph
9. Interior Design Visual, Maureen Mitton 2nd Edition
10. Illustration + Perspectives (In Pantone Colors), Eiji Mitooka
11. Neufert's Architect's data

AND 002 AANANDAM-II

Course Code: AND 002 Course Type: **Compulsory** Credit Units: **02**

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants are to be given** (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

GUIDELINES FOR GCSP (Group Community Service Project)
ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).
2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.
5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to<=54hrs (30-40 marks)**
- **O grade >54 hrs to<=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

EVS 201 ENVIRONMENT SCIENCE

Course Code: EVS 201

Credit Unit: 04

Teaching hours: 04

Course Objective:

The term environment is used to describe, in the aggregate, all the external forces, influences and conditions, which affect the life, nature, behavior and the growth, development and maturity of living organisms. At present a great number of environment issues, have grown in size and complexity day by day, threatening the survival of mankind on earth. A study of environmental studies is quite essential in all types of environmental sciences, environmental engineering and industrial management. The objective of environmental studies is to enlighten the masses about the importance of the protection and conservation of our environment and control of human activities which has an adverse effect on the environment.

Course Contents:

Module I: The multidisciplinary nature of environmental studies	<p>Definition, scope and importance</p> <p>Need for public awareness</p>
Module II: Natural Resources	<p>Renewable and non-renewable resources:</p> <p>Natural resources and associated problems; Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.</p> <p>Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.</p> <p>Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.</p> <p>Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.</p> <p>Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.</p> <p>Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.</p> <p style="padding-left: 40px;">Role of an individual in conservation of natural resources.</p> <p style="padding-left: 40px;">Equitable use of resources for sustainable lifestyles.</p>
Module III: Ecosystems	<p>Concept of an ecosystem, Structure and function of an ecosystem</p> <p>Producers, consumers and decomposers, Energy flow in the ecosystem</p> <p>Ecological succession, Food chains, food webs and ecological pyramids</p> <p>Introduction, types, characteristic features, structure and function of the following ecosystem:</p> <ol style="list-style-type: none"> a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem d. Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)
	<p>Introduction <u>Definition</u>: genetic, species and ecosystem diversity</p> <p>Biogeographical classification of India</p> <p>Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values</p>

<p>Module IV: Biodiversity and its conservation</p>	<p>Biodiversity at global, national and local levels India as a mega-diversity nation Hot-spots of biodiversity Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts Endangered and endemic species of India Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity</p>
<p>Module V: Environmental Pollution</p>	<p>Definition, causes, effects and control measures of:</p> <ul style="list-style-type: none"> a. Air pollution b. Water pollution c. Soil pollution d. Marine pollution e. Noise pollution f. Thermal pollution g. Nuclear pollution <p>Solid waste management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution.</p> <p>Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides.</p>
<p>Module VI: Social Issues and the Environment</p>	<p>From unsustainable to sustainable development Urban problems and related to energy Water conservation, rain water harvesting, watershed management Resettlement and rehabilitation of people; its problems and concerns. Case studies, Environmental ethics: Issues and possible solutions Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies. Wasteland reclamation, Consumerism and waste products Environmental Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness</p>
<p>Module VII: Human Population and the Environment</p>	<p>Population growth, variation among nations Population explosion Family Welfare Programmes Environment and human health Human Rights, Value Education, HIV / AIDS, Women and Child Welfare Role of Information Technology in Environment and Human Health Case Studies</p>

Module VIII: Field Work	<p>Visit to a local area to document environmental assets-river / forest/ grassland/ hill/ mountain.</p> <p>Visit to a local polluted site Urban / Rural / Industrial / Agricultural</p> <p>Study of common plants, insects, birds</p> <p>Study of simple ecosystems-pond, river, hill slopes, etc (Field work equal to 5 lecture hours)</p>
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Examination Scheme:

Components	CT	HA	S/V/Q	A	EE
Weightage (%)	15	5	5	5	70

Text & References:

- Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
- Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad 380 013, India, Email:mapin@icenet.net (R)
- Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p Clark
- R.S., Marine Pollution, Clarendon Press Oxford (TB)
- Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumabai, 1196p
- De A.K., Environmental Chemistry, Wiley Eastern Ltd. Down to Earth, Centre for Science and Environment (R)
- Gleick, H.P. 1993. Water in Crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford Univ. Press. 473p
- Hawkins R.E., Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay (R) Heywood, V.H & Waston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press 1140p.
- Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.
- Mckinney, M.L. & School, R.M. 1996. Environmental Science Systems & Solutions, Web enhanced edition. 639p.
- Mhaskar A.K., Matter Hazardous, Techno-Science Publication (TB) Miller
- T.G. Jr. Environmental Science, Wadsworth Publishing Co. (TB)
- Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA, 574p
- Rao M N. & Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd. 345p. Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
- Survey of the Environment, The Hindu (M)
- Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science
- Trivedi R.K., Handbook of Environmental Laws, Rules Guidelines, Compliances and Standards, Vol I and II, Enviro Media (R)
- Trivedi R. K. and P.K. Goel, Introduction to air pollution, Techno-Science Publication (TB) Wanger
- K.D., 1998 Environnemental Management. W.B. Saunders Co. Philadelphia, USA 499p

BCS 201 ENGLISH

Course Name	Course Code	LTP	Credit	Semester
General English	BCS 201	1:0:0	1	1

A. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Participate in conversation and in small- and whole-group discussion
CLO 2	Explore and use English as medium of communication in real life situation
CLO 3	Discuss topics and themes of a reading, using the vocabulary and grammar of the lesson
CLO 4	Identify features of a reading textbook and utilize them as needed
CLO 5	Prepare and deliver organized presentations in small groups and to whole class
CLO 6	Apply sentence mechanics and master spelling of high frequency words

B. SYLLABUS

Developing Listening Skills
Developing Speaking Skills
Developing Reading Skills
Developing Writing Skills
Principles of Good Writing - L Hill
Toasted English -R. K. Narayan
On Saying Please- A G Gardiner
All the World's a Stage : Shakespeare
Where the Mind is without Fear: R N Tagore
O Captain, My Captain: W. Whitman
Psalm of Life: H. Longfellow
Go Kiss the World by Subroto Bagchi; Steve Jobs By Walter Isaacson; Rich Dad, Poor Dad by Robert Kiyosaki; The Road Ahead by Bill Gates; What You See, Is What You Get By Alan Sugar (Non detailed study; any of books)

EXAMINATION SCHEME:

Components	CT/Mid-term	Project/Presentation/Assignment/Viva	Book Review	Quiz	Attendance	EE
Weightage (%)	15	10	10	10	5	50

SUGGESTED READINGS

Bhardwaj, Ashu. *A Course Book of English & Communication Skills*. Paragon: New Delhi, 2011.

Farhanthullah, T M. *Communication Skills for Technical Students*. Orient Black PVT: 2008.

Jha, Madhulika. *Echoes*. Orient Blackswan: New Delhi, 2007.

Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008.

Prasad, Dr P. *The Functional Aspects of Communication Skills*. SK & Sons: New Delhi, 2003.

Raman, Meenakshi and Sangeeta Sharma, *Technical Communication: Principles and Practice*. OUP: New Delhi, 2004.

BEHAVIOURAL SCIENCE - II

(PROBLEM SOLVING AND CREATIVE THINKING)

Course Code: BSS 205

Credit Units: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Recognize the relation critical thinking with various mental processes.
2. Identify hindrance to problem solving processes.
3. Analyze the steps in problem-solving process.
4. Create plan of action applying creative thinking.

Course Objective:

To enable the students:

- Understand the process of problem solving and creative thinking.
- Facilitation and enhancement of skills required for decision-making.

Course Contents:

Module I: Thinking as a tool for Problem Solving

What is thinking: The Mind/Brain/Behaviour

Critical Thinking and Learning:

Making Predictions and Reasoning

Memory and Critical Thinking

Emotions and Critical Thinking

Thinking skills

Module II: Hindrances to Problem Solving Process

Perception

Expression

Emotion

Intellect

Work environment

Module III: Problem Solving

Recognizing and Defining a problem

Analyzing the problem (potential causes)

Developing possible alternatives

Evaluating Solutions

Resolution of problem

Implementation

Barriers to problem solving:

Perception

Expression

Emotion

Intellect

Work environment

Module IV: Plan of Action

Construction of POA

Monitoring

Reviewing and analyzing the outcome

Module V: Creative Thinking

Definition and meaning of creativity

The nature of creative thinking

Convergent and Divergent thinking

Idea generation and evaluation (Brain Storming)

Image generation and evaluation

Debating

The six-phase model of Creative Thinking: ICEDIP model

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS**-Journal of Success; **HA**-Home Assignment; **P**-Presentation; **V**-Viva; **Q**-Quiz; **FC**- Flip class; **MA**- Movie Analysis; **CS**- Case study; **A**-Attendance

Text & References:

- Michael Steven: How to be a better problem solver, Kogan Page, New Delhi, 1999
- Geoff Petty: How to be better at creativity; Kogan Page, New Delhi, 1999
- Richard Y. Chang and P. Keith, Kelly: Wheeler Publishing, New Delhi, 1998.
- Phil Lowe Koge Page: Creativity and Problem Solving, New Delhi, 1996
- J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 3, Management (1996); Pfeiffer & Company
Bensley, Alan D.: Critical Thinking in Psychology – A Unified Skills Approach, (1998), Brooks/Cole Publishing Company.

FLT 201/211 FOREIGN LANGUAGE FRENCH (TECHNICAL)
Semester 2 Course Code: FLT 201/ 211 Credit Units: 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc

- To speak about the activities and hobbies
- To express ones tastes
- To excuse oneself
- To understand a mail
- To ask ones way
- To indicate the direction
- To express a wish
- To ask for information
- To give an order or a suggestion
- To read a plan of metro and RER.

Course Contents:

Unité 1 (Leçon 4) and Unité 2 Université et les grandes écoles : 18-39 Leçons 4, 5 & 6.

Contenu Lexical:

1. Les loisirs
2. Les saisons
3. Les nombres
4. Le logement et la ville
5. Les prépositions de lieu
6. Les verbes de direction
7. Les lieux de l'université
8. Les documents administratifs
9. Les expressions utilisées en classe par le professeur
10. Quelques raccourcis: diminutifs et sigles

Contenu Grammatical:

1. Aimer, faire et savoir au présent
2. La négation
3. Les adjectifs possessifs au pluriel
4. Le partitif
5. Aller au présent
6. <<il y a>>
7. L'usage des prépositions de lieu
8. Vouloir et pouvoir au présent

9. L'impératif
10. Le conditionnel de politesse

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 201/ 211 FOREIGN LANGUAGE GERMAN

Semester 2: Course Code: FLG 201/211

Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of this semester, students will be able to:

- Recognizing geographical locations.
- Know famous places in Germany and Europe.
- To be able to form basic questions
- use of past participle of verb was/were and make sentences.
- able to conjugate irregular verbs
- use possessive article for the nominative case
- Use of adjectives in sentences.
- They can describe their house like number of bedroom, kitchen etc
-

Course Content:

Vocabulary

- Verb was/were
- Types of Houses and Apartments,
- State and cities
- directions like north, south etc.,
- Neighboring countries of Germany and their respective languages.
- Description of house: Bedroom, bathroom, kitchen etc.

Grammar:

- Interrogatives – what, which, why, how, who, when
- Yes - no question
- Introduction of irregular verbs
- Article in accusative (definite and indefinite)
- Possessive article

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam

10	15	10	10	5	50
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Prescribed Text-Book:

Lesson 11 onwards from Deutschals Fremdsprache -1A, IBH & Oxford, New Delhi, 1977

References:

Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1 - Deutsch –Englisch**, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 201/211 FOREIGN LANGUAGE SPANISH

Semester 2:

Course Code: FLS 201/211

Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.
- To enhance all five skills of the language: Reading, Writing, Listening, Interacting and speaking.
- Adjectives to describe people
- To talk about locations and places.
- To be able to form basic questions
- Counting till 100
- To be able to speak about daily Routine and verbs of daily usage both regular & irregular verbs.

Course Content:

Vocabulary:

Home, Classroom, Neighborhood, hotel, Restaurant, Market, Days name, Months name, Colors names etc. Interrogatives.

Grammar:

Use of SER/ESTAR/TENER/ HAY

Difference between Estar and Hay

Demonstrative pronouns

Interrogatives – what, which, why, how, who, when

Introduction of irregular verbs

Possessive pronouns

ExaminationScheme:

Total: 100 marks

ContinuousEvaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero,
Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

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FLC 201/ 211 FOREIGN LANGUAGE CHINESE

Semester - II

Course Code: 201/211

Credit Units: 02

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

On the completion of second semester the students will be able to:

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters.
- Write Chinese Characters and sentences.
- Speak Chinese dialogues with correct pronunciation & tone.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Manipulate basic grammatical structures such as questions type (2), 有 sentence, verbal predicate, 们, numeration, time etc.
- Master and use most essential vocabulary items of day to day use; approx 110 Characters including 50 characters of HSK level -I.
- Understand Sino-Indian Relations.

COURSE CONTENT

1. Personal information : hobbies & habits
2. Personal information : abilities
3. Expression of gratitude
4. Expression of apology
5. Numbers & currencies
6. Expression of time
7. Description of weather
8. Description of direction,
9. Listening of dialogues
10. Conversation based on dialogues
11. Chinese CBT package /video clipping
12. Sino-Indian relations (in English)

VOCABULARY CONTENT

Vocabulary will include approx 110 Characters including 50 Characters of HSK-I level.

1. Vocab related to hobbies, abilities, gratitude, apology numbers, time, weather, direction, etc will be covered.

GRAMMAR CONTENT

1. Question of type (2) & (3)
2. 有 sentence
3. Auxiliary verbs: 要 会 能 可以
3. The sentence with a verb as its predicate.
4. 们 a plural suffix
5. Numeration

6. Interrogative pronoun 多少
7. Counting Money
8. A numeral-measure word as the attributive
9. Time words: Time, month, day & date
10. The demonstrative pronoun as the attributive
11. The adverbial adjunct:
12. Words of location

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text books & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Elementary Chinese Reader Book-I (suggested reading)
2. Chinese Reader (HSK Based) book-I (suggested reading)
3. Practical Chinese Grammar for foreigners (suggested reading)

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Interior Design
Batch 2020-24 Onwards

STAGE - I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

THIRD SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	St Per Week	P Per Week		
BID 301	Design- III	CC	0	6	0	9	6
BID 302	Materials & Construction Techniques - III	CC	1	1	1	3	3
BID 303	Art and Graphics – III	CC	0	0	2	1	2
BID 304	Graphics Skills- III	CC	0	0	4	2	4
BID 305	History of Interior Design – II	CC	2	0	0	2	2
BID 306	Building Services- II	CC	2	0	0	2	2
BID 307	Furniture Design Workshop - I	CC	0	0	2	1	2
Domain Elective – I (Select any One)							
BID 308	Photography	DE	0	0	2	1	2
BID 309	Vernacular Architecture						
BID 310	Model Making Workshop						
AND 003	Aanandam-III	VA	0	0	4	2	4
BCS 301	Communication Skills - I	VA	1	0	0	1	1
BSS 304	Behavioural Science – III (Interpersonal Communication)		1	0	0	1	1
	Foreign Language - III						
FLF 301	French						
FLG 301	German		2	0	0	2	2
FLS 301	Spanish						
FLC 301	Chinese						
	Minor Track	OE	3	0	0	3	3
	TOTAL		12	7	15	30	34

BID 301 DESIGN - III

Course Code: BID 301 Credit Units: 09 L-0/ST-6/P-0

Teaching hours: 06

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse functional spaces and the issues like clearances, lighting and ventilation, using the anthropometric study approach and work out Minimum and optimum areas for various functions.
CLO 2 :	Design according to the human considerations like, privacy, convenience, comfort, etc
CLO 3 :	Investigate, Compare and Infer existing architectural spaces through their measured drawings, models and photographs
CLO 4 :	Conclude and Recommend criteria to Justify/Decide basis for architecture design proposal
CLO 5 :	Develop, Propose and Draw the Design for a given architectural situation and Communicate through conventional architectural representations

B. SYLLABUS

Course Objective:

The objective of the course is to provide a clear understanding about the design elements and principles followed while designing interiors of a Residential unit like a house using different materials and architectural styles.

Course Contents:

Module I: Introduction

Study of internal spaces in Residences (2-3 Bedrooms) for anthropometrics, human comfort/convenience, culture and aesthetics. Project introduction for studio exercise

Module II :Case studies, Site Studies and Literature Studies

Case Studies – primary (existing Residences (2-3 Bedrooms)) and secondary (Residences (2-3 Bedrooms) through Literature); Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with bubble diagrams, circulation diagrams and sketches for discussion.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions on alternative sketch options. Design proposal to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Preparation of Presentation Drawings of the Final Design Proposal. Enhancement of presentation

skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models.

Suggested Design Exercise

The suggested design exercise – Residences - Villa, Townhouse, Apartments, Office cum Residence, etc. Emphasis shall be on the composition, aesthetics and innovation.

At least one major exercise and one minor design/time problems should be given. The final submission shall necessarily include a model.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text & References:

Text:

1. A Visual Dictionary of Architecture, Francis D.K. Ching
2. Creative Interiors (Design of Enclosed Space), Shashi Jain
3. Graphic Interiors (Space Designed by Graphic Artists), Corina Dean
4. Interior design illustrated , Francis D.K. Ching
5. (Space Designed by Graphic Artists), Corina Dean
6. Architecture: Form, Space and Order, Francis D.K. Ching

References:

1. Architectural Graphic standards, Boaz Joseph
2. Interior Design Visual, Maureen Mitton 2nd Edition
3. 100 Bright Ideas For color, Sue Rose

BID 302 MATERIALS AND CONSTRUCTION TECHNIQUES - III

Course Code: BID 302 Credit Units: 03 L-1/ST-1/P-1 Teaching hours: 03

A. COURSE LEARNING OUTCOME:

CLO 1 :	To define basic building elements.
CLO 2 :	To Recognize the various types of brick and stone masonry both in superstructure and foundation
CLO 3:	To know about the types and fundamental aspects of construction in stone & brick i.e masonry, openings.
CLO 4 :	To be able to use composite materials in a structure.
CLO 5:	To be aware of the properties and applications of the various materials

B. SYLLABUS

Course Objective:

- To acquaint the students about floor finishes as a building material. And to familiarize them with construction details and techniques in interior building works.

Course Contents:

Module I: Introduction to different hard finish flooring materials- 2 weeks

Natural Materials: Types of natural stones and application in flooring.

Man-Made Materials: Ceramics, Terrazzo, Vitrified Flooring, etc.

Module II: Introduction to semisoft finish materials- 2 weeks

Wood/ PVC /Cork, its application and fixing /finishing details.

Module III: Introduction to soft floor finishes- 3 weeks

Different types of Carpets/ Dari/ Rugs (man-made, machine made rugs and carpets)
Study of quality, material, thickness, properties applications on different surface.

Module IV: Flooring Patterns & Tile Alignment- 3 weeks

Different types of flooring patterns, designs and tile alignment in different spaces.

Module V: Fixing Details & Specifications- 3 weeks

Specification of floor finishes, fixing details, use of decorative/highlighter tiles other flooring materials. Fixing details and specification of tiles on various floor areas like Bedroom, Living rooms, bathrooms, kitchen, offices, etc.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

1. Building construction W.B.McKay
2. Building construction R Berry
3. Building construction Chudley
4. Building construction Francis D.K. Ching
5. Civil Engineering Handbook, P.N. Khanna
6. Structure in Architecture, Salvadori and Heller
7. Building construction Dr. B.C.Punmia

BID 303 ART AND GRAPHICS – III

Course Code: BID 303 Credit Units: 01 L-0/ST-0/P-2 Teaching Hours:02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To develop the understanding of various most relevant Rendering to present drawings/ideas/expression for the purpose of a Design Project
CLO 2 :	To create ability to identify the appropriate scale, proportion, aesthetic sense & balance between various elements/ components of social, economic, cultural and environmental aspects of design and to develop ability to represent the same with hand drawings/sketches etc.
CLO 3:	To develop the ability of lateral thinking required for visualizing the balance between various building materials /colors & elements.
CLO 4 :	To develop ability to create better design solutions in an effective way by enhancing the observation of shades and learning skills through existing structures, field study.
CLO 5:	To build ability to communicate effectively through graphical presentations and make the best use of most effective presentation skills while working in interdisciplinary groups.

C. SYLLABUS

Course Objective:

The objective of the course is to give an understanding about the graphics skills used in interior design. The emphasis also should be given on the contemporary arts in India and the works of great artists.

Course Contents:

Module I: Shading and rendering

Perspective view – one point and two point after developing them

Module II: Shades and shadows

Learning to draw Shades and shadows in Perspective with Rendering

Module III: Perspectives

Drawing Free hand perspectives and rendering, Draw the above on computer using different types of software.

Module IV: Collage and murals

Preparation of collage and murals for exterior and interior of buildings. Learning importance of collage for emphasizing the areas in interiors.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Text:

1. A Visual Dictionary of Architecture, Francis D.K. Ching
2. Creative Interiors (Design of Enclosed Space), Shashi Jain
3. Interior design illustrated, Francis D.K. Ching
4. Home Plumbing (The David & Charles Manual of), Ernest Hall
5. House Book (The Complete Guide to Home Design), Terence Conran
6. Architecture: Form, Space and Order Francis D.K. Ching

References:

1. Window Fashion, Charles T. Randall
2. Illustration + Perspectives (In Pantone Colors), Eiji Mitooka
3. Elements of Architecture, Meiss Pieree Von

BID 304 GRAPHIC SKILLS – III

Course Code: BID 304 Credit Units: 02

L-0/ST-0/P-4

Teaching Hours:04

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse & produce manual drawings of interpenetration of different solids in different positions and at different angles.
CLO 2 :	Understand the importance and use of perspective drawing in architecture; Anatomy of perspective-cone of vision, station Points and produce one point and two point perspective drawings manually through plan method and grid method.
CLO 3 :	Calculate and draw sciography, using different grades of shade and shadow in elevation and perspective views.
CLO 4 :	Apply the presentation techniques using different mediums such as color/ ink, as per light position. Also understand the use of basic plantation, vehicles, human beings etc to introduce scale to building perspectives.

B. SYLLABUS

Course Objective:

- To introduce computer graphics to students. The course is intended to develop the technique of interior rendering, graphic skills required for effective presentation technique.

Course Contents:

Module I: Intro to Computer Graphics and basic application of 2D drafting

Software- 2 weeks

Introduction to Auto CAD and its interface. Auto CAD co-ordinate system, inputting points, basic Auto CAD terminology, basic drafting commands.

Module II: Auto Cad (2-D): basic commands and introduction to use of printing equipment's and hardware- 2 weeks

To setting up a drawing environment; setting up the paper size setting unit setting grid limit, drawing limit, snap controls. Two-dimensional drafting work to be handled in detail on Auto Cad. Basic Drafting commands (Related to drafting of line to All geometrical shapes).

Module III: Auto Cad (2-D): modifying commands- 3 weeks

Basic commands related to drawing properties “layer control change properties, line-weight control”. Use of Display Commands, editing commands, construction commands, enquiry commands etc., Hatching & texting in drawing, Working on layout & x-ref etc. Drafting of Plan(s), Elevation(s) and Section(s).

Module IV: Auto Cad (2-D): advanced commands- 3 weeks

Draw, edit and create a complete set of architectural drawings for a dwelling unit using AutoCad Plan(s), Elevation(s) and Section(s) in detail. Create final presentation and documentation of 2D drawings in AutoCad.

Module V: Use of photo editing Software- 3 weeks

Familiarizing the use of printers, plotters their hardware and other related systems. Various Settings & different mode to print Auto CAD drawing. Importing & exporting the drawings from one software into other.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

BID 305 HISTORY OF INTERIOR DESIGN - II

Course Code: BID 305 Credit Units: 02 L-2/ST-0/P-0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Analyse and evaluate the building styles of different eras and the strategic developments of forms and structures
CLO 2 :	Synchronize the construction activities with installation of building services. Select the suitable system for particular requirements of buildings.
CLO 3 :	Understanding the importance of sound energy and its impact on building design and also able to control noise within the interior and from exterior sources.

B. SYLLABUS

Course Objectives:

- To make the students understand about the trends of interior design development and movements associated with them like Arts & Crafts, Art Deco and emergence of modernism and contemporary interiors of 20th Century
- To give students a Global & Indian perspective of achievements and characteristics in interior design, and decorative arts and their relevance and impact on society.
- To develop an understanding of determinants that helped shape art forms & design elements in modern periods
- To familiarize students with the emergence and necessity of interior design and decoration which resulted in emergence of the profession.

Course Contents:

Module I: Early 19th century and Mid 19th century – 2 Weeks

Industrial Revolution, Period – Early 19th century. Victorian taste with change, Period – Mid 19th Century

Module I: Late 19th century – 3 Weeks

The search for a new style, Period – Late 19th Century in reference to European and American style

Module II: Early 20th Century– 3 Weeks

Arts & Crafts movement, Art Nouveau, Impressionism Period – Early 20th Century

Module III: Mid 20th Century - 3 Weeks

Art Deco, Bauhaus Movement and the Modern, Period – Mid 20th Century

Module IV: Late 20th century- 3 Weeks

The Post – Modern/ contemporary era, Minimalism, Photo Realism Period – Late 20th century Present universal trends emerging all over world. Overview of prominent works by Frank O Gehry, I.M. Pei, John Urtzon, Norman Foster, Zaha Hadid. Furniture design by prominent architects and

designers like Le Corbusier, Charles and Ray Eames, Eero Saarinen, Marcel Breuer

Examination Scheme

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	10	15	20	00	50

Text Books /Reference Books/Journals/Other Study Material:

1. The History of Arch. in India, Chrictophes Tadjell
2. History of Interior Design, Jeannie Ireland
3. A History of Interior Design, John F Pile
4. The History of Arch. in India, Chrictophes Tadjell
5. Interior design & space planning, Dechiara Pabero Zelnik
6. Interior design illustrated, Francis D.K. Ching
7. Islamic Architecture in Interior, Satish Grover
8. The Best Interior India, Anuradha Mahindra
9. Indian Interior, Angelika Taschen

BID 306 BUILDING SERVICES-II (Electrical System & Lighting)

Course Code: BID 306 Credit Units: 02 L-2/ST-0/P-0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Understand the basic of sound energy, process and are able to manage building acoustical services provisions in construction sites.
CLO 2 :	Examine the developments in the use of materials with different eras
CLO 3 :	Analyse the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS

Course Objectives:

- To integrate electrical system with building design. Application of indoor and outdoor lighting in various planning and installation requirement right from generation to actual building level so that the students could use the same in their design.

Course Contents:

Module I: Introduction to electrical systems- 1 weeks

Introduction to electrical engineering services for buildings; Sources of electrical energy supplied to buildings

Electricity generation, transmission and distribution. Instruments for measurement, metering; Electricity Authority, Act, rules and regulation regarding electrification of buildings; Standard Graphical symbols for electrical systems; electric fittings and appliances; Requirements of electrical materials such as conductors, insulators; Types and requirements of electrical cables

Module II: Electrical System design for a building - 1 weeks

Basic Principles of electrical circuit, Methods of wiring -Open and concealed wiring system, distribution system and supply in a building, distribution board and meter, switches; Electrical load calculation,; Design considerations of electrical installations, Study of Electrical layout in a building.

Module III: Electrical safety and protection system - 1 weeks

Protection against overload, short circuit, Control equipment such as switch gear, safety devices to be used in electrical layouts - Fuse, M.C.B, MCCB, ACB, VCB, RCB, ELCB; Earthing and Lightning Protection

Module IV: Photometric Concepts and Day Lighting- 1 weeks

Introduction to basic photometric concept: Light its behaviour and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module V: Artificial Lighting- 1 weeks

Introduction to basic photometric concept: Light its behaviour and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module VI: Design Exercise- 2 weeks

Design and developed detailed layout of electrical and lighting services of previous semester design problem.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

1. Raina K. B. & Bhattacharya S. K. (2007) Electrical Design, Estimating and Costing, New Age International Publishers, New Delhi.
2. Dagostino, F. R. (1978) Mechanical and Electrical Systems in Construction in Architecture, Reston Publishing Company, Prentice Hill Co., Virginia.
3. Egan, D. M. (1983) Concepts in Architectural Lighting, McGraw Hill Book Company.
4. Flynn, J. E. et. al (1992) Architectural Interior Systems: Lighting, Acoustics and Air conditioning, Van Nostrand Reinhold
5. NBO (1966) Hand book for Building Engineers, National Buildings Organisation, New Delhi.
6. Grondzik, W. T., Kwok, A.G., Stein, B, Reynolds, J. S. (2009) Mechanical and Electrical Equipment for Buildings, Wiley
7. "Electric Heating",E.P. Ambrose,John Wiley & Sons Inc., New York, 1968.
8. Electrical Technology, Seventh Edition,H. Cotton,CBS publications, 2003

BID307 FURNITURE DESIGN WORKSHOP - I

Course Code: BID 307 Credit Units: 01 L-0/ST-0/P-2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To learn about the Importance of ergonomics, material design and working parameters and visual perception of furniture..
CLO 2 :	To know standards Human factors, therefore, are a major influence on the form, proportion, and scale of furniture.
CLO 3 :	To Evaluate the effectiveness of a furniture element, unified appearance of built - in furniture with the flexibility and movability of furniture.
CLO 4	To evaluate each material's strengths and weaknesses that should be recognized in furniture design.
CLO 5	To design ideas into three dimensional reality

B. SYLLABUS

Course Objectives:

The aim of the course is to make the students aware of the furniture designing which is a important part of interior design. The history of furniture is also to be introduced and described as the part of the course.

Course Contents:

Module I: Ergonomics & Anthropometry - 2 weeks

Introduction to Ergonomics of furniture design **Module**

I: Furniture design – 2 weeks

Furniture design, Analyzing furniture type, form and designing

Module III: Furniture materials - 4 weeks

Introduction to furniture design as per different materials and studying ergonomic design to prevent repetitive strain injuries and other musculoskeletal disorders.

Module IV: Parameters - 2 weeks

Analyzing working parameters and visual perception of furniture.

Module V: Measuring drawing - 4 weeks

Measuring drawing of a simple furniture and make it in the workshop, Introduction to various typology of furniture.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Architectural Models: Construction Techniques – Wolfgang Knoll, Martin Hechinge
2. Model-Making: Materials and Methods – David Neat

Reference Books

1. The aesthetic experience –magnet Jacque Form, Space & Order – D.K Ching.
2. Object by Architects – tapert,Annette,swid powell Art Forms – Preble,duame

Domain Electives – I

BID 308 PHOTOGRAPHY

Course Code: BID 308 Credit Units: 01 L-0/ST-0/P-2

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	A comprehensive knowledge and understanding of light, exposure and colour , and their application in architectural lighting
CLO 2 :	An advanced understanding of theories of photographic composition, balance and weight
CLO 3 :	A knowledge of the history of architectural photography, with an awareness of the contextual boundaries within, and outside of, the genre.
CLO 4 :	An advanced ability to use film and digital cameras to capture and create outstanding photographs of architecture, form and space

B. SYLLABUS

Course Objective:

This course will teach students to create successful images of exterior architecture, interior architectural design, as well as architectural models. The course discusses equipment, processes, and procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress. Students will learn to use Digital SLR camera, lighting techniques, software and to create output. Students will be able to use High Dynamic Range (HDR) : multiple exposures to create dramatic architecture/interior images without additional professional lighting.

Course Contents:

Module I: Architectural Photography

Origins of architectural photograph, Review of architectural photographs, Light and Shades, Understanding light – Properties and elements of light. Basics of camera – Operations and Control Parallax Error, use of camera, lens and understanding lighting conditions. Pixels, resolution, Sensor size

Module II: Light and Architecture

Understanding light and photography, External lighting- Direction of lighting - front, side, back, shadows, texture, and effects of clouds, light modification, psychological effects, and types of artificial lighting, combined daylight and flash. Overview of architectural photography, Color balance, Reading histogram, White balance and Color temperature.

Module III: Creativity in Shooting

Finding Forms and Shapes, Elements and Principals of framing, Rules of composition, Aesthetic of framing and composition, Perceptual Control, Depth of field and center of confusion, Exterior and interior photography, Flash control

Module IV: Digital Post Production

Introduction to software, RAW file editing, HDR Imaging, Adobe Photoshop and Light room, Retouching and color correction, Printing Preparation

Module IV: Framing Views

Single point and two point perspective- examples, distortions, emphasizing architectural elements, effect of camera to subject distance, oblique angles, three point perspective-applications in interiors and exteriors - composition, symmetric composition, applying the law of thirds - examples, image capture to publication.

Project : Students should submit two projects at the end of the semester. (a) Interior Photography
(b) Exterior Photography

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

1. Ackerman, J. S. (2001). *On the origins of architectural photography*. Mellon lecture, December, 4, 2.
2. Harris, M. G., & Harris, M. G. (1998). *Professional architectural photography*. Oxford: Focal Press.
3. Rosa, J., & McCoy, E. (1994). *A constructed view: The architectural photography of julius shulman*. Rizzoli Intl Pubns.
4. Siskin, J. (2012). *Photographing architecture: lighting, composition, postproduction, and marketing techniques*. Buffalo, NY: Amherst Media.
5. Schulz A., *Architectural Photography: Composition, Capture, and Digital Image Processing*, O'Reilly Media Inc., 2010
6. Michael Heinrich, *Architectural photography*, Birkhauser, 2009
7. Michael G. Harris, *Professional Architectural Photography*, Taylor & Francis, 2002 4.
8. Kopelow A., *Architectural Photography the Digital Way*, Princeton Architectural Press, 2007

BID 309 VERNACULAR ARCHITECTURE

Course Code: BID 309

Credit Units: 01 L-0/ST-0/P-2

Teaching hours: 02 Hours

A. COURSE LEARNING OUTCOME:

CLO 1 :	To understand how the contexts of a region have an impact on vernacular architectural forms.
CLO 2 :	To explore various traditional materials and construction techniques used in vernacular architectural forms.
CLO 3 :	To acquire knowledge on traditional materials and construction techniques which can be used in the design of built spaces in the modern context.
CLO 4 :	Understanding the impact of context of a region over architectural forms and expressions will lead to sensible and context specific and sensitive design solutions.

B. SYLLABUS

Course Objectives:

To expose the students to traditional architecture of the various parts of the country. The students will have knowledge of the planning aspects, materials used in construction, constructional details and settlement planning of the settlements in various parts of the country.

Course Contents:

Module I: Introduction to Vernacular Architecture

Approaches and concepts to the study of Vernacular architecture – Introduction to Kutcha architecture and Pucca architecture and architecture without architects developed through experience based on local material.

Module II: Southern region

Planning aspects, materials of construction, Constructional details & Settlement Planning of: Kerala – Nair houses (Tarawads), Kerala Muslim houses (Mappilah houses), Temples, Palaces and theaters – Thattchushastra.

Tamil Nadu – Toda Huts, Chettinad Houses (Chettiars) & Palaces

Karnataka – Gutthu houses (land owning community), Kodava ancestral home (Aynmane)

Andhra Pradesh –Kaccha buildings Religious practices, beliefs, culture & climatic factors influencing the planning of the above.

Module III: Western Region:

- Planning aspects, Materials used, Constructional details, Climatic factors influencing the planning of Jat houses for farming caste, Bhungas(Circular Huts) and Havelis(Pukka houses) of Rajasthan
- Pol houses of Ahmedabad - Primitive forms, Symbolism, Colour, Folk art etc in the architecture of the deserts of Kutch & Gujarat state.
- Vernacular architecture of Goa.

Module IV : Northern and Eastern India

- Planning aspects, Materials used, Constructional details, Climatic factors influencing the planning of
- Kashmir – Typical Kutcha houses, mosque, Dhoongas(Boathouses), Ladakhi houses, bridges
- Himachal Pradesh – Kinnaur houses
- Uttar Pradesh – Domestic housing of Uttar Pradesh
 - Bengal – Bangla (Rural house form), Aat Chala houses – change from Bangla to Bungalow, Kutcha & Pucca architecture of Bengal.Nagaland – Naga houses & Naga village, Khasi houses Factors influencing the planning aspects, materials of construction& constructional details of the above.

Module V : Vernacular Architecture

Overview of vernacular Architecture of neighbouring countries and world such as Africa, UAE etc.

Exercise : students may be advised to prepare case studies through literature/online/ site visits and submit report.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

1. Traditional buildings of India, Ilay Cooper, Thames and Hudson Ltd., London
2. Architecture of the Indian desert, Kulbushan Jain & Meenakshi Jain, Aadi Centre, Ahmedabad
3. The Royal Palaces of India, George Michell, Thames and Hudson Ltd., London
4. Chettiar Heritage, S.Muthiah, Meenakshi Meyappan, Visalakshmi RAMASWAMY, Lokavani-Hallmark Press Pvt. Ltd., Chennai
5. Encyclopaedia of Vernacular architecture of the World, Cambridge University Press
6. Havali – Wooden houses & mansions of Gujarat, V.S.Pramar, Mapin Publishing Pvt. Ltd., Ahmedabad
7. The Tradition of Indian architecture – Continuity & Controversy – Change since 1850, G.H.R.Tillotsum, Oxford University Press, Delhi
8. VISTARA – The architecture of India, Carmen Kagal. Pub : The Festival of India, 1986.
9. House, Form & Culture, Amos Rappoport, Prentice Hall Inc, 1969

BID310 MODEL MAKING WORKSHOP

Course Code: BID 310 Credit Units: 01 L-0/ST-0/P-2 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To remember different tools used in carpentry, masonry and surface painting
CLO 2 :	To understand the technique of applying construction material such as brick, cement, wood, stone and its testing.
CLO 3:	To construct different building components like dome, arch and wall with various typologies.
CLO 4 :	To create new forms and structures using the learned techniques.

B. SYLLABUS

Course Objectives:

To introduce various fabrication skill and techniques to produce scale –models and to encourage preparation of models as an essential phase in design development and evaluation.

Course Contents:

Module I: Introduction to model-making - 4 weeks

Need, role of scale models in design, general practices, Essentials of model-making, understanding of various tools And machines employed, best practices involved in operating the tools and the techniques.

Module I: Materials for model-making - 4 weeks

Introduction of various materials available for model making such as papers, mount boards, mount sheets, wood, plastics, films, plaster of Paris, acrylic sheets, metal, glass, FRP etc. Potential of these materials, in model-making

Module III: Techniques of scale-modeling- 6 weeks

Use of different scale, templates, measuring aids, conventions followed. Techniques for preparation of presentation models, mock-ups, simulation of various materials and textures such as wood, glass, aluminum, steel, bricks, roofing tiles, flooring, etc. Models with soft materials like; clay, plaster of Paris etc. Models of shells & membrane structures by use of canvas molding cloth

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Architectural Models: Construction Techniques – Wolfgang Knoll, Martin Heching

2. Model-Making: Materials and Methods – David Neat

Reference Books

1. The aesthetic experience –magnet Jacque Form, Space & Order – D.K Ching.
2. Object by Architects – tapert,Annette,swid powell Art Forms – Preble,duame

BCS 301 COMMUNICATION SKILLS - I

Course Code:BCS 301

Credit Units: 01

Teaching hours: 01

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS 301	1:0:0	1	1

B. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Inculcating creative thinking skills
CLO 2	Construct and showcase their communication skills in a creative manner.
CLO 3	Comprehending and demonstrating ways of self-introduction
CLO 4	Outlining and illustrating presentation Skills

B. SYLLABUS

Topic
Self-Actualization (Baseline, Self-Image Building, SWOT, Goal Setting)
Telephone Etiquette
GD-1 (Basics, Do's & Don'ts, Mannerism, Dynamics, GD Markers)
Book Review Presentation

EXAMINATION SCHEME:

Components	Self Introduction	GD	Book Review Presentation	Attendance
Weightage (%)	30	35	30	5

SUGGESTED READINGS

- Business Communication, Raman – Prakash, Oxford
- Creative English for Communication, Krishnaswamy N, Macmillan
- Textbook of Business Communication, Ramaswami S, Macmillan
- Writing Skills, Coe/Rycroft/Ernest, Cambridge

BEHAVIOURAL SCIENCE – III: (INTERPERSONAL COMMUNICATION)

Course Code: BSS305

Credit Units: 01

Course learning outcomes (CLOs):

At the successful completion of this course you (the student) should be able to:

1. Demonstrate knowledge of strategies for developing a healthy interpersonal communication.
2. Recognize the importance of transactional analysis, script analysis.
3. Identify the difference between healthy and unhealthy expression of emotions and develop emotional competence necessary for conflict resolution and impression management.
4. Enhance personal effectiveness and performance through effective interpersonal communication.

Course Objective:

This course provides practical guidance on

- Enhancing personal effectiveness and performance through effective interpersonal communication
- Enhancing their conflict management and negotiation skills

Course Contents:

Module I: Interpersonal Communication: An Introduction

Importance of Interpersonal Communication

Types – Self and Other Oriented

Rapport Building – NLP, Communication Mode

Steps to improve Interpersonal Communication

Module II: Behavioural Communication

Meaning and Nature of behavioural communication

Persuasion, Influence, Listening and Questioning

Guidelines for developing Human Communication skills

Relevance of Behavioural Communication for personal and professional development

Module III: Interpersonal Styles

Transactional Analysis

Life Position/Script Analysis

Games Analysis

Interactional and Transactional Styles

Module IV: Conflict Management

Meaning and nature of conflicts

Styles and techniques of conflict management

Conflict management and interpersonal communication

Module V: Negotiation Skills

Meaning and Negotiation approaches (Traditional and Contemporary)

Process and strategies of negotiations

Negotiation and interpersonal communication

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; JOS-Journal of Success; HA-Home Assignment; P-Presentation; V-Viva; Q-Quiz; FC- Flip class; MA- Movie Analysis; CS- Case study; A-Attendance

Text & References:

- Vangelist L. Anita, Mark N. Knapp, Inter Personal Communication and Human Relationships: Third Edition, Allyn and Bacon
- Julia T. Wood. Interpersonal Communication everyday encounter

- Simons, Christine, Naylor, Belinda: Effective Communication for Managers, 1997 1st Edition Cassel
- Goddard, Ken: Informative Writing, 1995 1st Edition, Cassell
- Harvard Business School, Effective Communication: United States of America
- Foster John, Effective Writing Skills: Volume-7, First Edition 2000, Institute of Public Relations (IPR) Beebe, Beebe and Redmond; Interpersonal Communication, 1996; Allyn and Bacon Publishers

FLT 301/ 311 FOREIGN LANGUAGE FRENCH

Semester 3 Course Code: FLT 301/311 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc

- To understand and present the time schedule and to tell the time
- To understand and draft a short biography and to present a scientist
- To understand an online conversation and read a program and the timings.
- To propose an outing and to accept an outing.
- To leave a message on the answering machine

Course Contents:

Unité 3 La science au quotidien Page : 40-61 Leçons 7, 8 & 9

Contenu Lexical:

1. L'heure
2. Les jours de la semaine
3. Les mois de l'année
4. Les matières et types de cours
5. Les spécialitésscientifiques.
6. L'annéeuniversitaire
7. Les nationalités
8. Les noms de pays
9. Les métiers scientifiques
10. Les chiffres de 69 à l'infini
11. Quelquesunités de mesure
12. Quelquestermesscientifiques
13. Les termes de l'exposition
14. Les expression familières pour accepter une invitation.

Contenu Grammatical:

1. Finir, commencer au présent
2. Les prepositions de temps
3. Féminins et masculine des noms de métiers scientifiques
4. Les adjectifs de nationalité.
5. Le future proche
6. Les adjectifs demonstratives
7. Le but: pour + infinitive

8. Le register familier

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 301/311 FOREIGN LANGUAGE GERMAN

Semester 3: Course Code: FLG 301/311

Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.

After successful completion of this semester, students will be able to:

- describe furniture in a room.
- ask question related to time like when, from when etc.
- tell time (formal and informal)
- how to make calls on phone
- can excuse for cancel appointments.
- speak about their daily routine.

Course Contents

Vocabulary:

- Furniture
- Days and months name
- Time vocabulary like 15 min, quarter, minute, seconds.
- Adjectives use to describe furniture.

Grammar:

- Past participle of verb had
- Usage of negation like **not = nicht; kein= not a single.**
- Preposition of time.
- Use of adjective in sentences.
- Introduction and use of separable verbs

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: First 10 Lessons from Deutsch als Fremdsprache -1B, INBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen,

2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 301/311 FOREIGN LANGUAGE SPANISH

Semester 3: Course Code: FLS 301/311 Credit units : 02

Course Learning Objective:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.
- Students will be able to communicate in small sentences in oral, self introduction, family description etc.
 - To enable the students to talk about a place like, class room, market, neighborhood and location of thing with the use of prepositions.
 - To talk about one's likes/dislikes, how one is feeling, to express opinions, pain and illness.
 - Time and date
 - Speaking about prices/currency/ market and quantity.
 - Counting above 100,
 - To discuss near future plans

Course Content

Vocabulary:

Vocabulary pertaining to describe people/ place /objects, Illness, Currency, Market etc. preferences, opinions , body parts etc.

Grammar:

Introduction of stem changing irregular verbs

Introduction of prepositions (Cerca de/ lejos de/ encima de etc.)

Present continuous tense (**Estar+ gerundio**)

Introduction of third person verbs Gustar/Parecer/Encantar/ Doler etc

Interrogatives – How much/ How many

Introduction of irregular verbs.

Immediate future plans (Ir a + verbo)

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					EndSem Evaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) byMatideCerralozza Aragón, oscarCerralozza Gilli, Begoña Llovet Barquero, EdelsaGroup didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 301/ 311 FOREIGN LANGUAGE CHINESE

Semester - III

Course Code: FLC- 301/311

Credit Units: 02

Course Learning Objectives:

- Students will hone Basic language skills such as reading, writing, speaking, listening & interactive in the language
- Students will be able to read and interpret small texts .
- Students will be able to communicate in small sentences in writing, self introduction, family description etc.

Students will be able to communicate in small sentences in oral, self introduction, family description etc

On the completion of third semester the students will be able to attain the proficiency of HSK-I and they will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out conversation in the target language.
- Manipulate basic grammatical structures such as: 在 是 有 sentence, etc.
- Master and use most essential vocabulary items of day to day use and programme specific vocabulary; approx 100 Characters including 50 characters of HSK level -I.

COURSE CONTENTS

1. Description of size
2. Description of quantity
3. Asking and replying questions on shopping
4. Asking and replying questions on Communication
5. Conversation Related to Study
6. Conversation Related to Work
7. Expression of Simple Feelings
8. Listening of dialogues
9. Conversation based on dialogues
10. Programme Specific Vocabulary & Expressions
11. Chinese CBT Package
12. Chinese Festivals (In English)

VOCABULARY CONTENTS

1. Vocabulary will include approx 100 Characters including 50 Characters of HSK-I level.
2. Vocab related to size, quantity, shopping, communication, study, work and simple feelings and Programme Specific Vocabulary will be covered during this semester.

3. By the end of third semester the students will be able to master all 150 characters set for the HSK level-I.

GRAMMATICAL CONTENTS

1. Antonyms

2. Prepositional phrases
3. The object of 在 从
4. Complement of degree
5. Preposed object
6. Verb 在
7. 有 and 是 indicating existence
8. Question of type (4)
9. The 是 sentence type (2).
10. Sentence with a verb taking two objects

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References

1. Learn Chinese with me book-I (Major Text book), People's Education Press
2. Elementary Chinese Reader Book-I
2. Chinese reader (HSK Based) book-I
3. Module on Programme specific vocab.

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Interior Design
Batch 2020-24 Onwards

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits
Studio (ST) - 1 Hr. = 1.5 Credits
Practical (P) - 2 Hrs. = 1 Credit

FOURTH SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	St Per Week	P Per Week		
BID 401	Design – IV	CC	0	6	0	9	6
BID 402	Materials & Construction Techniques - IV	CC	1	1	1	3	3
BID 403	Art and Graphics – IV	CC	0	0	2	1	2
BID 404	Graphics Skills –IV	CC	0	0	4	2	4
BID 405	Furniture Design Workshop – II	CC	0	0	2	1	2
BID 406	Building Services – III	CC	2	0	0	2	2
Domain Elective – II (Select any One)							
BID 408	Innovative Material for Finishes	DE	2	0	0	2	2
BID 409	Interior Documentation						
BID 410	Barrier Free Space Planning for Interiors						
AND 004	Aanandam - IV	VA	0	0	4	2	4
BCS 401	Communication Skills – II	VA	1	0	0	1	1
BSS 404	Behavioral Science - IV (Relationship Management)	VA	1	0	0	1	1
	Foreign Language - IV	VA	2	0	0	2	2
FLF 401	French						
FLG 401	German						
FLS 401	Spanish						
FLC 401	Chinese	OE	3	0	0	3	3
	Minor Track						
	TOTAL		12	7	13	29	32

BID 401 DESIGN - IV

Course Code: BID 401 Credit Units: 09 L-0/ST-6/P-0

Teaching hours: 06

A. Course Learning Outcome

CLO 1 :	Investigate the nature of the problem by analyzing the project brief, data collected from literature studies, site visits, case studies and other specific studies.
CLO 2 :	Create design concepts for the given project based on the developed understanding of the project.
CLO 3 :	Apply the learning of previous semesters and other allied subjects of the semester
CLO 4 :	Develop the architectural project in terms of architectural drawings, models, etc. with all the given requirements.

B. Syllabus

Course Objective:

The objective of the course is to provide a clear understanding about the design elements and principles followed while designing interiors of a Offices - open and enclosed.

Course Contents:

Module I: Introduction

Study of internal spaces in Offices - open as well as enclosed/ cubicles (bureaucratic, IT Sector, Corporate etc.) for anthropometrics, task, human comfort/convenience, culture and aesthetics. Project introduction for studio exercise

Module II: Case studies, Site Studies and Literature Studies

Case Studies – primary (existing Offices –open/enclosed) and secondary (Offices – open/enclosed through Literature); Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with bubble diagrams, circulation diagrams and sketches for discussion.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions on alternative sketch options. Design proposal to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Preparation of Presentation Drawings of the Final Design Proposal. Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models.

Suggested Design Exercise

The suggested design exercise – Offices - bureaucratic, IT, Corporate, Industrial etc. of maximum 200sq.m. Emphasis shall be on the composition, aesthetics, functional efficiency and innovation.

At least one major exercise and one minor design/time problems should be given. The final submission shall necessarily include a model.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal

Study tour conducted in previous semester shall be evaluated on the basis of report submission of study tour.

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text & References:

Text:

- Interior Best Collection, Commerce Asia II, Archiworld
- Interior Design- Ahmed Kasu
- Interior Design Illustrated - Francis D.K. Ching
- Time Saver standards for Interior Designing and Space Planning , Joseph Dechiara and Julius Panero

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Architectural Graphic standards editor, Boaz Joseph
- Planning – the Architect’s handbook, E and E.O.
- Neufert’s Architect’s data

BID 402 MATERIALS AND CONSTRUCTION TECHNIQUES - IV

Course Code: BID 402 Credit Units: 03 L-1/ST-1/P-1

Teaching hours: 03

A. Course Learning Outcome

CLO 1	To illustrate the application of metal as construction material.
CLO 2	To demonstrate the various properties & characteristics of basic building materials such as steel & aluminum.
CLO 3	To demonstrate the application of steel and aluminum in actual building construction.
CLO 4	To elucidate the knowledge of various construction details of foundations, staircase & door window built in metal.
CLO 5	To indicate knowledge of steel trusses.

B. Syllabus

Course Objective:

- To familiarize students with different transparent/ translucent materials such as Glass, acrylic Sheets, polycarbonate sheets etc. and construction techniques for use as materials in interior built works. Study of Aluminum as a building material and its application with Glass and other products.

Course Contents:

Module I: Types of Glass- 2 weeks

Glass and glass products: Plain, sheet, plate, textured, laminated, wired and toughened glass. Glass blocks, glass tiles, mirrors, heat reflecting glasses and Glass wool.

Module II: Glazing/ Glass Partitions/ Floor/ Ceiling- 3 weeks

Introduction to the basics of Curtain Wall Glazing and Structural Glazing. Use of Glass Partitions, Glass floors, Glazed surfaces, etc in interiors. Market survey of available materials, technology and hardware and understanding construction details.

Module III: Glazed Aluminum/Steel Doors, Windows & Partitions- 3 weeks

Construction and fixing details used for glazed aluminum doors, windows, partitions, their applications, types, pricing. Steel doors and window: types and construction detail, standard door/windows sections. Types of Rolling Shutters and their construction detail. Market survey of available technology and products.

Module IV: Acrylic and Polycarbonate- 2 weeks

Transparent and translucent sheets like Acrylic, polycarbonate sheets in interiors. Understanding the use and application of Translight in interiors and working drawings.

Module V: Elevators, Escalators and Staircase- 3 weeks

Elevators types- Conventional, Glass Elevators for Residence application, etc. and basic construction details. Escalators: Types and Construction detail, Travellators and other modern modes of movement. Construction details of Steel Staircase, Glass Staircase with SS handrail, Glass balustrade and other details.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Building construction W.B. McKay

Building construction R Berry

Building construction Chudley

Building construction Francis D.K. Ching

Structure in Architecture, Salvadori and Heller

Building construction Dr. B.C.Punmia.

BID 403 ART AND GRAPHICS – IV

Course Code: BID 403 Credit Units: 01 L-0/ST-0/P-2

Teaching Hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To develop the understanding of various most relevant Rendering to present drawings/ideas/expression for the purpose of a Design Project
CLO 2 :	To create ability to identify the appropriate scale, proportion, aesthetic sense & balance between various elements/ components of social, economic, cultural and environmental aspects of design and to develop ability to represent the same with hand drawings/sketches etc.
CLO 3:	To develop the ability of lateral thinking required for visualizing the balance between various building materials /colors & elements.
CLO 4 :	To develop ability to create better design solutions in an effective way by enhancing the observation of shades and learning skills through existing structures, field study.
CLO 5:	To build ability to communicate effectively through graphical presentations and make the best use of most effective presentation skills while working in interdisciplinary groups.

B. SYLLABUS

Course Objective:

- The objective of the course is to learn about interior surface designing, independent standing three dimensional artwork which could be used in exhibition spaces, lobby, lounge spaces and semi-public and private spaces. Making models to present your ideas.

Course Contents:

Module I: Introduction

Use of various raw materials/ finish materials/ waste materials to make sculptures, installations with advanced technology and discovering and developing new techniques of designing. Understanding scale, proportions, textures, etc of various three dimensional art forms.

Module II: Installation

Composition of an Installation from waste materials to create an functional model applying various textures and finishes. The installation should be able to stand independently without additional supports.

Module III: Sculpture

Making of small size sculptures using different materials with a given theme and understanding the method for making it. Application of colors, textures, polish, etc. to the sculpture as required.

Module IV: Geometrical and Organic Shape 3d- Models

Designing of models based on Geometrical and Organic shapes with given themes which could be put to different uses or just serve an aesthetic function.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Text:

- A Visual Dictionary of Architecture, Francis D.K. Ching
- Creative Interiors (Design of Enclosed Space), Shashi Jain
- Interior design illustrated, Francis D.K. Ching
- Home Plumbing (The David & Charles Manual of), Ernest Hall
- House Book (The Complete Guide to Home Design), Terence Conran
- Architecture: Form, Space and Order Francis D.K. Ching

BID 404 GRAPHIC SKILLS – IV

Course Code: BID 404 Credit Units: 02

L-0/ST-0/P-4

Teaching Hours: 04

A. Course Learning Outcome

CLO 1	Remember various tools or shorthand commands used in SketchUp, AutoCAD-3D, V-Ray.
CLO 2	Understand to develop higher-quality, more accurate architectural designs, and models; use tools specifically built to support 3D design- creation- rendering- animation based application.
CLO 3	Apply the knowledge of various aspects of building Services & Construction techniques into 3D designs.
CLO 4	Analyse the importance of 3Ddesign- creation- rendering- animation based application in the field of Architecture and construction industry.
CLO 5	Evaluate 3D Modelling based design on critical thinking and problem solving skills.
CLO 6	Create 3D design models of an Architectural Project

B. Syllabus

Course Objective:

- To train students in drafting and presentation techniques using computer software.

Course Contents:

Module I: Auto Cad (2-D): Advanced commands- 2 weeks

Draw, edit and create a complete set of architectural drawings for a dwelling unit using AutoCad Plan(s), Elevation(s) and Section(s) in detail. Create final set of 2D drawings in AutoCAD.

Module II: Use of photo editing Software- 3 weeks

Photo editing as well as preparation of 2-D presentations and rendering views on Photoshop/ Corel Draw. Create final presentation 2D drawings in Photoshop or Corel Draw.

Module III: Introduction to (3-D) software (Elementary-I) - 3 weeks

Introduction to basic 3-D software of architectural significance AutoCAD-3D and its basic usage (creating conceptual exterior and views of an Architectural Project).

Module IV: Introduction to (3-D) software (Elementary-II) - 3 weeks

Introduction to Sketch Up. Creating basic Interior views of a 3D project using SketchUp.

Module V: Advanced Modeling & Basic Rendering- 3 weeks

Advanced 3D Modeling in Autocad and Sketch Up with Human figures, furniture layout, Wall and floor finishes using Material library, interior landscape, doors and windows and other details. Creating basic rendered views using Autocad, Sketch Up and Photoshop.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Manuals of Autocad – Autodesk Inc.

Computer graphics and design, Radhakrishnan

Inside Autocad--parker,denial& rice

Google SketchUp user's guide.

Adobe Photoshop user guide/manual.

Google SketchUp for Interior Designers – Daniel John Stine

Rendering in SketchUp – Daniel Tal

V-ray user's Guide.

Lumion user's guide/manual.

Architectural Design with SketchUp – Alexander Schreye

BID405 FURNITURE DESIGN WORKSHOP-II

Course Code: BID 405 Credit Units: 01 L-0/ST-0/P-2 Teaching hours: 02

CLO 1 :	To develop the understanding of various most relevant Rendering to present drawings/ideas/expression for the purpose of a Design Project
CLO 2 :	To create ability to identify the appropriate scale, proportion, aesthetic sense & balance between various elements/ components of social, economic, cultural and environmental aspects of design and to develop ability to represent the same with hand drawings/sketches etc.
CLO 3 :	To develop the ability of lateral thinking required for visualizing the balance between various building materials /colors & elements.
CLO 4 :	To develop ability to create better design solutions in an effective way by enhancing the observation of shades and learning skills through existing structures, field study.
CLO 5 :	To build ability to communicate effectively through graphical presentations and make the best use of most effective presentation skills while working in interdisciplinary groups.

Course Objectives:

The objective of the course is to provide knowledge about an existing piece of furniture in its functional and technical aspect, carpentry skills required, materials and properties, biomechanical factors, ergonomics, aesthetics and economic factors.

Course Contents:

Module I: Analyzing furniture - 2 weeks

Analyzing furniture forms and designing furniture forms scientifically based on ergonomics, material design and working parameters and visual perception of furniture as a single form and as a system in each interior space.

Module II: Measurement drawing - 4 weeks

Measurement drawing of a piece of a furniture-plan, elevation, sections and detail drawings on proper scale. Design of a simple object having some moving components like a folding stool or chair. History of furniture from early days to industrial revolution.

Module III: Modular Aspect - 4 weeks

Modular aspect and approach towards all types of furniture, cost criteria of design furniture for lower income group in the society.

Module IV: Furniture Style - 4 weeks

Design and understand Post Independence furniture style.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	C T	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Architectural Models: Construction Techniques – Wolfgang Knoll, Martin Heching
1. Model-Making: Materials and Methods – David Neat

Reference Books

1. The aesthetic experience –magnet Jacque Form, Space & Order – D.K Ching.
2. Object by Architects – tapert,Annette,swid powell Art Forms – Preble,duame

BID 406 BUILDING SERVICES-III (Acoustical System)

Course Code: BID 406

Credit Units: 02

L2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the process and are able to manage building acoustical services provisions in construction sites.
CLO 2	Synchronize the construction activities with installation of building services.
CLO 3	Select the suitable system for particular requirements of buildings
CLO 4	Understanding the importance of sound energy and its impact on building design and also able to control noise within the interior and from exterior sources.
CLO 5	Plan and able to design and read acoustical layout required for different types of buildings

B. Syllabus

Course Objectives:

- To acquaint students about acoustical requirements and consideration for building design right from residential to the theatre type of building.

Course Contents:

Module I: Terminology in Acoustics- 1 weeks

Sound and its properties, audible sound, intensity and loudness, frequency and pitch, quality Reflection, absorption, transmission, diffusion, diffraction of sound ; Common acoustical defects: Echo, sound-foci, dead spots, sound shadows, resonance, insufficient loudness, external noise, reverberation and reverberation time.

Module II: Acoustic materials - 1 weeks

Sound absorbing materials and their applications– description and characteristics, types of absorbents and reflectors and their application, Market survey and sample collection.

Module III: Acoustical design case studies - 1 weeks

Study of existing designs to understand shapes/spaces and integration of acoustical equipment in the design.

Module IV: Noise control- 1 weeks

Environmental noise control: noise sources, airborne and structure-borne noise, transmission of noise, methods of environmental noise control, control of mechanical noise and vibrations, General idea of sound insulation. Noise control in specific types of buildings like – auditoriums, residential buildings, hotels, school, hospitals, offices, libraries.

Module V: Artificial Lighting- 1 weeks

Introduction to basic photometric concept: Light its behaviour and properties, Instruments for measurement lux meters, field of vision, visual task, visual comfort and glare: objectives of lighting design in architecture.

Module VI: Design Exercise- 2 weeks

Acoustical design or case study of existing building such as auditorium, recording studio, theatre, cinema halls, hospitals or a multistory office building.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Domain Elective-II

BID 408 INNOVATIVE MATERIALS FOR FINISHES

Course Code: BID 408 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To describes the usage of electronics, safety equipment's and IT equipment's and to recognize the computer based 3D modelling,4D/6D
CLO 2	To converts regular interiors into intelligent interior consists of the use of high – tech office automation systems to render the operation of a company more efficient
CLO 3	To identifies the application of intelligent interiors like residence, office and other public spaces. To compare the contemporary design and intelligent design and energy consumption and optimization system.
CLO 4	To criticize various interior spaces, building services like HVAC, lighting, water supply etc. using computer modulation and programming system. And cost of installation versus service output.

B. Syllabus

Course objective:

To familiarize student with different innovative materials for finishes and their use in building works.

Course contents:

Module I: Introduction

Introduction to different innovative materials for finishes viz. paper, pipes, salt, fur, translucent wood, pollution absorbing bricks, light generating cement, bio-plastics, pre-cast modular materials etc.

Module II: Application Methods & Techniques

Application methods and techniques for the use of different innovative materials for finishes viz. paper, pipes, salt, fur, translucent wood, pollution absorbing bricks, light generating cement, bio-plastics etc. in building works.

Module III: Stamped Concreting and Application Techniques

Introduction of Stamped Concrete used in Interiors and exteriors and application methods. Preparation of different surfaces for stamped concreting and their market study.

Module IV: Artificial Stones, Semi-precious Stones and Application Techniques

Types of artificial stones and semi-precious stones used in Interiors and exteriors and their application methods. Preparation of different surfaces for artificial stones, semi-precious stones works and their market study.

Module V: Plastics & Polycarbonates and Application Techniques

Types of plastics & polycarbonates used in Interiors and exteriors. Application methods of different plastics & polycarbonates in building works and their market study.

Exercises: Field trips, market survey of available innovative materials, technology and

hardware, preparation of study reports and presentation of seminars on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- YouTube videos on construction operation using above building materials

BID 409 INTERIOR DOCUMENTATION

Course Code: BID 409 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the design intent of the architect
CLO 2	Be able to read construction drawings.
CLO 3	Communicate with consultants and vendors.
CLO 4	Develop and convert the design intent into a set of good for construction drawings.

B. Syllabus

Course Objective:

- To familiarize the students with various aspects, issues and considerations related to the documentation of architecture and its characteristics so that its heritage and inherent values can be identified and recorded.

Course Contents:

Module I: Introduction to Architectural Documentation

Introduction to documentation of historical buildings includes not only measured photographic survey, but also surveying of the qualities of building spaces and their elements. Identification and understanding the use and purpose of the documentation.

Module II: Methodology

Detailing the purpose, scaled drawings, photographic documentation, visual analysis, classification and mapping of the spaces and their elements. The originality of these spaces and elements are evaluated within the frame of research results that are previously published, site surveys made. Use of modern equipment such as 'CANVAS' and its interface with I-pad and AutoCAD etc to be understood.

Module III: Analysis

Visual analysis consisting of analysis of spatial element and architectural elements need be understood. The spaces grouped according to their functions and the elements grouped according to their types. Visual analysis of onsite elements, outside elements need to be recorded. The context of the building need to be understood and recorded.

Module IV: Evaluation of characteristics

Distinguishing the modern with traditional architecture in terms of elements, details etc. Sketching and tabulating the spatial characteristics and their types

Module V: Compilation and Assessment

Classification and comparison is an effective way to decipher architectural characteristics of a historical

Building with its originalities and alterations. The compilation should be as realistic as possible without the opinion of the compiler to retain the authenticity of the project.

NOTE-Students may be assigned a case study to assess the understanding of the subject.

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

BID 410 BARRIER FREE SPACE PLANNING FOR INTERIORS

Course Code: BID 410 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To learn about Importance of Barrier free Architecture and uses in various types of buildings.
CLO 2	To know standards and norms for the Barrier free design.
CLO 3	To understand the importance of Barrier free design using Case studies of Design
CLO 4	To Evaluate existing public building and residential building using norms and Standards
CLO 5	To Redesign existing public building using norms and Standards

B. Syllabus

Course Objectives:

- The objective of course is to learn the principles of barrier free design and concepts of universal design. It Provides an idea about barrier free construction principles in buildings while understanding of the key aspects and systems of specially able persons built space in architecture.

Course Contents:

Module I: Special Abilities

Understanding the different human imparities such as visual, mobility and hearing and also understanding the abilities of such differently able persons. To understand the architectural requirements of such persons.

Module II: Introduction to Architecture for specially able

Defining the basic concepts of barrier free design, need for barrier free concepts in architecture, concepts of universal design and types of disabilities. Design principles for barrier free architecture and accessibility for all.

Module III: Barrier free elements for outdoors and Urban Design

Design elements outside the building like curb ramps, pedestrian crossing, public toilets, and parking, signage, flooring and street furniture. Case examples of Barrier free architecture in India and across the globe. To study the anthropometrics and dimensions of mobility devices, special fixtures for barrier free design. Barrier free construction materials and dimensions for flooring, walls, doors, windows, staircases, elevators, toilets, entrances and corridors.

Module IV: Laws

Knowledge of different laws prevailing within India and in other countries. Understanding implication of different laws on design of spaces.

Module V: Case Study, Presentation & Design elements

Barrier free architecture in Public Buildings – dimensions and standards. Case Study of Barrier free elements in Public buildings, Photographic documentation and Presentation. Incorporation of barrier free elements in project being pursued in architectural design.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

AND 004 AANANDAM-IV

Course Code: AND 004 Course Type: **Compulsory**

Credit Units: **02**

Course Learning Outcomes:

The student should develop:

- Awareness and empathy regarding community issues
- Interaction with the community and impact on society
- Interaction with mentor and development of Student teacher relationship
- Interaction among students, enlarge social network
- Cooperative and Communication skills and leadership qualities
- Critical thinking, Confidence and Efficiency

Course Objectives:

After the completion of this course, students will be able to:

- apply their knowledge and skills to solve specific community problem
- learn to plan, lead, and organize community events have a sense of belonging to their college campus and community and find something they are interested in doing during their free time
- make new friends, expand social network, and boost social skills and mental health.
- be useful to society as it will protect them against stress, frustration, and depression

Course Contents:

The project report should be guided by the mentor and shall contain:

- **Synopsis:** clearly stating objectives and activities to be undertaken. Problem identifying and problem-solving projects to be taken up.
- Details of the **Mentor and the Participants** are to be given (name of mentor, name of participants, phone number/mobile no, email, and address)
- Location / community where the work was carried out
- Details of Activities performed are to be given with date
- Number of beneficiaries and impact on the society (the object should be to empower the community and make them self-reliant)
- Photographs taken for documentation of work should be submitted
- Media coverage of the projects should be attached if any
- The Group Community Service Project Report will be submitted by the Student group leader under the guidance of the mentor to the Director/HoIs of the Department.
- The Director/HoIs should get the best report (more than one if required) of the Group Community Service Project uploaded on the HTE website and on the University page
- The Director/HoIs will forward the best report of the department to the Nodal Officer of the University.
- University will forward the report to the state level committee.

GUIDELINES FOR GCSP (Group Community Service Project)

ASSIGNMENT OF ANANDAM FOR SOCIAL AWARENESS (for students)

1. Each member of the group shall write one blog about the decided topic of 500 words (minimum) along with any relevant photos/diagrams/statistical data (with reference).

2. The group member shall write his/her name at the end of the blog.
3. The blog shall be posted on Instagram and Facebook (apart from these any other website wherever the group seems necessary).
4. Print out of the blog where date of when the content is posted, number of followers, comments, name of the writer shall be visible will be taken and file will be maintained for the same.
5. In the cover page of the project mention heading “**Group Community Service Project**”, and the filled format of final project report given by Anandam Scheme.
6. For the topic chosen by the group, students are recommended to cover the following points:
 - a) Current scenario (Regional, national and international level as applicable)
 - b) Future predictions
 - c) Duty of the government
 - d) Government policies (related to the topic), if any
 - e) Duty of public
 - f) Conclusion

Evaluation Scheme:

Project Participation: 2 hours X 8 days (per month) X 4 months = 64 hours

- **C grade =32 hrs (Below 20 marks)**
- **B grade >32 hrs to <=44hrs (20-30 marks)**
- **A grade >44 hrs to<=54hrs (30-40 marks)**
- **O grade >54 hrs to<=64hrs (40-50 marks)**

Evaluation Criteria:

Respective Departmental Anandam mentors are requested to evaluate the project (out of 50) as per the following criteria:

1. Position and exceptions, if any, are clearly stated. The organization of the blog is completely and clearly outlined and implemented.
2. The body of the blog is coherently organized, original and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear, concise, and persuasive.
3. Conclusion is clearly stated. The underlying logic is explicit.

BCS 401 COMMUNICATION SKILLS II

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS 401	1:0:0	1	1

A. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Identify steps to professional communication
CLO 2	Identify the key components of meeting, agendas and meeting minutes
CLO 3	Understand the key skills and behaviors required to facilitate a group discussion/presentation
CLO 4	Polish current affairs & rapport building

B. SYLLABUS

Topic
Enhancing Speaking Skills (Public Speaking)
Resume Building-1
GD-2 (Specifically: Social & Political)
Presentations-2

EXAMINATION SCHEME:

Components	Public Speaking	GD	Poster Presentation	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Essential Telephoning in English, Garside/Garside, Cambridge
- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria & Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008. Print
- Krishnaswamy N, *Creative English for Communication*. Delhi: Macmillan Publishers India Ltd. Print. 2007.

BEHAVIOURAL SCIENCE - IV

(RELATIONSHIP MANAGEMENT)

Course Code: BSS 405

Credit Units: 01

Course Learning Outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Identify the basis of interpersonal relationship.
2. Describe the importance of interpersonal relationship and bridging individual differences.
3. Recognize the development and strategies for effective interpersonal relationship.

Explain and apply the theories of relationship concepts of impression management. **Course Objective:**

To understand the basis of interpersonal relationship

To understand various communication style

To learn the strategies for effective interpersonal relationship

Course Contents:

Module I: Understanding Relationships

Importance of relationships

Role and relationships

Maintaining healthy relationships

Module II: Bridging Individual Differences

Understanding individual differences

Bridging differences in Interpersonal Relationship – TA

Communication Styles

Module III: Interpersonal Relationship Development

Importance of Interpersonal Relationships

Interpersonal Relationships Skills

Types of Interpersonal Relationships

Module IV: Theories of Interpersonal Relationships

Theories: Social Exchange, Uncertainty Reduction Theory

Factors Affecting Interpersonal Relationships

Improving Interpersonal Relationships

Module V: Impression Management

Meaning & Components of Impression Management

Impression Management Techniques (Influencing Skills)

Impression Management Training-Self help and Formal approaches

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; JOS-Journal of Success; HA-Home Assignment; P-Presentation; V-Viva; Q-Quiz; FC- Flip class; MA- Movie Analysis; CS- Case study; A-Attendance

Text & References:

- Vangelist L. Anita, Mark N. Knapp, Inter Personal Communication and Human Relationships: Third Edition, Allyn and Bacon
- Julia T. Wood. Interpersonal Communication everyday encounter
- Simons, Christine, Naylor, Belinda: Effective Communication for Managers, 1997 1st Edition Cassell
- Goddard, Ken: Informative Writing, 1995 1st Edition, Cassell
- Harvard Business School, Effective Communication: United States of America
- Foster John, Effective Writing Skills: Volume-7, First Edition 2000, Institute of Public Relations (IPR) Beebe, Beebe and Redmond; Interpersonal Communication, 1996; Allyn and Bacon Publishers

FOREIGN LANGUAGE 401 FRENCH - IV

Semester 4 Course Code: FLT 401/411 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

- To do the shopping
- To ask and express one's needs
- To present one's eating habits
- To understand a label
- To ask the price
- To order at the restaurant
- To organise a meeting
- To propose to someone to do an activity
- To understand the advertisement of a conference
- To understand the names of different stations
- To speak about ones schedule
- To express one's professional wish
- To formulate a project
- To read a notice board

Course Contents:

Unité 3 La science au quotidien Page : 62-84 Leçons 10, 11 & 12

Contenu Lexical:

1. La nourriture
2. Les ingrédients
3. Les expressions de quantité
4. Les expressions familières avec les noms de fruits et les légumes
5. Les expressions pour proposer une invitation
6. Le processus de fabrication de quelques éléments
7. Les expressions pour parler d'un projet

Contenu Grammatical:

1. Manger et boire au présent
2. L'article partitif
3. Les prépositions de lieu
4. Les verbes pronominaux
5. La date, l'heure et le jour: les prépositions
6. La nominalisation

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 401/ 411 FOREIGN LANGUAGE GERMAN

Semester 4: Course Code: FLG 401/411

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- talk about different professions
- express positive and negative aspect of different professions.
- talk about daily routine of a job
- enquire about direction.
- use preposition in sentences.
- understand the visiting cards etc.

Course Content:

Vocabulary Content:

- Professions
- Workplaces
- Professional Tasks like writing mail, make phone calls etc.
- Locations (right left, etc.)
- Public places

Grammar Content:

- Possessive article in accusative.
- Introducing prepositions in dative, accusativ cases and changing prepositions in dat + acc.
- Usage of preposition : in through, to , at etc

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: Lessons from 11 onwards from Deutsch als Fremdsprache -1B, INBH & Oxford, New Delhi, 1977

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 401/ 411 FOREIGN LANGUAGE SPANISH

Semester 4:

Course Code: FLS 401/411

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To talk about relations
- To express obligation
- To enquire about direction
- To be able to describe your locality
- Telephonic conversation etiquettes
- Dialogue between two friends/sales man and client etc.

Course Content:

Vocabulary Content:

Family, friends, directions, way (going straight, left, right etc.) Temple, hospital, restaurant, church, hospital, Town hall, parks, shopping mall, etc.

Grammar Content:

Revision of present indefinite, continuous and near future tense.

Double negation – No Nunca, Ningun/a, Nada, nadie etc.

Tener que / Hay que

Expressions with Tener and Estar.

Use of Apetecer, Llevarse bien o mal con alguien / Caer +bien/mal + a alguien

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					EndSem Evaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Skills Evaluated: Writing, Comprehension, grammar, and Vocabulary

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralozza Aragón, Oscar Cerralozza Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 401/411 FOREIGN LANGUAGE CHINESE

Semester - IV

Course Code: FLC- 401/411

Credit Units: 02

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Fourth semester the students will be able to consolidate their proficiency of HSK-I and will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters, sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out conversation in the target language.
- Manipulate basic grammatical structures such as: 疑问代词 etc.
- Master and use most essential vocabulary items of day to day use and office related vocabulary; approx 70 Characters including 50 characters of HSK level –II
- Refer Chinese dictionaries.
- Translate a Chinese paragraph with the help of dictionaries and translation software.

COURSE CONTENTS

1. Revision of Important expressions
2. Expression of welcome
3. Expression of time: past, present & future
4. Expression of right or wrong.
5. Questioning and answering simple questions about medical care
6. Questioning and answering simple questions about sports & entertainment
7. Office related vocabulary , expressions & email writing
8. Referring Chinese dictionaries (hard and electronic dictionaries)
9. Translation with the help of dictionaries & translation software
10. Practice of model test series of HSK-I
11. CBT package
12. Listening
13. Conversation based on above topics
14. Chinese poetry

VOCABULARY CONTENT

1. Vocabulary will include approx 70 Characters including 50 Characters of HSK-II level.
1. Vocab related to welcome, tenses, right wrong etc and office related vocabulary will be covered during this semester.

GRAMMATICAL CONTENT

1. Interrogative pronouns 疑问代词 什么, 哪儿, 谁, 为什么, 怎么样, 哪 什么时候, 多少, 几,
2. Money 表示钱数
3. Weight 表示重量
4. Measure words 量词
5. Adverbs 副词
6. 时间副词: 正在
7. 频率副词: 再

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text books & References

1. Learn Chinese with me book-II. (Major Text Book)
2. Module on HSK-II. (suggested reading)
3. Practical Chinese Grammar for foreigners. (suggested reading)
4. Chinese Dictionaries: Chinese to English & English to Chinese. (reference books)
5. Office Talk (suggested reading)

AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Interior Design

Batch 2019-24 & 2020-25 Onwards

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

FIFTH SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	T/St Per Week	P Per Week		
BID 501	Design – V	CC	0	8	0	12	8
BID 502	Materials & Construction Techniques - V	CC	1	1	1	3	3
BID 503	Estimation & Specifications	CC	2	0	0	2	2
BID 504	Graphics Skills – V	CC	0	0	4	2	4
BID 505	Interior Project Management	CC	2	0	0	2	2
BID 506	Building Services - IV	CC	2	0	0	2	2
Domain Elective – III (Select any One)							
BID 507	Material Appreciation	DE	2	0	0	2	2
BID 508	Energy Conservation Architecture						
BID 509	Climate Responsive Interiors						
BCS 501	Communication Skills – III	VA	1	0	0	1	1
BSS 504	Behavioral Science -V (Group Dynamics & Team Building)	VA	1	0	0	1	1
	Foreign Language – V	VA	2	0	0	2	2
FLF 501	French						
FLG 501	German						
FLS 501	Spanish						
FLC 501	Chinese						
	Minor Track	OE	3	0	0	3	3
	TOTAL		16	9	5	32	30

BID 501 DESIGN - V

Course Code: BID 501

Credit Units: 12 L-0/ST-8/P-0

Teaching hours: 08

A. Course Learning Outcome

CLO 1	To Recognizing the previous semester learning outcomes like anthropometric, ergonomics, space a,locations, site analysis and active and passive design consideration for the different climatic Zones
CLO 2	To implementing the basics of design problem and analysis the different similar projects through Literature Studies, site visit, case studies, and other relevant studies.
CLO 3	To critique the existing knowledge and attributed knowledge through student self learning and standardize them for further creation
CLO 4	To produce given project based on to develop the architectural project in terms of architectural drawings, models, etc.
CLO 5	To attributing the design centric theoretical knowledge and practical knowledge like case studies of the building weather applicable or not.

B. Syllabus

Course Objective:

- The objective of the course is to introduce the students to basics of Hospitality spaces and to integrate Building Services such as Lighting, Electrical, Water Supply, Acoustics etc in the designed interiors scheme. The course should involve different design ideas and schemes to represent the designing of Food joints, cafeterias, restaurants as these are the prime area of designing emerging in the modern world.

Course Contents:

Module I: Introduction

Study of requirement of Hospitality related internal spaces in 3-4 star rated accommodations for anthropometrics, human comfort/convenience, culture ,aesthetics and integration with building services. Project introduction for studio exercise

Module II: Case studies, Site Studies and Literature Studies

Case Studies – one Live and one through Literature; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with bubble diagrams, circulation diagrams and sketches for discussion.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions on alternative sketch options. Design proposal to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Preparation of Presentation Drawings of the Final Design Proposal. Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through submission of sheet work – drawings and views as well as scaled models.

Suggested Design Exercise

The suggested design exercise – Coffee Shops, Fine Dining Restaurants, Reception Lobbies and Lounge of Hotels, Spas, Bars, Clubs, Discotheque, Hotel Kitchens – open & enclosed etc. Emphasis shall be on the composition, aesthetics and innovation.

At least one major exercise and one minor design/time problems should be given. The final submission shall necessarily include a model.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept as well as the final proposal drawings etc- shall be an essential part of submission.

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text & References:

Text:

- Design Fundamental in Architecture, Walter Gropius
- Interior Best Collection, Commerce Asia II, Archiworld
- Interior Design- Ahmed Kasu
- Interior Design Illustrated - Francis D.K. Ching
- Time Saver standards for Interior Designing and Space Planning , Joseph Dechiara and Julius Panero

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Architectural Graphic standards editor, Boaz Joseph
- Time Saver standards for building types, editor Joseph D.C. and John Callender.

BID 502 MATERIALS AND CONSTRUCTION TECHNIQUES - V

Course Code: BID 502 Credit Units: 03 L-1/ST-1/P-1 Teaching hours: 03

A. Course Learning Outcome

CLO 1	To remember properties & application of different finishing materials like ACP, PVC, Gypsum, Glass, Fiberglass, Glass bricks, Metals, Stone, Ceramics, Exposed brick work, Paints, POP, Polish, and Varnishes etc.
CLO 2	To understand the criteria of applying latest materials & construction details of different building component like flooring, false ceiling, false partition and special doors.
CLO 3	To apply visual & textural properties of latest finishes & hardware's in building interiors and exterior.
CLO 4	To evolve innovative designs of Interior & exterior components like flooring, false ceiling, false partition and special doors.
CLO 5	To prepare construction details of designed components.

B. Syllabus

Course Objective:

- To familiarize student with different finishing materials for false ceiling, cladding, upholstery and their use in building works.

Course Contents:

Module I: False ceiling type and Construction details- 3 weeks

POP, Gypsum board, Acoustic panels, Wood, Metal etc.- Classification, Manufacturing, Market availability and prices, Advantages/ Disadvantages, Design and detailing etc.

Module II: Exterior and interior finishes- 3 weeks

Latest finishing materials and their applications in construction- Aluminum Composite Panels (ACP), PVC Sheets, Gypsum, Fiberglass, Glass bricks, other cladding materials and finishes.

Module III: Paints, Polish, Varnishes and Application Techniques- 2 weeks

Types of Paints used in Interiors and exteriors and application methods. Preparation of different surfaces for Painting, Polishing and Varnishing and their market study.

Module IV: Upholstery & Curtains, Drapes & Blinds- 3 weeks

Upholstery work in furniture, especially seats, with padding, springs, webbing, and fabric or leather, leatherette covers, etc. Curtains, Drapes, Blinds, their material types and application on doors and windows.

Module V: Special Details- 2 weeks

Sliding door and Windows, Folding door, Revolving Door, Sliding and Folding door with hardware and their combinations.

Exercises: Field trips, market survey of available materials, technology and hardware, preparation of study reports and presentation of seminars, preparation of drawings on above topics.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

Building construction W.B.McKay

Building construction R Berry

Building construction Chudley

Building construction Francis D.K. Ching

Building construction Dr. B.C.Punmia

BID 503 ESTIMATION & SPECIFICATION

Course Code: BID 503 Credit Units: 02 L-2/ST-0/P-0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	Prepare quantity estimates for buildings structures as per the specifications.
CLO 2	Draft detailed specifications and work out rate analysis for all works related to building structures.
CLO 3	Ascertain the quantity of materials required for construction works and interior works as per specifications.
CLO 4	Prepare cost estimate and valuation of construction and interior works.

B. Syllabus

Course Objective:

- To familiarize the students with the theory and practice of estimation and specification. To develop the understanding of specification writing.

Course Contents:

Module I: Introduction

Definition, importance and uses of specification – principles and practice; method of writing specification; form and sequence of clauses, calculation of length according to long & short wall method, center line method.

Module II: Material Specifications

Writing detailed specification for various common building materials e.g., bricks, sand, lime, timber, wood products, glass, paints etc.; specification of new building materials.

Module III: Specification of simple construction

Writing detailed specification for various building construction works

Module IV : BIS Standards

Specification of BIS and other institutions; general Abbreviations used in specifications.

Module V: Introduction

Introduction to cost estimation and definitions of terms related to estimates

Module VI: Types of estimates

Types of estimates, abstract and detailed estimates; detail estimates – methods of estimating; taking out of various items; preparation of bill of quantities – use of schedule of rates; analysis of rate and break up of material requirements

Module VII: Cost accountancy and book keeping

Introduction to cost accountancy and book keeping

Module VIII: Rate Analysis

Principles of analysis of rates, rates of labour and materials, rate analysis in different building works.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Text:

- Estimating and Costing in Civil Engineering: B. N. Dutta

BID 504 GRAPHIC SKILLS – V

Course Code: BID 504

Credit Units: 02

L-0/ST-0/P-4

Teaching hours: 04

A. Course Learning Outcome

CLO 1	To remember various tools or shorthand commands used in Autodesk Revit Architecture, 3Ds Max, Rhino and grasshopper.
CLO 2	Understand to develop higher-quality, more accurate architectural designs and models; use tools specifically built to support Building Information Modelling workflows.
CLO 3	To apply the knowledge of Structural, Mechanical, Electrical, Plumbing, Communications, Security, Fire Protection system into BIM-based designs.
CLO 4	To analyse the importance of Revit Architecture in the field of Architecture and construction industry.
CLO 5	To evaluate Building Information Models based on critical thinking and problem solving skills.
CLO 6	To create Building information modelling solutions and parametric models.

B. Syllabus

Course Objective:

- To train students to create 3D model using computer software.

Course Contents:

Module I: Introduction to other 3D Modeling software- 2 weeks

Introduction to 3ds Max and learning basic modeling like extrusion of Walls, creating doors and windows, making staircases, etc.

Module II: Intermediate & Advanced Modeling in 3ds Max- 3 weeks

Advanced Modeling in 3ds Max using Material library, Lighting Systems in 3ds max. Understanding Scanline and Mental ray rendering.

Module III: Advanced Rendering-3 weeks

Introduction to latest software of architectural significance viz. 3ds Max, V-Ray and Lumion and its basic usage. Creating a complete set of 3d-interior drawings for a dwelling unit. The students shall also render the complete drawings.

Module IV: Basic & Intermediate level Animation-3 weeks

Creating animation (walkthrough) of 3D models in 3ds max, V-Ray and Lumion.

Module V: Learning latest Building Information Modeling (BIM) soft ware's

(Revit- Elementary) -3 weeks

Introduction to latest software of interior significance viz. Revit and its basic usage for. Creating Plan(s), Elevation(s) and Section(s).

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Manuals of Autocad – Autodesk Inc.

Computer graphics and design, Radhakrishnan

Inside Autocad--parker,denial& rice

Adobe Photoshop user guide/manual.

Google SketchUp for Interior Designers – Daniel John Stine Rendering

in SketchUp – Daniel Tal

V-ray user's Guide.

Lumion user's guide/manual.

Architectural Design with SketchUp – Alexander Schreyer

BID 505 INTERIOR PROJECT MANAGEMENT

Course Code: BID 505

Credit Units: 02 L-2/ST-0/P- 0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To Recognizing the previous semester learning outcomes like anthropometric, ergonomics, space a, locations, site analysis and active and passive design consideration for the different climatic Zones
CLO 2	To implementing the basics of design problem and analysis the different similar projects through Literature Studies, site visit, case studies, and other relevant studies.
CLO 3	To critique the existing knowledge and attributed knowledge through student self learning and standardize them for further creation
CLO 4	To produce given project based on to develop the architectural project in terms of architectural drawings, models, etc.
CLO 5	To attributing the design centric theoretical knowledge and practical knowledge like case studies of the building weather applicable or not.

B. Syllabus

Course Objective:

Introduction of networking techniques and construction planning practices. Use of construction equipment and method along with quality control. To familiarize students with building construction practices, technology & sequencing for various items of works ranging sub structures, super structures, finishes and services installation.

Course Contents:

Module I: Introduction to Networking Techniques

Introduction to networking techniques: Use of computer aided Microsoft Project/ CPM/ PERT for planning, scheduling and control of construction works; computerized network scheduling and bar charts; errors in networks; types of nodes and node numbering system.

Module II: Introduction Construction Planning

Planning for construction and site facilities using network; preparation of construction schedule for jobs, materials, equipment, labour and budgets using Microsoft Project/ CPM/

Module III: Construction Quality Control

Construction quality control and inspection; significance of variability in estimation of risk; construction cost control; crashing of network

Module IV: Construction Equipment and Methods

Equipment for earth construction and application; concrete construction; production; handling; procurement; Placement; temperature control etc.

Module VI: Construction & Services

Sequence of construction from civil works, electrical HV & LV, plumbing, HVAC, fire safety, Furniture work and other services.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:***Text:***

- Construction, Planning Management – U.K. Srivastav
- Construction Planning, Equipment and Methods – R.L. Peurifoy
- Construction Performance control ny networks – H.N. Ahuja
- Construction Project Management – K.K. Chilkar
- Construction Planning and Management – M.B. Dhir & S.P. Ghilot

BID 506 BUILDING SERVICES-IV (Fire Safety & Security Systems)

Course Code: BID 506 Credit Units: 02 L-2/ST-0/P-0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	To analyse the importance of fire safety in a building.
CLO 2	To understand the different aspects of materials in terms of fire safety.
CLO 3	To accumulate awareness of fire safety norms
CLO 4	To be able to do comparison between different fire detection systems and cctv equipment.
CLO 5	To design a fire fighting and cctv system for a building.

B. Syllabus

Course Objectives:

- To acquaint the student with the fire safety regulation and security systems to be adopted in the buildings. Study the development codes and bye-laws of fire safety regulations, and study about the different methods and materials for treatment in buildings for fire safety.

Course Contents:

Module I: Fire Safety- 1 weeks

Introduction: basic understanding about fire, growth decay curve. Causes of fire in buildings, types of fire, spread of fire, production of smoke and poisonous gases. Fire safety and preventive measures.

Module II: Fire properties of materials- 2 weeks

Basic fire properties of materials i.e. ignitability, combustibility, surface spread of flame, fire propagation, toxicity etc.: General behavior of materials, combination of fire retardant and non-combustible materials.

Module III: By-laws for firefighting - 2 weeks

Firefighting regulations with reference to National Building code. Fire escape, stairways and escape routes, dry and wet risers, Water demand for firefighting, storage tanks, fire hydrants etc.

Module IV: Fire extinguishing- 1 weeks

Study of Fire detection systems, smoke detectors, heat detectors, fire alarms etc. Fire extinguishing systems, Unit fire extinguishers, Chemical and foam extinguishers, Chemical and foam extinguishers.

Module V: Advance Security Systems - 1 weeks

Communication systems in buildings, CCTV, conduits to accommodate the systems. Security and Surveillance. Remote control for security systems and automation

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

- Fire Safety: National Building Code of India 1983, An Introduction to Building Physics:
Narsmhan

Domain Elective-III

BID 507 MATERIAL APPRECIATION

Course Code: BID 507 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To Recognizing the previous semester learning outcomes like anthropometric, ergonomics, space a,locations, site analysis and active and passive design consideration for the different climatic Zones
CLO 2	To implementing the basics of design problem and analysis the different similar projects through Literature Studies, site visit, case studies, and other relevant studies.
CLO 3	To critique the existing knowledge and attributed knowledge through student self learning and standardize them for further creation
CLO 4	To produce given project based on to develop the architectural project in terms of architectural drawings, models, etc.
CLO 5	To attributing the design centric theoretical knowledge and practical knowledge like case studies of the building weather applicable or not.

B. Syllabus

Course objective:

The objective of the course is to introduce the students to the practice of appreciating architectural built forms.

Course contents:

Module I: Introduction

Introduction to building appreciation and analysis of the evolution of buildings and its necessity. Introduction also includes guidelines and parameters to appreciate any building.

Module II: Aesthetic Interpretation

The interpretive understanding of aesthetic experience provides with the opportunity to develop their interpretive skills and heighten their aesthetic responses to various building forms, building textures and building expressions. Analyze, interpret and respond to architectural examples done by architects from past and present. This also includes appreciation of historical works and background of previous era.

Module III: Historical Perspective

Examining historical perspectives help realize the need to understand the past and thoughtfully consider the future to contextualize current knowledge about buildings and their elements. Identify and describe appropriate systematic and scientific strategies to examine historical built forms and methods.

Module IV: Guidelines for Building Appreciation

Develop critical thinking skills, ability to reflect and explain the meanings of architectural works Understand how architectural building works shape and reproduce social ideas, values and concerns and how they interact with and influence society, history and culture.

Note: Students shall be given an example of Building appreciation to record their

experiences

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

- Kenneth Lindley, Appreciation of Architecture: Landscape and Building (C.I.L.)
Paperback – February, 1972
- Carol Davidson Cragoe, How to Read Buildings: A Crash Course in Architectural Styles,
Rizzoli, 2008
- Francis D.K. Ching , A Visual Dictionary of Architecture, Wiley, 1996
- Kevin McCloud, Grand Designs Handbook: The blueprint for building your dream home,
Collins , 2009

BID 508 ENERGY CONSERVATION ARCHITECTURE

Course Code: BID 508

Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	demonstrate a good ability to calculate the energy balance of buildings
CLO 2	evaluate different opportunities to save energy with measures regarding both building technology and building services engineering in both new and existing buildings
CLO 3	assess whether there is a potential conflict between energy conservation and indoor climate for different energy saving measures
CLO 4	analyze and interpret results both critically and independently regarding energy and indoor climate in buildings based on values from both calculations and measurements
CLO 5	demonstrate a good ability to work independently on investigating energy and indoor climate issues for buildings and to present the results both orally and in writing in well-prepared technical reports.

B. Syllabus

Course Objective:

To familiarize students with principles, techniques and guidelines for planning and design of energy conserving architecture. Study of solar energy systems and other alternative sources of energy being used in architectural applications.

Course Contents:

Module I: Introduction

Classification and characteristics of energy resources, Use and exploitation of resources, Resource use in architecture / exploitation of resources for development, Resource shortage and constraint, Concepts and need for conservation, Renewable, non-renewable resources and alternate sources of energy. Need and necessity of energy conservation.

Module II: Energy conserving architecture

Principles of energy conservation, Pattern of energy use in buildings, Technologies and methods of conservation, Economic, technological and environmental implications. Ambient energy and lifecycle requirement of energy in different types of buildings. Use and possibility of alternate sources of energy.

Module III: Conservation of other resources

Conserving building materials, water, land etc. in architecture, methods of conservation and their implication. Understanding the concept of zero energy buildings.

Module IV: Design of energy conserving architecture

Fundamentals of planning and design, Elements and principles of design, Study of design problems, Application of relevant principles for design solutions, Innovative and appropriate construction technologies. Use of landscaping elements in energy conservation.

Module V: Students shall workout a practical exercise of converting one of their designs into energy conserving building.

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

- Alternative Natural Energy Sources in Building Design: Davies and Schubert.
- Design with nature: I. McHarg
- The Ecological Context: H. McHale.

References:

- Human Ecosystems: W. B. Jr. Clapham.
- Review our dying planet: S. Devi.
- Energy Conservation Standards: for building design, construction and operation, S. Fred Dubin.

BID 509 CLIMATE RESPONSIVE INTERIORS

Course Code: BID 509 Credit Units:02 L-2/ST-0/P-0 Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	To understand how the contexts of a region have an impact on vernacular architectural forms.
CLO 2 :	To explore various traditional materials and construction techniques used in vernacular architectural forms.
CLO 3 :	To acquire knowledge on traditional materials and construction techniques which can be used in the design of built spaces in the modern context.
CLO 4 :	Understanding the impact of context of a region over architectural forms and expressions will lead to sensible and context specific and sensitive design solutions.

B. SYLLABUS

Course Objective:

- To acquaint students to various concepts of climate analysis and its use in Interior.
- To familiarize students with human thermal comfort as an essential function of building. Students shall learn using the natural climatic elements to achieve their maximum utilization for the minimum dependence on the artificial means.

Course Contents:

Module I: Introduction to Climate

Importance of climate in Interiors, Factors affecting climate.

Elements of climate- Solar radiation, temperature, wind, humidity and precipitation and their measurement.

Module II: Tropical Climate

Climatic zones, Characteristics of tropical climate, macroclimate and microclimate.

Module III: Human thermal comfort

Study of body's heat production and heat loss, comfort zone, bio-climatic chart and effective temperature, Isoleths. Solar passive techniques: cooling and heating.

Module IV: Day light and shading devices

Natural light, glare, day light factor and day lighting in tropics.

Method of recording the position of sun in relation to earth, solar chart, shadow angle protractor and its application in design of shading devices.

Module V: Ventilation and air movement

Requirement, size and position of openings, air flow pattern inside and outside buildings.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

BCS 501 COMMUNICATION SKILLS - III

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS501	1:0:0	1	1

B. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Create right selection of words and ideas while also choosing the appropriate channel of formal communication.
CLO 2	Demonstrate the ability to analyse a problem and devise a solution in a group.
CLO 3	Demonstrate proficiency in the use of written communication.
CLO 4	Recognize the mannerisms and methodology of Interview and GD to become more expressive in their body language and verbal performance.

B. SYLLABUS

Topic
Email Writing (Briefing, Do's & Don'ts & Practice)
Corporate Dressing & Body Language (Verbal & Non-Verbal Cues & its role in Interview Selection)
Interview-1 (Briefing, Do's & Don'ts, Questions, Mock Sessions)
GD-3(Practice Sessions)

EXAMINATION SCHEME:

Components	Email Writing	GD	Personal Interview	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Essential Telephoning in English, Garside/Garside, Cambridge
- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria&Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008.
Print
- Krishnaswamy N,*Creative English for Communication*. Delhi: Macmillan
Publishers India Ltd. Print. 2007.

BSS 504 BEHAVIOURAL SCIENCE V (Group Dynamics and Team Building)

Course Code: BSS 501

Credit Units: 01

Teaching hours: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) should be able to:

1. Recognize their personality and individual differences and identify its importance of diversity at workplace and ways to enhance it.
2. Recognize effective socialization strategies and importance of patriotism and taking accountability of integrity.
3. Recognize different types of human rights and its importance.
4. Identify Indian values taught by different religions.
5. Identify long term goals and recognize their talent, strengths and styles to achieve them.

Course Objective:

To inculcate in the students an elementary level of understanding of group/team functions To develop team spirit and to know the importance of working in teams

Course Contents:

Module I: Group formation

Definition and Characteristics

Importance of groups

Classification of groups

Stages of group formation

Benefits of group formation

Module II: Group Functions

External Conditions affecting group functioning: Authority, Structure, Org. Resources, Organizational policies etc.

Internal conditions affecting group functioning: Roles, Norms, Conformity, Status, Cohesiveness, Size, Inter group conflict.

Group Cohesiveness and Group Conflict

Adjustment in Groups

Module III: Teams

Meaning and nature of teams

External and internal factors effecting team

Building Effective Teams

Consensus Building

Collaboration

Module IV: Leadership

Meaning, Nature and Functions

Self leadership

Leadership styles in organization

Leadership in Teams

Module V: Power to empower: Individual and Teams

Meaning and Nature

Types of power

Relevance in organization and Society

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS**-Journal of Success; **HA**-Home Assignment; **P**-Presentation; **V-**

Viva; **Q**-Quiz; **FC**- Flip class; **MA**- Movie Analysis; **CS**- Case study; **A**-Attendance

Text & References:

- Organizational Behaviour, Davis, K.
- Hoover, Judith D. Effective Small Group and Team Communication, 2002, Harcourt College Publishers
- Dick, Mc Cann & Margerison, Charles: Team Management, 1992 Edition, viva books
- Bates, A. P. and Julian, J.: Sociology - Understanding Social Behaviour
- Dressers, David and Cans, Donald: The Study of Human Interaction
- Lapiere, Richard. T – Social Change
- Lindzey, G. and Borgatta, E: Sociometric Measurement in the Handbook of Social Psychology, Addison – Welsley, US.
- Rose, G.: Oxford Textbook of Public Health, Vol.4, 1985.
- LaFasto and Larson: When Teams Work Best, 2001, Response Books (Sage), New Delhi
- J William Pfeiffer (ed.) Theories and Models in Applied Behavioural Science, Vol 2, Group (1996); Pfeiffer & Company
Smither Robert D.; The Psychology of Work and Human Performance, 1994, Harper Collins College Publishers

FLF 501 FOREIGN LANGUAGE FRENCH - V

Semester 5 Course Code: FLT 501/511 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To understand the TP
- To understand an experiment
- To read the chemical equations
- To identify the chemical formulas
- To understand the instructions of a project
- To express a desire
- To understand a testimony
- To understand and read an exercise of mathematics
- Read and note the equations

Course Contents:

Unité 4 Formation Scientifique Page : 85-99 Leçons 13, 14 & 15

Contenu Lexical:

1. La chimie: les elements chimique et le matériel
2. La formulation des équations chimiques
3. Le corps humain
4. Les transports en commun
5. Les signes et formulations mathématiques
6. Les verbes utilisés dans les exercices de mathématiques

Contenu Grammatical:

1. L'infinitif pour exprimer un ordre ou un conseil (dans les consignes)
2. La nominalization
3. Savoir ou connaître au présent
4. Les pronoms relatives (qui, que, qu')
5. L'infinitif dans les consignes

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam

10	15	10	10	5	50
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Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionnaire, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG 501 GERMAN - V

Course Code: FLG 501/511

Credit Units: 02

Teaching hours: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- tell where they work and live
- tell location of their offices and house
- explain, how they reach their work place
- ask and tell the location of thing or person in a house like behind, in front of etc.
- describe the office things like printer, files etc

Course Content:

Vocabulary:

- Workplace
- Location like 1st floor, ground floor.
- Ordinal numbers
- Things and furniture in a office
- Means of transportation

Grammar:

- changing preposition in dative and accusative case
- Verbs related to changing prepositions like to put, to lay etc
- Dative and accusative preposition
- Modal verb : must and can

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: ZielspracheDeutschalsFremdsprachePart 1

References: Studio D A1 by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013

Tangram A1 by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007

Sprachtraining A1 by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013

Dictionaries for reference: **Studio D: Glossar A1** - Deutsch –Englisch, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

FLS 501SPANISH - V

Semester 5:

Course Code: FLS 501/511

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To talk about a pre decided plan
- To talk about a plan yet to materialize
- To propose a plan
- To talk about what they have done today/during vacations etc.
- Reading texts about Spanish festivals
- Writing composition about Festivals

Course Content:

Vocabulary:

Vocabulary related to leisure time, going out with friends, traveling, shopping, club, transport, decoration and celebration.

Grammar:

Introduction of direct/indirect object pronouns
(Pensar + infinitive),
(Estar pensando en + infinitive)
(Por qué no + verbo / Te Parece + Infinitivo.. etc)
(Haber + participio Pasado)
Introduction of pretérito perfecto

Examination Scheme:

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Text & References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005
Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 501 CHINESE V

Semester - V

Course Code: FLC- 501/511

Credit Units: 02

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Fifth semester the students will be able to

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.etc.
- Carry out conversation in the target language based on the topics learnt.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use, programme specific and internet related vocabulary; approx 80 Characters including 50 characters of HSK level – II
- Type Chinese document.
- Express their opinion and ask opinion of others in Chinese “de”.

COURSE CONTENT

1. Revision of vocabulary
2. Detailed study of greetings, farewell & personal information (HSK-II topics 1 & 2)^{etc.}
3. A brief description of mood & colours
4. Expression of opinions
5. Asking the opinion of the others
6. Listening of dialogues
7. Conversation based on topics learnt
8. CBT package “huozhe” “haishi”
9. Programme specific vocabulary and expressions
10. Chinese typing and making soft copy of a Chinese document
11. Important Chinese sites and internet related vocabulary

GRAMMAR CONTENT

1. Pattern: 因为.....所以..... “de”.
2. Preposition 介词: 在
3. Auxiliary verbs; 助动词

4. Modal Particle 语气助词:了

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Text Books & References

1. Learn Chinese with me book-II. (Major Text Book)
2. Module on HSK-II. (suggested reading)
3. Practical Chinese Grammar for foreigners. (suggested reading)
4. Internet Chinese. (suggested reading)
5. Office Talk (suggested reading)
6. Elementary Chinese Reader Book-I (suggested reading)

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AMITY SCHOOL OF ARCHITECTURE & PLANNING

Bachelor of Architecture

Batch 2019-24 Onwards

STAGE -I PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credits

Studio (ST) - 1 Hr. = 1.5 Credits

Practical (P) - 2 Hrs. = 1 Credit

SIXTH SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	St Per Week	P Per Week		
BID 601	Design – VI	CC	0	8	0	12	8
BID 602	Detailing In Interiors-I	CC	1	1	1	3	3
BID 603	Professional Practice	CC	2	0	0	2	2
BID 604	Dissertation	CC	0	0	4	2	4
BID 605	Building Services- V	CC	2	0	0	2	2
Domain Elective – IV (Select any One)							
BID 607	Intelligent Buildings	DE	2	0	0	2	2
BID 608	Vaastu in Architecture						
BID 609	Professional Presentation Techniques						
BCS 601	Communication Skills – IV	VA	1	0	0	1	1
BSS 604	Behavioral Science – VI (Stress and Coping Strategies)	VA	1	0	0	1	1
	Foreign Language – VI	VA	2	0	0	2	2
FLF 601	French					0	0
FLG 601	German					0	0
FLS 601	Spanish					0	0
FLC 601	Chinese					0	0
	Minor Track	OE	3			3	3
	TOTAL		14	9	5	30	28

BID 601 DESIGN - VI

Course Code: BID 601

Credit Units: 12 L-0/ST-8/P-0

Teaching hours: 08

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and need of the design. Learn the principles, methods, process, and concepts of design. Appreciate the requirements of design guidelines.
CLO 2	Evaluate architectural design concepts' applicability in various contexts by studying cases.
CLO 3	Apply the learning of the previous semester and theoretical or practical design to evolve a unique concept for a real architectural design project.
CLO 4	Evolve specific architectural design guidelines, policies, and recommendations for the project.
CLO 5	Create a design proposal for the given project in terms of presentation drawings, 3D model; 3D views, etc., as per the given requirements.

B. Syllabus

Course Objective:

- The objective of the course is to introduce the students to basics of Hospitality spaces and to integrate Building Services such as Lighting, Electrical, Water Supply, Acoustics etc in the designed interiors scheme. The course should involve different design ideas and schemes to represent the designing of Food joints, cafeterias, restaurants as these are the prime area of designing emerging in the modern world.

Course Contents:

Module I: Introduction

Understanding of Retail Space Design for different type of merchandise (Electronics, Garments, Cosmetics, Groceries, Jewelries , Shoes, Automobiles etc.) and Retail type – Departmental, Single Brand franchises. Market Study of furniture, interior materials and finishes and lighting fixtures. Project introduction for studio exercise

Module II: Case studies, Site Studies and Literature Studies

Case Studies – one Live and one through Literature; Literature Review – Design Standards and Codes, Comparative Analysis and Area statement

Module III: Concept Formulation

Development of concept to be presented with bubble diagrams, circulation diagrams and sketches for discussion.

Module IV: Design Development

Design to be developed through a series of appraisals and open discussions on alternative sketch options. Design proposal to be frozen and workability, efficiency of design to be worked out and finalized.

Module V: Presentation

Preparation of Presentation Drawings of the Final Design Proposal. Enhancement of presentation skills using multiple media. Creation of 3-D models based on the design. Preparation of perspective views (internal & external). Presentation of studies and design proposal through

submission of sheet work – drawings and views as well as scaled models.

Suggested Design Exercise

The suggested design exercise Retail Space Design for different type of merchandise (Electronics, Garments, Cosmetics, Groceries, Jewelries , Shoes, Automobiles etc.) and Retail type – Departmental, Single Brand franchises. Emphasis shall be on the composition, aesthetics, function and innovation.

At least one major exercise and one minor design/time problems should be given. The final submission shall necessarily include a model.

An A4 Design Report - documenting the process & progress of work through clippings of sketches/ photographs of models highlighting design concept, the final proposal drawings as well as Material Board having list & sample of materials used for different surfaces along with specifications - shall be an essential part of submission.

Study tour conducted in previous semester shall be evaluated on the basis of report submission of study tour.

Examination Scheme:

Components	A	S1	S2	CT	Viva	EE
Weightage (%)	05	15	20	10	20	30

Text & References:

Text:

- Design Fundamental in Architecture, Walter Gropius
- Interior Best Collection, Commerce Asia II, Archiworld
- Interior Design- Ahmed Kasu
- Interior Design Illustrated - Francis D.K. Ching
- Time Saver standards for Interior Designing and Space Planning, Joseph Dechiara and Julius Panero

References:

- A.J. Metric Handbook, editors, Jan Bilwa and Leslie Fair weather
- Architectural Graphic standards editor, Boaz Joseph
- Neufert's Architect's data
- Time Saver standards for building types, Editor Joseph D.C. and John Callende

BID 602 DETAILING OF INTERIOR I

Course Code: BID 602

Credit Units: 03 L-1/ST-1/P-1

Teaching hours: 03

A. Course Learning Outcome

CLO 1	Understand the design intent of the architect.
CLO 2	Be able to read construction drawings.
CLO 3	Communicate with consultants and vendors.
CLO 4	Develop and convert the design intent into a set of good for construction drawings.

B. Syllabus

Course Objective:

To learn the techniques of detailed drawing for interior design and to apply and provide various services in the building and learn the working drawing

Course Contents:

Module I: Interior Details

Working drawing - Introduction, concept of working drawings its needs and importance. Drawing and drafting of plan, development of elevation, details of all drawings, lettering, dimensioning symbols, working drawing of ground/first floor and terrace.

Module II: Schedule of Openings

Doors, types of doors, batted and ledged door, framed and panelled door, flush doors, steel doors, sliding doors, PVC doors, fiber reinforced plastics doors, revolving doors, swing door and collapsible steel door - applications, advantages and disadvantages, section and elevation.

Windows - Double hung window, louvered window, casement window, transom window, slider window, stationary window, pivoted windows, ventilators and skylights - applications, advantages and disadvantages, section and elevation.

Module III: Detailing of flooring and Plumbing

Flooring- Start point, Levels, lines, patterns depending of the space utility and building types. Necessity of Groove, Continuity of groove, Discontinuous grooves, their necessity and location, Grove in brick pattern. Size of the groove. Filled up grooves and their importance.

Module IV: Electrical drawing

Introduction to electrical drawings - Symbols of fan, switch, sockets, bulb, two way switch, geyser, main board, meter, MCB. Preparation of electrical drawings for 1BHK house.

Module V: Detailing of Venetians/ curtains

construction details at curtain installation, Selection of fabric for curtains depending of the use. Frills and their creation. Backing of curtain. Double and triple curtains. Types of Pelmet, their fixing to wall, with cover or without. Painting to order of the venetians/ curtains.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

- Building construction W.B.McKay
- Building construction R Berry

- Building construction Chudley
- Building construction Francis D.K. Ching
- Drawing for Interior Design Laurence King & Drew Plunkett
- Electronic Workflow for interior Designers and Architects Andrew Brody
- Construction Drawings and Details for Interiors”, Willey & Sons, Otie W & Rosemary Kilmer

BID 603 PROFESSIONAL PRACTICE

Course Code: BID 603 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To remember the project management techniques for handling construction projects.
CLO 2	To apply knowledge of charts & critical path networking for planning the construction activities.
CLO 3	To analyse the resource allocation requirements for various construction projects.
CLO 4	To formulate project schedules & plans for typical civil construction projects.

B. Syllabus

Course Objective:

- To acquaint the students about different Professional and Legal bodies related to the Interior and Architecture Design Profession, their role and importance. To make the students understand the professional intricacies, professional responsibilities and conduct, legal obligations and implications so that at the end of their studies the Students is familiar of their responsibilities as a professional.

Course Content:

Module I: Professional Bodies-

Familiarization with different Professional Bodies directly and in-directly related to architecture profession such as The Indian Institute of Interior Designers (IIID), The Indian Institute of Architects (IIA), The Council of Architecture (COA),etc.

Module II: Discussions in Detail about IIID

Its formative History, rules and regulations, membership procedure and categories, IIID Elections, Functions and formation of the IIID Council, importance, professional and trade practices and ethics.

Module III: Code of Professional Conduct and scale of professional charges

As laid down by the COA and modified from time to time. Procedures to be followed by an architect for the safe running of the Practice. Awareness about Interior Design Competitions and the Procedure lay down by the IIID. Do's and Don'ts for Interior Competitions.

Module IV: Minimum Standards of Interior Education

The implication of the regulations on the profession. Procedure followed by the COA for maintenance of the set standards.

Module V: Tendering for Interior Design of Buildings

Types, details of a tender document, procedure to be followed for calling tenders, tender analysis, election of the contractor and award of the work. Important terms such as EMD, Security Deposit, Defect Liability, Insurance etc.

Module VI: Contracts

Types of the Contracts, legality of the Contract, important clauses of the Contract, role of the

owner, architect and the contractor in fulfillment of the contract.

Module VII: Setting up of Interiors Office and start of Practice

Size of the office, location, infrastructure requirement, staff requirement etc. Procurement of the works. Important activities in a professional office.

Examination Scheme:

Components	A	C	P	H	S	CT	EE
Weightage (%)	05	05	05	05	10	20	50

Text & References:

Text:

- COA document of Architect's Act 1972
- COA Documents/Handbook

References:

- Professional Practice in India – S.K. Sahu
- Code of Architectural Practice – B.M. Basu

BID 604 DISSERTATION

Course Code: BID 604

Credit Units: 02 L-0/ST-0/P-4

Teaching Hours : 04

A. Course Learning Objective

CLO 1	Identification of research area and preparation of research proposal
CLO 2	Literature study and data collection
CLO 3	Analysis of site and data
CLO 4	Prepare research methodology
CLO 5	Preparation of reports and drawings

B. Syllabus

Course Objective:

- The objective is to introduce students to the research based project and its analysis. A research study will be undertaken by each student of different topics of immediate relevance to the professional knowledge. The study would include a through literature survey as well as data collection from the field service or by contact with practicing Architects, Interior designers and public at large as clients. Each student will prepare an analytical research project based on the above information and submit in the form of a well-complied document duly illustrated with relevant diagrams, sketches and informatics presentation.

Note: Dissertation can be treated as a preamble as the base of the thesis done on individual basis so the students could learn to work on research project

Course Contents:

Module I: Introduction

Introduction to the dissertation project and get the project/ topic approved by the school and respective faculty giving suitable justifications and reasons for the research. The proposal of research should include the aims, objectives, methodology, limitations, bibliography, site etc. at the time of approval of topic.

Module II: Collection and Analysis of Data (Case Study)

Site and surroundings survey- location, local climatic conditions, topography, existing landscape, socio- cultural impact on design. Study the site potentials in term of energy conservation and natural conditions.

Module III: Analysis of Data

Research analysis and data collection, Justification to topic selected. Detailed study of functions, Study of relationship of built and open spaces, interlinking of various activities.

Module IV: Methodology

Methodology of research, Data analysis, Data compilation.

Module V: Presentation

Preparation of analysis report with suitable drawings for discussion

Selection of Dissertation topic	Justification to topic selected	Site analysis and justification
Methodology of research	Research analysis and Data collection	Case Studies and Market Study of

		Materials & Finishes
User requirements and standards	Analysis	Inferences
Conclusions	Recommendations/ Suggestions	Bibliography

Submission: The submission will be in the hard Bound A-4 Size Report. The research should include the followings:

Examination Scheme:

Components	A	C	P1	Viva
Weightage (%)	05	15	30	50

Text & References:

Text:

- Creative Interiors (Design of Enclosed Space), Shashi Jain
- Commercial Interior Perspectives, Graphic – Sha (Editor)
- Design with Wood , Carol Soucek King
- Drywall (Pro Tips for Hanging & Finishing), John D. Wagner
- Interior design illustrated , Francis D.K. Ching
- Graphic Interiors (Space Designed by Graphic Artists), Corina Dean
- Home Plumbing (The David & Charles Manual of) , Ernest Hall
- House Book (The Complete Guide to Home Design), Terence Conran

References:

- Architectural Graphic standards, Boaz Joseph
- The Curtain Book, Mitchll Beazly
- Interior Design Visual, Maureen Mitton 2nd Edition

BID 605 BUILDING SERVICES-V (HVAC Systems)

Course Code: BID 605 Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understanding the scope, importance and ethics of the field of building services. Appreciate the requirements of different types of building services. Learn the concepts of the building services systems
CLO 2	To evaluate the quantity and quality of services to be provided.
CLO 3	Identify the various appliances, fixtures and appurtenances. Learn about the popular techniques of the building sciences.
CLO 4	Study about the thumb rules and the byelaws of the services and learn how to apply the knowledge while designing the layout of the buildings and its execution
CLO 5	Develop reports and assignments containing write-ups, and sketches to express their understanding of building services during lectures and site visits.

B. Syllabus

Course Objectives:

- To Integrate of HVAC system with building design & its application. To expose the students to the areas of air-conditioning, heating and ventilation in buildings of various types so that there integration could be done in most appropriate manner right at the design stage.

Course Contents:

Module I: Ventilation- 1 weeks

Natural and artificial ventilation systems; estimation of ventilation requirements; mechanical ventilation in buildings; scheme and equipment required for ventilation spaces like industrial kitchens, underground garages, and multistoried buildings and parking spaces.

Module II: Air conditioning- 2 weeks

Principles of Air conditioning; concept of thermal comfort; physiological principles; reaction of human body to the thermal environment; principles of psychometric; psychometric chart; selection of indoor and outdoor design conditions; refrigeration and air cycle; cooling and heating load calculations; various systems of air conditioning; duct work and air conditioning layout, fittings and fixtures; evaporative cooling, fair conditioning and its suitability. Types of systems- cooling tower, geothermal heating and cooling

Module III: Equipment's- 1 weeks

Scheme and equipment required for HVAC; their placement and physical space requirements.

Module IV: Load Calculation- 1 weeks

Cooling and heating load calculations; Introduction to British thermal unit and other factors; various systems of air conditioning; duct work and air conditioning layout, fittings and fixtures; evaporative cooling.

Module V: HVAC Design- 2 weeks

Design and drawing of HVAC system for a building designed in previous semester.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

1. Manohar Prasad, 'Refrigeration & Air conditioning'
2. C.P. Arora, 'Refrigeration & Air conditioning'
3. Modern Air-Conditioning, Heating and Ventilation: Carrer and G. Pitman.
4. Air Conditioning and Ventilation, Servems and Fellows, John Wiley

Domain Elective-IV

BID 607 Intelligent Buildings

Course Code: BID 607

Credit Units: 02

L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To describes the usage of electronics,safety equipment's and IT equipment's and to recognize the computer based 3D modelling,4D/6D
CLO 2	To converts regular interiors into intelligent interior consists oF the use of high-tech office automation systems to render the operation of a company more efficient
CLO 3	To identifies the application of intelligent interiors like residence, office and other public spaces. To compare the contemporary design and intelligent design and energy consumption and optimization system.
CLO 4	To criticize various interior spaces, building services like HVAC, lighting, water supply etc. using computer modulation and programming system. And cost of installation versus service output.

B. Syllabus

Course Objectives:

- To introduce the concept of intelligent buildings and to acquaint the student with the factors to be taken into consideration to build an intelligent building and basic concept of Artificial Intelligent and how it is helpful for building construction technologies.

Course Contents:

Module I: Introduction to intelligent buildings - 2 weeks

Definition of IB (Intelligent Building) according global and Indian context, Concepts, purpose and scope of intelligent building.

Module II: Intelligent Systems in Building - 3 weeks

Intelligent HVAC, Intelligent lighting, intelligent security, Intelligent firefighting, Intelligent openings, Intelligence with respect to telecommunications and network connectivity like WIFI etc.

Module III: Building Automation System - 3 weeks

Application, Current trend and innovation, Effect of building automation on functional efficiency, Components of Building Automation, Automation system in Building Services and their Integrated approach in design, maintenance and management system, Concept of artificial intelligence, Application of expert system in architecture.

Module IV: Expert System - 3 weeks

Introduction to expert system, objectives, features and components of expert system,
Applications of Expert Systems, benefits and limitations of Expert Systems

Module V: Artificial Intelligence - 3 weeks

Introduction to artificial intelligent, intelligent behavior, Development of Artificial Intelligence,
Concepts of Artificial Intelligence, Applications of Artificial Intelligence.

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

BID 608 VAASTU IN ARCHITECTURE

Course Code: BID 608

Credit Units: 02 L-2/ST-0/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Understand the philosophy and believes in Vastu
CLO 2	Learn the relationship between humans and cosmos
CLO 3	Learn the concepts of vedic vastu
CLO 4	Learn the site planning and planning approaches of vastu
CLO 5	Produce building plans as per vastu

B. Syllabus

Course Objectives:

- To educate the students on Vastu Shastra so that our own built environment should be in harmony with the energy of the inmates living in it.
- To expose the students to the various theoretical and practical aspects of Vastu Shastra.
- To familiarize with the ancient mode of designing a building in amalgamation with the latest technologies available.

Course Contents:

Module I: Introduction to Vastu

Introduction to Vastu, History of Vastu, Vedas and other ancient books, Growth of Vastu, Vastu and today, Scientific definition of Vastu, Solar Passage & Buildings with research referencing, Solar Energy, Humans & Buildings, Cosmic Energy & Flow:

Module II : Vedic Vastu

Concept of Vedic Vastu, Vastu Purush, Mandalas, Five Elements Theory, Planets & Directions.

Module III : Planning As per Vastu

Direction and Corners, Eight directions, Importance of directions, Slope & Loading Pattern, Open space & balconies, Shapes, Vedic opinion on entries, Alternative opinion on entries, Main Door & Main Gate. Planning for Bedroom, Kitchen, Puja room, Bathroom, Children's room, Drawing Room, Living Room, Office Room.

Module IV : Land & Location as per Vastu

Angles in a Plot & Building, Veedhi Shoola, Angles & Extentions, Shermukhi & Gaumkhi plot, Good & Bad Location. Selection of land & soil test, Examination of the land as per Mayamata & Brahit Samhita, Types of Land as per Vedic books, auspicious land & Inauspicious land, Obstructions.

Scientific correlation of Vaastu

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

Text:

- B.B. Puri, Applied Vastu Shastra in Modern Architecture
- Michael Borden, Vastu Architecture: Design Theory and Application for Everyday Life
- Kathleen Cox, Vastu Living: Creating a Home for the Soul
- Talavane Krishna, TheVaastu Workbook: Using the Subtle Energies of the Indian Art of Placement
- Sherri Silverman, Vastu: Transcendental Home Design in Harmony with Nature
- Rohit Arya, Vaastu: The Indian Art of Placement

BID 609 PROFESSIONAL PRESENTATION TECHNIQUES

Course Code: BID 609
hours: 02

Credit Units: 02 L-2/ST-0/P-0

Teaching

A. Course Learning Objective

CLO 1	Identify different professional bodies and Statutory Bodies in India, their functioning, importance and role towards the profession and role of the professional towards these bodies
CLO 2	Analyse and critically evaluate the requirements of a professional office/ corporate office to be ready to establish/join one.
CLO 3	Select and implement one of the practice types to be able to establish one's own practice
CLO 4	Demonstrate awareness of laws and bylaws related to the profession

B. Syllabus

Course Objective:

- To introduce about the attributes of an Interior Designer so that same can be groomed to look more Professional.
- To orient students towards developing verbal & non-verbal professional communication skills for an effective communication of the ideas, as well as to profess the values and ethics of the design profession especially with regards to interaction with people.
- To help students in developing design portfolio of their own works to kick start a professional carrier.

Course Contents:

Module I: Professional Attributes of an Interior Designer - 1 week

A brief introduction to Professional Attributes of an Interior Designer viz. updated domain knowledge, design portfolio, communication skills, presentation skills, design process, design perception, change-adaptive and professionalism.

Module II: Introduction to Interior Design Presentation - 1 week

Definition of an Interior Design Presentation; Stakeholders in an Interior Design Project; Process of interior design development and need of communication; Technical meetings; Professional presentation; Various modes of presentation.

Module III: Professional Communication I - 3 weeks

Dimensions of communication (Verbal & non-verbal, Formal and Informal, upward, downward etc. with clients, site worker/labours, co-worker etc.; Types of professional communication, Letters, E-mail, Short messages, reports Planning,

composing, and writing, Guide to effective writing.

Module IV: Professional Communication II - 3 weeks

Importance of conversation, definition, process and feedback in communication, cultural influences as barriers to effective communication, features of effective communication. Listening and responding, Modes of one to one communication i.e. personal meetings, video conferencing, etc.; Ethics related to various forms of communications.

Planning and conducting conversations, interviews, preparation and rehearsal of oral statements for presentations, body language, dressing sense, effective listening, and telephonic communication.

Module V: Introduction to Portfolio Design - 4 weeks

Multiple forms of representation, verbal and non-verbal (written & visual), students will explore methods that facilitate describing and representing their design work. Understanding relationship between form and content, different filters through which their work can be read. Recordings of materials, assembly, customization, reproduction techniques; graphic design and composition; The page layout – organization and sequencing of project documentation. The traditional hard copy portfolio and the digital portfolio.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Suggested Texts & References:

- Raman, M. & Sharma, S., Technical Communication : Principles and Practice, 2nd Ed. Market, Mike, 2012. Technical Communication
- Rizvi, M. Ashraf, Effective Technical Communication,
- Anderson, Paul V., Technical Communication: A Reader- Centred Approach, 6 Ed.
- Key Qualities of an Interior Designer (<https://smallbusiness.chron.com/key-qualities- interior-designer-17668.html>)
- 10 qualities of a successful interior designer (<https://bsbgroup.com/blog/10-qualities- successful- interior-designer>)
- How to Look Professional as an Interior Designer (https://www.youtube.com/watch?v=N6El_u20YX4)

- Interior Design : How to Present Your Ideas to the Client
(https://www.youtube.com/watch?v=LmE_X7c8-oc)
- Effective Presentation Techniques:
<https://www.presentationmagazine.com/effective-presentation-techniques-the-top-10-149.htm> and
<https://www.dandipatch.com/blogs/news/10-effective-presentation-techniques-to-help-you-master-your-presentation>

BCS 601 COMMUNICATION SKILLS - IV

Course Name	Course Code	LTP	Credit	Semester
Professional Communication Skills	BCS601	1:0:0	1	1

C. COURSE LEARNING OUTCOMES (CLO)

CLO 1	Demonstrate professional attitude needed for interview preparedness, power dressing, and respectful self orientation.
CLO 2	Showcase their leadership skills with effective team work.
CLO 3	Outline the basic etiquettes in expressing their personality individually and in group.

B. SYLLABUS

Topic
Resume Building-2
GD-4 (General & Abstract Topics)
Presentations-3 (Corporate Terms, HR Policies, Rules & Regulations)
Document Preparation for Job (CV Update according to profiles, Photo, Passport, IDs)
Mock Personal Interview-2

EXAMINATION SCHEME:

Components	Resume Writing	GD	Mock Personal Interview	Attendance
Weightage (%)	30	30	35	5

SUGGESTED READINGS

- Working in English, Jones, Cambridge
- Dr. P.Prasad. *Communication Skills*.S.K.Kataria & Sons
- Koneru, Aruna. *Professional Communication*. The McGraw Hill: New Delhi, 2008. Print
- New International Business English, Jones/Alexander, Cambridge

BSS 605 BEHAVIOURAL SCIENCE – VI

(STRESS AND COPING STRATEGIES)

Course Code: BSS 605

Credit Unit: 01

Course learning outcomes (CLOs)

At the successful completion of this course you (the student) would be able to:

1. Identify stress and that an individual come across.
2. Recognize the causes of stress in their lives.
3. Analyze symptoms and how they are affecting lives.
4. Create ways to effectively cope with it.

Course Objective:

- To develop an understanding the concept of stress its causes, symptoms and consequences.
- To develop an understanding the consequences of the stress on one's wellness, health, and work performance.

Module I: Stress

Meaning & Nature

Characteristics

Types of stress

Module II: Stages and Models of Stress

Stages of stress

The physiology of stress

Stimulus-oriented approach.

Response-oriented approach.

The transactional and interactional model.

Pressure – environment fit model of stress.

Module III: Causes and symptoms of stress

Personal

Organizational

Environmental

Module IV: Consequences of stress

Effect on behaviour and personality

Effect of stress on performance

Individual and Organizational consequences with special focus on health

Module V: Strategies for stress management

Importance of stress management

Healthy and Unhealthy strategies

Peer group and social support

Happiness and well-being

Examination Scheme:

Components	SAP	JOS	FC/MA/CS/HA	P/V/Q	A
Weightage (%)	25	15	30	25	05

SAP- Social Awareness Programme; **JOS-**Journal of Success; **HA-**Home Assignment; **P-**Presentation; **V-**Viva; **Q-**Quiz; **FC-** Flip class; **MA-** Movie Analysis; **CS-** Case study; **A-**Attendance

Text & References:

- Blonna, Richard; Coping with Stress in a Changing World: Second edition
- Pestonjee, D.M, Pareek, Udai, Agarwal Rita; Studies in Stress And its Management
- Pestonjee, D.M.; Stress and Coping: The Indian Experience
- Clegg, Brian; Instant Stress Management – Bring calm to your life now

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FOREIGN LANGUAGE 601

Semester 6 Course Code: FLT 601 (Tech French)

Credit Units: 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To understand the essentials of an interview
- To present one research
- To present one university and professional course
- To speak about the professional projects
- To understand a remarkable topic
- To understand and ask questions
- To describe a person
- The content and the method of the report
- To make a plan of the report
- To write an introduction
- To understand a short technical message
- To reply to a survey

Course Contents:

Unité 5 Nouvelles technologies Page : 100-121 Leçons 16, 17 & 18

Contenu Lexical:

1. Le parcours académique
2. Le monde du travail
3. Le fibreoptique
4. Les adjectifs descriptifs
5. L'exposé
6. Les énergies renouvelables

Contenu Grammatical:

1. Le passé composé avec avoir
2. Quelques adverbes
3. Quelques indicateurs temporels
4. L'interrogation (forme standard et soutenue)
5. L'accord de l'adjectif (féminin, masculin et pluriel)
6. La place de l'adjectif
7. Les différents niveaux de langue
8. Le futur simple
9. Les questions avec << qu'est-ce que >>

EXAMINATION SCHEME

Total: 100 marks

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam

10	15	10	10	5	50
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Text & References:

- Le Gargasson, I. Naik, S. Chaize, C. (2012) Tech French, Delhi : Goyal Publications
- Ray. A, Robert (2010) Le Petit Robert French Dictionary, Paris: Le Robert
- Robert, Collins (2006) Collins Robert French Dictionary, Paris : Harper Collins

FLG601 GERMAN VI

Semester 6:

Course Code: FLG 601

Credit units : 02

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

After successful completion of this semester, students will be able to:

- express their likes and dislikes (buying groceries)
- ask price and quantity
- express their likes and dislikes in terms of cloths
- buy cloths in the shopping mall

Course Content:**Vocabulary:**

- How often- every day, sometime daily etc.
- Cloths
- Colours
- Groceries : fruits , vegetables etc
- Groceries materials : packets, bottle etc.
- quantity and weight
- currency

Grammar:

- Make question with which, how many etc
- Comparative many, good etc
- Introduction of adjective ending in accusative with definite and indefinite article
- Verb like
- Demonstrative

EXAMINATION SCHEME**Total: 100 marks**

Continuous Evaluation (Total 50 Marks)					End Sem Evaluation (Total 50 Marks)
Quiz	Mid Term Test	Presentation	Viva Voce	Attendance	End-Term Exam
10	15	10	10	5	50

Prescribed Text-Book: Zielsprache Deutsch als Fremdsprache Part 2**References: Studio D A1** by Hermann Funk, Christina Kuhn and Silke Demme, Cornelsen, 2013**Tangram A1** by Rosa Maria Dallapiazza, Eduard von Jan & Till Schoenherr, Max Hueber, 2007**Sprachtraining A1** by Rita Maria Niemann, Dong Ha Kim, Cornelsen, 2013Dictionaries for reference: **Studio D: Glossar A1 - Deutsch –Englisch**, Cornelsen, 2013

<http://www.duden.de/woerterbuch>

Materials are given in form of photocopies if felt to be necessary

Course Learning Objective:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.
- To express future plans and intentions
- To talk about tourist destination in Spain and India
- Reading texts about Spanish historical monuments
- To talk about dance and music.
- Reading text about Spanish Cities
- Writing email to your friend/family members

Course Content:

Vocabulary: Names of the famous Spanish cities, monuments, dance forms (Flamenco, salsa, tango) informal greeting in letter writing.

Grammar:

Revision of Indefinite/ continuous /perfect tense
Introduction of Future Tense.

ExaminationScheme:

Total: 100 marks

ContinuousEvaluation (Total 50 Marks)					EndSemEvaluation (Total 50 Marks)
Quiz	MidTerm Test	Presentation	Viva Voce	Attendance	End-TermExam
10	15	10	10	5	50

Text &References:

Nuevo Español Sin Fronteras (ESF1) by Jesús Sánchez Lobato, Concha Moreno Garcia, Concha Moreno Garcia, Isabel Santos Gargallo, Sociedad General Española De Librería, S.A 2005

Pasaporte Nivel (A1) by Matilde Cerralzo Aragón, Oscar Cerralzo Gilli, Begoña Llovet Barquero, Edelsa Group didascalía, S.A. 2005

Dictionaries for reference: Collins, www.wordreferences.com.

Essential materials are given in the form of photocopies.

FLC 601 CHINESE VI

Semester - VI

Course Code: FLC-601

Credit Units: 2

Course Learning Objectives:

- Students will hone intermediate language skills such as reading, writing, speaking, listening & interactive) in the language
- Students will be able to read and interpret small texts of intermediate level.
- Students will be able to communicate in small sentences in Simple Future and Past tenses .
- Students will be able to communicate in oral in small sentences in Simple Future and Past tenses. etc.

On the completion of Sixth semester the students will be able to attain the proficiency of **HSK-II**. They will be able to:

- Read Chinese words, phrases and simple sentences both in Pin Yin and Characters given in the text.
- Write Chinese Characters and sentences and small paragraphs.
- Speak Chinese dialogues from various fields of day to day life.
- Listen and understand simple Chinese words and dialogues used in syllabi.
- Carry out effective conversation in the target language.
- Manipulate basic grammatical structures.
- Master and use most essential vocabulary items of day to day use: approx 70 Characters including 50 characters of HSK level –II
- Put up suggestions, explain reason, and do comparison.
- Do translation with the help of dictionaries and translation software.

COURSE CONTENT

1. Revision
2. Put up suggestions
3. Making comparison
4. Explaining the reason
5. Grammar points & exercises
6. Listening practice
7. Conversation based on dialogues
8. CBT package
9. Translation of small passages from English to Chinese
10. Practice of model test series of HSK-II
11. Chinese government system (in English)

VOCABULARY CONTENTS

1. Vocabulary will include approx 80 Characters including 50 Characters of HSK-II level.
1. Vocab related to suggestions, comparison, reason, will be covered during this semester.

2. By the end of sixth semester the students will be able to master **300 characters set for the HSK level-II** .

GRAMMAR CONTENTS

1. Aspectual particle 动态助词：着
2. Interjection 叹词: 喂
3. Overlapping verbs 动词的重叠
4. Affirmative sentences 肯定句

5. Negative Sentences 否定句

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Interior Design
2018-22 Batch

STAGE -II PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credit

Studio (ST) - 1 Hr. = 1 Credit

Practical (P) - 2 Hrs. = 1 Credit

SEVENTH SEMESTER

Course Code	Course Title	Category	L / T / P /ST Per Week			Credits	Teaching Hours
			L Per Week	T/St Per Week	P Per Week		
BID701	Professional Training	NTCC				21	
	TOTAL		0	0	0	21	

Note: Professional Training will be conducted during Seventh semester. Evaluation will be done before registration in Eighth semester.

BID 701 PROFESSIONAL TRAINING

Course Code: BID 701

Credit Units: 21 NTCC

Teaching hours : 0

A. Course Learning Outcome

CLO 1	To make students acquire the practical experience which will concoct them for their likely responsibilities, immediately after qualifying B. Arch. Course.
CLO 2	Students are expected to learn with the realm of architectural discipline ranging from generation of idea, preparation of drawings to the final execution of design on site.

B. Syllabus

Course Objective:

- To expose the students to the practical environment and works by working under an Architect /Interior Designer.
- To gain a practical knowledge and involved in all aspects of office works.

Course Contents:

Students are required to be involved in all works in an Architect's/Interior Designer's office including site visits also. The students should work on projects assign to them in terms of sketch design, presentation of drawings, Detailed working drawings, model making, estimation, specification, tendering of small projects.

Examination Scheme:

Components	S	Viva
Weightage (%)	50	50

Students are required to submit all the drawings, models, reports etc. on which they have worked and supervised by the Architect under whom they completed the training. Assessment of Professional training will be done in 8th Semester.

AMITY SCHOOL OF ARCHITECTURE & PLANNING
Bachelor of Interior Design
2018-22 Batch

STAGE -II PROGRAM STRUCTURE

Note:- Lecture (L) - 1 Hr. = 1 Credit

Studio (ST) - 1 Hr. = 1 Credit

Practical (P) - 2 Hrs. = 1 Credit

EIGHT SEMESTER

Course Code	Course Title	Category	L / T / P / ST Per Week			Credits	Teaching Hours
			L Per Week	T/St Per Week	P Per Week		
BID 801	Interior Thesis Project	CC	4	6		10	10
BID 802	Detailing of Interiors-II	CC	2	3		5	5
Domain Elective – V (Select any One)							
BID 803	Lighting in Interiors	DE	1	1		2	2
BID 804	Modular Construction Technology						
BID 805	Film & Television Set Design						
Elective – VI (Select any One)							
BID 806	Intelligent Interiors	DE	1	1		2	2
BID 807	Interior Landscape						
BID 808	Design of Logo & Signages						
Domain Elective – VII (Select any One)							
BID 809	Interior Journalism	DE	1	1		2	2
BID 810	Cost Effective Interiors						
BID 811	Specialized Interiors						
	TOTAL		9	12	0	21	21

Total Credits (29+28+30+29+28+29+21+21) = 215

BID 801 INTERIOR THESIS PROJECT

Course Code: BID 801

Credit Units: 10 L-4/ST-6/P-0

Teaching Hours: 10

A. Course Learning Objective

CLO 1	To illustrate the ability to designs a project responsive to the contextual and program requirements
CLO 2	To demonstrate systematic & methodological learning from various stages of the research & design process.
CLO 3	To communicate the ideas clearly using writing, verbal and visual presentation
CLO 4	To evaluate & compare data gathered from pre-design research
CLO 5	To demonstrate application of various codes, standards and regulations governing the project.
CLO 6	To illustrate the ideas clearly using a detailed physical Model.

B. Syllabus

Course Objective:

- To provide the students an opportunity to research and develop a design scheme for a project of their choice and approved by the school maintaining professional working standards and attain a professional level approach with extensive details. To attain independent professional approach analysis based design projects achieving high level of workability, efficiency and aesthetics in 3-D form with all the services properly worked out.

Course Contents:

Module I: Introduction

Introduction to the thesis design and get the project approved with the finalization of thesis guide/s. (Consent to be taken from internal and external guide both). The project research should include the followings:

Aim and Objective of study and Justification to topic selected	Case studies selected	Suggestions
Methodology of research	Analysis of study	Concept and planning of your own design
Limitation and scope of research	Conclusions of study	Bibliography

Module II: Research

Extensive research specific to project through the primary and secondary data collection. Conduct the case studies with extensive study and analyze to get a clear picture of the existing example. Detailed site study is to be conducted simultaneously.

Module III: Concept Development and Designing

Development of concept at various stages and levels with conceptual model and 3-D sketches to be studied. Design to be developed through a series of appraisals and open discussions. Planning at site as well as building level to be frozen and workability, efficiency of design to be worked out and finalized.

Module IV: Specifications and Estimation

The project estimation with all the necessary specifications to be detailed and studied to get a clear picture of the cost of the project. The details should include all the interior and exterior details.

Module V: Presentation

Complete project development and analysis report to be compiled containing all the details of the project. Presentation in terms of 3-D drawings and detailed Model to be submitted. Mode of presentation may be mutually devised by co-coordinators and student that may be project specific.

Examination Scheme:

Components	A	P	S	External Jury/Viva
Weightage (%)	05	25	20	50

The thesis project to be evaluated through open jury comprise of thesis guide and external expert members.

Text & References:

Text:

BID 802 DETAILING OF INTERIOR -II

Course Code: BID 802

Credit Units: 05 L-2/ST-3/P-0

Teaching hours: 05

A. Course Learning Outcome

CLO 1	Understand the design intent of the architect.
CLO 2	Be able to read construction drawings.
CLO 3	Communicate with consultants and vendors.
CLO 4	Develop and convert the design intent into a set of good for construction drawings.

B. Syllabus

Course Objective:

- To familiarize student with modern high-tech materials/products that are being/can be used for interiorsto create various moods and impacts on the users.
- Learning application details of high-tech material/product.

Course Contents:

Module I: Surfaces& Partitions- Construction Details- 2 weeks

Application of LED and other similar modern products for interiors such as walls, floors, murals etc. Virtual walls and their applicability.

Detailing of lattice work partitions in different types of material like wood, Stone, etc. Understanding techniques like laser cutting, Water jet cutting, and other methods used for different types of surface development.

Module II: Chandeliers and decorative Lighting- 3 weeks

Creating awareness about decorative lights and chandeliers including precautions in fixing. Lighting for special occasions/places such as bars and discotheques, hospitality spaces, auditoriums, show rooms etc. Creating awareness about different type of lighting fixtures and their utility.

Adding colors through light in interiors. Emphasis shall be in learning details of fixing the equipment along with necessary precautions.

Module III: Detailing of Spaces and Furniture- 3 weeks

Working drawing of Work Stations in offices, living room furniture, bedroom furniture, Dining Room, tables and storage units like Wardrobes, Crockery Unit, TV Unit, Chest of drawers, Bar Counter and Storage Unit detailed drawings . Drawing of one space and detail of one furniture item in that space shall be done.

Module IV: Toilet Details- Construction Details- 3 weeks

Working drawing for toilets with type of Flooring and Flooring pattern, Wall Tiling and Pattern, Sanitary ware fixing precautions, detailed layout with complete fixtures for e.g. Walk in Showers, Jacuzzi, Bath Tubs, different types of commode and washbasins, etc . Precautions for Waterproofing of a Toilet. Plumbing and Electrical diagrams with dimension and fixture name.

Complete working drawing showing details of all the exposed surfaces shall be made of an existing toilet.

Module V: Kitchen Details- Residential & Hospitality- 3 weeks

Working drawing of an existing Kitchen with detailing of Shelves & Cupboards along with hardware fixtures such as Handles and Hinges. Modular Kitchen Details using accessories provided by companies like Godrej Interiors, IFB, Hacker, KAFF, etc. Estimation and Specification of materials. Plumbing and Electrical layout diagrams.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Domain Elective -V

BAR803 LIGHTING IN INTERIORS

Course Code: BID 803 Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1 :	Understand the basic of sound energy, process and are able to manage building acoustical services provisions in construction sites.
CLO 2 :	Examine the developments in the use of materials with different eras
CLO 3 :	Analyse the spaces proportions, and sections, motifs of typologies of buildings such as communal hall, residences etc.

B. SYLLABUS

Course Objectives:

- The primary focus of this course is the study of natural and Artificial lighting in an architectural context. The course promotes the integration of occupant comfort, energy efficiency and daylight availability throughout the design process and places an emphasis upon the role light can play in shaping architecture.

Course Contents:

Module I: Introduction to Daylighting- 3 weeks

Introduction: Physics of light, Photometry, Transmission of light, recommended illuminances, Glare, Daylight illuminance, Luminance distribution, Design methods, Total flux method, Daylight factor method, BIS method, Pepper-pot diagram, Models and computer tools. Planning for daylight, day light utilization factor., Indoor and outdoor daylighting light.

Lab: Introduction to Lux meter. Simple experiments to measure Lux levels under different sky conditions, Class room lux measurements, etc.

Module II: Introduction to Artificial Lighting- 2 weeks

Study of interior lighting, different types of lighting their effects types of lighting Fixtures. Controls system, SOLAR control with artificial lighting, Artificial sky, Computer modelling.

Module III: Elements of Interior Architecture – lighting accessories- 2 weeks

Study of interior lighting, different types of lighting their effects types of lighting Fixtures.

Module IV: Philosophy of Lighting in Architecture - 3 weeks

The physiology of vision: The eye and sight (visual perception), Temporal sensitivity of vision, The spatial perception of the human eye, Visual comfort, Biological effects of lighting, The perception of light in architecture. Exhibiting philosophy, Lighting Legislation

Module V: Application of lighting and illumination in Architecture with Case Studies- 4 weeks

Designing using light as an architectural element, Necessity of lighting in designing spaces, Concept of Architectural Lighting, Phases of lighting design- Pre and post Analysis, Architectural lighting design focuses on fundamental aspects of the illumination of buildings- In aesthetic appeal, The functional aspects, Energy efficiency and wastage of light, Emphasis on Architectural features, Layout and Pattern, innovative daylighting systems, the future of daylighting and artificial lighting. Case Studies- Residential, Education, Ecclesiastical, Leisure, Transport, Display, Industrial.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material: Text:

- Architectural Lighting by M. David Egan, Victor W. Olgay

BID 804 MODULAR CONSTRUCTION TECHNOLOGY

Course Code: BID 804 Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Analyse productivity and economics in modular construction techniques.
CLO 2	Implement modular construction practices.
CLO 3	Understand the limitations of modular construction techniques.
CLO 4	Understand reliable proportioning concepts in modular construction techniques.

B. Syllabus

Course Objectives:

- The course of Modular Construction is aimed at focusing on the study of use of pre-fabrication systems, systems developed by CBRI and other agencies, basic modular planning and the proportioning systems and using the skills in designing of buildings. In today's context when various components of building construction happens off site, it is important to design as per the units/modules, repetition of which gives a modularly coordinated design and helps in easy and fast construction. Thus, the student will be able to demonstrate knowledge of building construction and management with application of Modular coordination and pre-fabrication concepts in their design.

Course Contents:

Module I: Module Orientation to Modular Construction - 1 weeks

Defining the concept of Modular Construction

Introduction to system building, mechanization of production of different parts and components of building types of building sizes.

Review of market to know availability of modular materials

Module II: Advantages & disadvantages of Modular coordination - 2 weeks

Classification of prefabrication systems developed CBRI, skeletal system, Brick panel system, non-structural elements, deviations in prefabrication.

Manufacturing of modules and their transport to the site.

Prefabrication; advantages, disadvantages and relevance in Indian context.

Shuttering and construction system for Use of RMC modular spaces and planning coordination requirements. of fixtures and components.

Module III: Modular planning of an interior space - 2 weeks

Introduction to modular practice, basic modular planning and component Module, modular number pattern introduction. System of proportion-introduction of various systems and comprehensive industrialized building-introduction and application.

Development of planning Module and structural Modules for various types of buildings in India.

Module IV: Review of works of masters on modular construction such as Le Corbusier etc. and presentation of a report. - 1 weeks

Module V: Mivan Shuttering-1 weeks

Construction requirements for modular construction design of building as per the availability of interior modular component such as tiles/ kitchen cabinets etc. to avoid wastage. Shuttering and scaffolding requirements. Introduction of 'MIVAN' shuttering system for making multiple housing units and its economics.

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	Viva	EE
Weightage (%)	05	25	20	20	30

BID 805 FILM & TELEVISION SET DESIGN

Course Code: BID 805

Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. COURSE LEARNING OUTCOME:

CLO 1	A comprehensive knowledge and understanding of light, exposure and colour , and their application in architectural lighting
CLO 2	An advanced understanding of theories of photographic composition, balance and weight
CLO 3	A knowledge of the history of architectural photography, with an awareness of the contextual boundaries within, and outside of, the genre.
CLO 4	An advanced ability to use film and digital cameras to capture and create outstanding photographs of architecture, form and space
CLO 5	A comprehensive knowledge and understanding of digital photographic image manipulation and processing techniques using industry standard software programmes

B. SYLLABUS

Course Objectives:

- Set Design is an important and interesting section of design industry as it gives shape to ones' imagination and visualization. Set designing intends to expose students to different backgrounds and enhance designing skills by expressing ones' visualization into scenes. In this, students will be able to explore a new arena of employment

Course Contents:

Module I: Orientation to the Set design

Introduction to set design, History of set designing, Materials and techniques, In sync of traditional set designing to contemporary sets. Case studies of classical & modern sets as submission of reports.

Module II: Application of set design

Practical use of Elements and principles of design in set Design, Presentation on different Film studios such as Ramoji film city, and Universal Studio/AUR Studio etc.

Module III: Workshop

Designing sets by using local low cost materials, designing artistic backdrops for various events held in college/ Students in groups designing sets such as News reports office, café.

Module IV : Virtual sets

Adoption of technology in design of sets, virtual sets. Incorporation of multimedia & modern gadgets within sets.

Module V : Modern set

Study of modern set, requirements for stage shows for different activities such as dances/ dramas/ plays/ solo and group performances/ reality shows/ discussion stage/ mobile & reusable stages. Understanding the equipments required and that aesthetic incorporation to enhance viewer pleasure.

Examination Scheme:

Components	A	CE	CT 1	EE
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Weightage (%)	05	25	20	50
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Text & References:

- Drafting for the theatre- Dennis Dorn and Mark Shanda
- Light Fantastic: The Art and Design of Stage Lighting- Max Keller
- The Handbook of Set Design- Crowood Press
- Set Design by Tony Davis

Elective-VI

BID 806 INTELLIGENT INTERIORS

Course Code: BID 806 Credit Units: 02 L-1/T-1/P-0 Teaching hours: 02

A. Course Learning Outcome

CLO 1	To understand the difference between conventional design approach and Digital design process.
CLO 2	To understand use of different software, digital design tools and techniques for different-different digital design processes.
CLO 3	To apply digital design tools and techniques for the development of complex products, building interiors and exterior.
CLO 4	To evolve innovative digital architectural components by using logical and mathematical model.
CLO 5	To create physical structure evolved by digital design process.

B. Syllabus

Course Objectives:

- Technology is becoming inherent part of modern life and has invaded every aspect of our life including the building interiors. Intelligent interiors are one of the most important parts of the modern buildings and objectives of the course is to make students aware of the use of technology in interiors.

Course Contents:

Module I: Introduction - 2 weeks

Overview of intelligent interiors and use of electronics & IT equipment for creating interesting interiors.

Module II: Intelligent Safety Systems - 3 weeks

Use of technology to maximize the performance of fire alarms and security systems while at the same time minimizing costs. Incorporation of safety equipment such as CCTV etc aesthetically in the interiors.

Module III: Workplace automation - 2 weeks

Intelligence with respect to workplace automation in an intelligent interior consists of the use of high – tech office automation systems to render the operation of a company more efficient. This can be done at a reduced cost to tenants by virtue of the equipment being shared.

Module IV: Automation of interiors - 2 weeks

Remote control in interiors, Managing and monitoring building efficiency from distance. Managing Security, HVAC etc from distance.

Module V: Virtual spaces and interiors - 3 weeks

Learning ways & system of creating such spaces that change shape/ size/ ambience/ colour etc. to change according to performance & suite the audience- D/4D/6D interiors. Interiors to suit the model

& behavior of the user. Right from ones entry to the building to reach his final destinations.
Temperature, light and colour control.

Module VI: Intelligent use of energy - 2 weeks

Intelligent interiors consist of energy use to the minimum with computerized system. To control light, airflow, air-conditioning, outdoor light entering the building heating and minimizing the energy consumption.

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

BID 807 INTERIOR LANDSCAPE

Course Code: BID 807

Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Characteristics of various types of plants/trees/ shrubs/ creepers/ edges/ hedges etc., and their suitability for landscaping; plant selection criteria, planting design.
CLO 2	Definition, scope, landscape architecture in relation to architecture. Landscape design elements and principles, historical review of gardens in India, Persia, Japan, Italy, France and England, contemporary landscape design
CLO 3	To know Landscape design element such as sculptures/ benches/ umbrellas/ fences/ posts etc. their design, selection and incorporation in landscape/ site planning schemes. Characteristics of various types of plants/ trees/shrubs/ creepers/ edges/ hedges etc., and their suitability for landscaping; plant selection criteria, planting design.
CLO 4	To Evaluate the topography/ slope, hydrology/ drainage, geology/ soil, vegetation, views – on site/ off site and then consideration in design and planning.
CLO 5	To design the outside space in accordance with the understandings and elements of site planning.
CLO 6	To review, reflect, re-interpret and refine the effectiveness of the designed outdoor spaces

B. Syllabus

Course objective:

The objective of the course is to introduce the students to the practice of arranging and designing landscaping

Course contents:

Module I: Introduction

Introduction to interior landscape; history of evolution; Role and working of landscaping organizations such as ASLA etc.; impact of interior landscaping world-wide; study of examples of various cities in early years and modern usages

Module II: Briefing Interior Landscape

Types of interior landscaping; concepts of horticulture, xeriscaping, etc.; listing and analysis of plants and vegetation as per their usage and climatic conditions

Module III: Principles of Interior Landscape

Ergonomics, topiary, etc concepts for designing/ ornamentation of interior landscaping; representation techniques, graphics and symbols, rendering techniques; study of various fundamentals of designing such as aesthetics, expressions, harmony, etc

Module IV: Working Exercise

Plantscaping an area using any style of Interior Landscaping, providing detail legends of plants, shrubs, etc; using any style of interior landscaping

Module V: Planters

Planters/types and other hardware for interior landscaping

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:***Text:***

- An Introduction to Landscape architecture by M. Laurie.
- An Introduction to Landscape Design by H. V. Hubbard
- Fundamentals of Landscaping and Site Planning by James B. Root.
- History of Garden Design by D. Clifford
- Tropical Garden Plants in Colour by Bose and Chowdhury

References:

- Colour and Design for Every Garden by Ortloff and Raymore
- Design with Nature by I. Mcharg
- The Way We Live by Alfresco
- New Landscape Design by Robert Holden
- Fundamentals of Ecology by M. C. Dash.
- Landscape Detailing by Michael Ittlewood.

BID 808 DESIGN OF LOGO & SIGNAGES

Course Code: BID 808

Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	Solve complex design problems using creative thinking and analytical skills
CLO 2	Develop and demonstrate their understanding and skillful use of the elements and principles of visual design
CLO 3	Gain skill to use the digital tools as a powerful means of communication for creation, modification & presentation
CLO 4	Learn ways to apply aesthetic sensibilities into their works and explore ways to balance between formal theories with practical applications.

B. Syllabus

Course objective:

To acquaint the students with graphic design of symbols, logos and signage

To familiarize the students towards its application in the field of architecture and built-environment globally

Course contents:

Module I: Introduction

Definition of Graphic design and its specialized industries; History of Visual communication, pivotal movements & designers that led to the development of Graphic Design industry dealing with Symbols, Logos and Signage as witnessed today.

Module II: Visual Design Fundamentals

Visual design elements and principles, theory of graphics and visualization, Colour theory, Typography and Photography;

2D and 3D visual elements for representation and transformations.

Module III: Design Process – Symbols and Logos

Creative thinking processes and methods; Typology fundamentals; designing, narrating and concept evolution for symbols and logos; Designing fundamentals of words, images, aesthetics, identity and expressions; Case Studies of famous examples of Logo and Symbol design.

Module IV: Design Process - Signage

Understanding importance of signage as per the building typologies; impact of commercial signage on users; ergonomics of informative signage; sign regulations, harmony with contextual urban design, architecture and environment, Design process and Case Studies of key informative and commercial signage.

Module V: Technology

Commercial Printing, materials & techniques for signage fabrication and erection, Signage lighting, Use of Graphic design softwares for designing symbols, logos and signage.]

Examination Scheme:

Components	A	CE	CT 1	EE
Weightage (%)	05	25	20	50

Text & References:

- Chris Calori, David Vanden-Eynden, Signage and Wayfinding Design: A Complete Guide to Creating Environmental graphic design system, 2015 wiley
- Lisa Silver, Logo Design that Works: Secrets for Successful Logo Design, 2001, Rockport Publishers
- Michelle Galindo, Signage Design, 2011, Braun
- Edo Smitsluijzen, Signage Design Manual, 2007 Prestel Pub

Domain Elective-VII

BID 809 INTERIOR JOURNALISM

Course Code: BID 809 Credit Units: 02 L-1/T-1/P-0 Teaching hours: 02

A. Course Learning Objective

CLO 1	Identification of research area and preparation of research proposal
CLO 2	Literature study and data collection
CLO 3	Analysis of site and data
CLO 4	Prepare research methodology
CLO 5	Preparation of reports and drawings

B. Syllabus

Course Objective:

Interior Journalism aims to provide foundations for writing about architecture and design. This course deals with the basics of news writing, news structure, editing and presenting and discusses the elements and principals of writing. This course is intended to help those, who have inclination for writing to develop their skills to enable them to record, analyze and evaluate architecture both in its theoretical and practical forms. To understand the process of documenting a projects in the field of interior.

Course Contents:

Module I: Journalism in general

Journalism in general, Theories of journalism, Techniques and processes, Contemporary Architectural journalism

Module II: Basics of Writing

News – Source, Elements, News Values and Impact, Journalism – History, Focus on India, Journalism and Society

News Writing – Style and principals. Types of leads & Body text, News Structure – 5W 1H, Inverted Pyramid, Diamond and Hourglass style of news writing, Understanding your reader, Writing in perception of the user, Career in Architectural journalism

Module III: Writing about design and architecture

Overview of journalistic assignments. Design – Analysis and Writing, Writing review and critical analysis, Collecting information and presenting data, Elements of architecture: the form, the materials, the design concept or the key planning – Idea Creation, Documenting of projects, Brining Flair and Objectivity in Writing, Architectural Criticism, Writing on interior and construction, Writing on urban planning and sustainability, Interview and Personal Writing, Writing facts and establishing debate, Corporate Reporting, Press Meeting and press releases

Module IV: Editing and Presentation

Prof reading techniques – Languages, Grammar and Style, Electronic Copy editing, Writing Headlines and captions

Writing an editorial and opinion , Style sheet, Constructing Narrative , Writing for various media – Print, Visual and Online, Lay-out – Newspaper and Magazine, Introduction to Publishing Softwares.

Module V: Magazine Writing

Introduction to magazine journalism and writing, Reviews of famous architectural magazine and writers, Principals of writing magazine story, Feature writing , Using pictures and graphics,

Project : Student must prepare two features; one for newspaper and other for the magazine about a project and an architect.

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text & References:

- Miller, Randy & Wilber, Rick (2002). *Modern Media Writing*. Wadsworth Publishing
- Sharma, Sangeet (2013). *Architecture, Life & Me*. Rupa & Co. Delhi.
- Wray, Cheryl (1997). *Writing for Magazines: A Beginner's Guide*. McGraw Hill.
- Architectural Criticism and Journalism by Majd Musa and Mohammad Al-Asad (1 March 2007)
- Challenges to the Epistemology of Journalism: The Architecture of the Contemporary Mediascape (Economy and Society... by George Lazaroiu (15 August 2012)

Magazines:

- **Metropolis Magazine**, architecture and design
- **Plan**, architecture, design, art and urban planning

Surface Magazine, architecture, design, and fashion

BID 810 COST EFFECTIVE INTERIORS

Course Code: BID 810

Credit Units: 02 L-1/T-1/P-0

Teaching hours: 02

A. Course Learning Objective

CLO 1	Appreciate the need for achieving low costs in construction for increasing affordability.
CLO 2	Determine the factors that add up to and increase project costs.
CLO 3	Learn the cost-effective space planning and architectural design strategies for both urban and rural context
CLO 4	Develop acumen for searching material alternatives for building construction.
CLO 5	Compile existing cost-effective construction techniques that can be applied in projects to control costs.

B. Syllabus

Course Objective:

- To familiarize the student with cost-effective construction for building economy
- To develop an understanding of different issues, types and techniques involved in the design and construction of low cost structures

Course Contents:

Module I: Introduction

Basic shelter issues in India and Affordability, Need for achieving low costs in building construction – Low cost vs. Quality. Factors constituting building costs, Controlling parameters for achieving Cost Effective Architecture – land, space, materials, design, construction techniques, construction time & labour.

Module II: Understanding needs of economically weaker sections

Cultural study of economically weaker sections in India in different pockets like slums & existing EWS & LIG housings, space usage pattern studies, study for modifications and alterations done by dwellers in existing EWS & LIG Schemes.

Module III: Architectural Planning & Design for Cost Effective Architecture – Space Optimization

Site planning and Architectural Design as tools for Cost Effective Architecture, Space planning Norms of National Building Code, India for Economically weaker Sections in Urban and Rural Areas; National building organization – Recommendation of Housing and Urban Development Corporation, Space optimization as a process of cost reduction, Multiple use of space. Multiple use of furniture.

Module IV: Building Materials, Construction techniques & Time Optimization for Cost Effective Architecture

Local materials and traditional technologies, Improved traditional technologies, Innovative Materials and construction methods developed Laurie baker; CBRI Roorkee, HUDCO, Anangpur Building Centre, Development Alternatives, Auroville Building Centre and many others for different types of walling, roofing and foundation with materials like Pressed soil blocks, soil cement blocks and other alternative materials – fly ash brick, gypsum byproducts, Ferro cement products, bamboo, jute stalk etc; Ways to cut down the use of unwanted building materials, Project time optimization to reduce

project costs, Use of effective project management techniques.

Module V: Studies and Comparative Analysis for Cost Effectiveness

Case studies presentations of low cost/ cost effective projects and their comparative cost analysis with conventional projects.

Examination Scheme:

Components	A	CE	CT 1	EE
Weight age (%)	05	25	20	50

Text & References:

BAR 811 SPECIALIZED INTERIORS

Course Code: BID 811

Credit Units:02 L-1/T-1/P-0

Teaching hours: 02

A. Course Learning Outcome

CLO 1	To understand the difference between conventional design approach and Digital design process.
CLO 2	To understand use of different software, digital design tools and techniques for different-different digital design processes.
CLO 3	To apply digital design tools and techniques for the development of complex products, building interiors and exterior.
CLO 4	To evolve innovative digital architectural components by using logical and mathematical model.
CLO 5	To create physical structure evolved by digital design process.

B. Syllabus

Course Objectives:

To understand the basic ideas different spaces and designing spaces in various modes of transit through Adaptive and retrofit design, Proper utilization of limited spaces.

Course Contents:

Module I: Principles of Yacht/House Boat Design- 2 weeks

History of Boat, Typology, Understanding Boat Design, Space Allocation, Identifying ,Information Relevant to the Yacht Interior, Space Planning for the Yacht Interior, Lighting the Yacht Interior, Construction Methods and Materials for the Yacht Interior.

Module II: Principles of Aeroplan/Private jet Interior Design - 4 weeks

Function and performance, Cabinetry, seat design, rapid cabin retrofits, Passenger safety, Removal of wastes, Entertainment, Lighting ,types of construction materials, Storage spaces, galley or cooking spaces, laboratories, crew restroom, passenger lounges,

Module III: Principles of Train Cabin/ Container Interior Design - 4 weeks

Typology of Cabin, Understanding Rail cabin Design, Space Allocation, Identifying , Information Relevant to the Rail cabin Interior, Space Planning for the cabin Interior, Lighting the cabin Interior, Construction Methods and Materials for the cabin Interior. Acquiring knowledge on air conditioning systems: Cabin, Passenger compartment. Ergonomically Significance. Adaptive furniture design.

Module IV: Automobile Interior Design - 4 weeks

Brief history on the evolution of present day vehicles- Personal and public mobility system, Retro styling movement. Automobile terminologies and configurations. Anthropometrics and its application to vehicle ergonomics and cockpit design, Driver and passenger comfort – seating, visibility, man-machine system,

Safety issues- active and passive safety features in vehicles.

Exercises: Field trips, Retro styling, Styling for future, interior design based on themes. Exercises based on the above and seminars

Any important note or instruction for course coordinator

Examination Scheme:

Components	A	CE	CT	EE
Weightage (%)	05	25	20	50

Text Books /Reference Books/Journals/Other Study Material:

Text:

1. Ahola, Markus. 2017. Tracing Passenger Safety Perception for Cruise Ship Design. Aalto