Student's Induction Program

Motivating (Inspiring) Activities under Induction programme – A pre - post Architecture Programme Activity (02 weeks in the begining of first Semester and 02 weeks in the begining of second semester)
Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc. For details refer ANNEXURE-I.

Visvesvaraya Technological University, Belagavi

BACHELOR OF ARCHITECTURE

Scheme of Teaching and Examination (2021)

Outcome basec Education (OBE) Choice Based Credit System (CBCS)

SMESTER-I

Sl No	Course category	Course Code	Title of the Subject	Teaching Dept	Teaching Hours/ Week							Examination						Credits
					Lecture	Tutorial	Studio	Practical	Seminar	Self Study	Total	Duration in Hours	CIE marks	SEE Marks			Total	
					L	T	S	P	SM	SS				Theory Marks	Term Work	Viva Marks		
1	PCC	21ARC11	Architectural Design-1	Architecture			7				7		50			50	100	7
2	PCC	21ARC12	Materials & Methods in Building Construction-1	Architecture	1		3				4		50			50	100	4
3	PCC	21ARC13	Architectural Graphics-1	Architecture			4				4		50		50		100	4
4	PCC	21ARC14	History of Architecture-1	Architecture	3						3	3	50	50			100	3
5	PCC	21ARC15	Basic Design & Visual Arts	Architecture	2		3				5		50		50		100	5
6	SEC	21ARC16	Model Making Workshop	Architecture			4				4		100				100	4
7	AEC	**21ARC17/ 21IDT19/ 29**	**Innovation and Design Thinking**	Architecture	1						1	1	50	50			100	1
	HSMC	**21EGH18**	**Communicative English**	Humanities	1	1		1			3	2	50	50			100	2
			Total		**8**	**1**	**21**	**1**	**0**	**0**	**31**	**6**	**450**	**150**	**100**	**100**	**800**	**30**

PCC- Professional Core Courses
SEC - Skill Enhancement Course
HSMC - Humanity Sciences and Management Courses
AEC-Ability Enhancement Course

Progressive Marks(CIE) to be awarded by the subject teacher. Term work & Viva Voce examination shall be conducted jointly by one internal & one external examiner appointed by the University.

Minimum Marks for passing: Progressive **(CIE)** Marks 50%, Theory **(SEE)** marks, Term work marks and Viva marks 40 % in each

Student's Induction Program

Motivating (Inspiring) Activities under Induction programme – A pre - post Architecture Programme Activity (02 weeks in the begining of first Semester and 02 weeks in the begining of second semester)

Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc.(Refer ANNEXURE-I for details)

Visvesvaraya Technological University, Belagavi

BACHELOR OF ARCHITECTURE

Scheme of Teaching and Examination (2021)

Outcome Based Education (OBE) Choice Based Credit System (CBCS)

SMESTER-II

Sl No	Course category	Course Code	Title of the Subject	Teaching Dept	Teaching Hours/ Week							Examination						Credits
					Lecture	Tutorial	Studio	Practical	Seminar	Self Study	Total	Duration in Hours	CIE marks	SEE Marks			Total	
														Theory Marks	Term Work	Viva Marks		
					L	T	S	P	SM	SS								
1	PCC	21ARC21	Architectural Design- II	Architecture			7				7		50			50	100	7
2	PCC	21ARC22	Materials and Methods in Building Construction-II	Architecture	1		3				4		50			50	100	4
3	PCC	21ARC23	Architectural Graphics-II	Architecture			4				4		50		50		100	4
4	PCC	21ARC24	History of Architecture-II	Architecture	3						3	3	50	50			100	3
5	PCC	21ARC25	Basic Design & Theory of Design	Architecture	2		2				4	3	50	50			100	4
6	BSAE	21ENG26	Building Structures-I	Civil Engg	3						3	3	50	50			100	3
7	BSAE	21ENG27	Site Surveying and Analysis	Civil Engg				2			2		50		50		100	2
8	HSMC	21EGH28	Professional Writing Skills in English	Humanity Sci Dept	1	1		1			2	2	50	50			100	**2**
9	AEC	21SFH29	Scientific Foundatioins of Health	**Any Dept**	1						1	1	50	50			100	1
			Total		**11**	**1**	**16**	**3**	**0**	**0**	**30**	**12**	**450**	**250**	**100**	**100**	**900**	**30**

PCC- Professional Core Courses

BSAE- Building Science & Applied Engineering Courses

HSMC - Humanities Courses (Govt. Karnataka Compulsory Course)

SEC - Skill Enhancement Course

Progressive Marks(CIE) to be awarded by the subject teacher. Term work & Viva Voce examination shall be conducted jointly by one internal & one external examiner appointed by the University.

Minimum Marks for passing: Progressive **(CIE)** Marks50 %, Theory **(SEE)** marks, Term work marks and Viva marks 40 % in each

I Semester

ARCHITECTURAL DESIGN - I			
Course Code	**21ARC11**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	0:0:0:7	SEE Marks (VIVA)	50
Total Hours of Pedagogy		Total Marks	100
Credits	07	Exam Hours	

Course objectives:

1) To develop the ability to generate solutions to spatial constructs, which integrate principles of design with functional requirements.
2) To develop an understanding of the holistic role of an Architect and Architecture in society.

Teaching-Learning Process (General Instructions)

These are sample Strategies; which teachers can use to accelerate the attainment of the various course outcomes.

1) The contents of the courses shall be taught in an application-oriented manner on a scientific and design basis. The course contents shall be taught and learned in lectures, seminars, labs or workshops, studio exercises and design projects, etc.
2) IIn-studio exercises the teachers shall take the lead to provide tasks and offer guidance for solutions finding. The students shall work either individually or in groups.
3) In design studios, the students contribute to the processing, analysis and solving of problems of direct professional practice, attended by faculty(s) entitled to conduct the studio and examine. The results shall be defended through drawings; models and reports and evaluated through periodic assessment and finally by a jury or panel, and finally, evaluated through periodic assessment and an end semester examination or viva voce.

We inhabit and function in space, both the manmade and the natural i.e., “a life spent within an enclosure”. These enclosures have functional and cultural meanings, are symbols of abstract ideas of that period in time.

"Architecture is the art we all encounter most often, most intimately, yet precisely because it is functional and necessary to life, it's hard to be clear about where the "art" in a building begins." - Jonathan Jones

"Architecture is a discipline directly engaged with shaping enclosure, of erecting and toppling barriers or—more explicitly—of extending and limiting ‘freedoms’." - E. Sean Bailey &Erandi de Silva

Module-1

Introduction to Architecture:

- Importance of Architectural Design in architectural education.
- Architect’s role in Society and Architectural Design.
- Understanding of Architecture’s connection with other disciplines of knowledge: Science & Technology, Mathematics, Philosophy, Religion, Sociology, Psychology, Ecology, Climate change etc.

Teaching-Learning Process	• Documentation of local stories on architecture, important local buildings and other favourite buildings or places. • To observe and understand different elements, those comprise architecture like

	doors, windows, staircase, roof, enclosures etc. • Observing and documenting the built environmental condition around and experiencing enclosures (field trips) to learn basics of architectural representation.
Module-2	
Introduction to Design: • Universality of Design in various fields. • Introduction to different fields in Design such as Basic design, Architectural design, Graphic design, Automobile design, Interior design, Fashion design, Product design, sustainable design, and so on.	
Teaching-Learning Process	Objects Analysis – Understanding of objects that are in everyday use around us. Look and feel of them to know the purpose and function, with material, texture, size and shape. • Representation through points and lines, various textures in nature and man-made elements. • To learn basic design principles such as balance, symmetry, rhythm, repetition, hierarchy, unity, proportion, emphasis, contrast
Module-3	
Introduction to the Design Process: To understand the Qualitative and Quantitative aspects of Design Process **Qualitative design process** • What is an Idea or Concept in Design? Understanding the relationship between idea, context, space (form & structure), and functional requirements. • Introduction to the various methods of idea / concept generation - use of form, patterns in nature and in geometry, music, text, and other allied fields. • Understanding the ambience of space using – Form, Colour, Texture, Light, Space and Scale **Quantitative design process** • Anthropometry - Understanding the functional and spatial requirements with respect to the human body and its postures along with furniture. • Study of Standard measurements, minimum and optimum areas for mono functions. • User's data, movement and circulation diagrams. • Case study of famous architect's work or local architecture with respect to spatial analysis, area requirement and program.	
Teaching-Learning Process	• Understanding the difference and similarity while design of a non-enclosed space, a semi-enclosed space, an enclosed space. • Analysis of spaces using – Form, colour, texture, light, ventilation, space and scale along with circulation. • Submission will include Idea generation, Study models, Sketches and drawings to achieve the desired results. • Drawings of the human body in various postures with required measurements with respect to different functions, spaces and furniture. • Design of functional furniture layout with requisite circulation, lighting and ventilation for a specific function. Study models and sketches to explore the design principles. Drawings of study models - plans and sections (suitable scale).
Module-4	

Introduction to Abstraction:

- Elements of form from abstract concepts like point, line, plane, mass and / or volume, 2D forms - circle, square and triangle, 3D forms – cube, sphere and pyramid, therefore, development of more complex forms by the method of addition and / or subtraction.
- Concepts of volume and scale, width to height ratio.
- Additive and subtractive

Teaching-Learning Process	Method of learning: Observation & Study • Exercises to introduce 2D concepts to 3D forms without functional constraints and Human scale. • Declaring the conceptional theme of any composition at the beginning, before the exploring the volume using Horizontal and vertical elements or planes. • Study of patterns and use the pattern, both physical and material patterns as well as patterns of transformation and Integration. Appreciation of the difference between architecture and the chosen pattern.

Module-5

Form Development with function

- Design of Spaces such as a pavilion, gazebo, kiosk, bus stop, stage, (outdoor spaces) living/dining, bedrooms, (indoor spaces) Architect's office, Doctor's clinic, etc. (Utilitarian Spaces) (anyone in each category)
- Design of functional furniture layout with requisite circulation, lighting, and ventilation for a specific function.
- Understanding the difference and similarities while the design of a non-enclosed space, a semi-enclosed space, an enclosed space.
- Submission will include Idea generation, Study models, Sketches, and drawings to achieve the desired results.

Teaching-Learning Process	• discussions, presentations, and case studies will cover three typologies. The portfolio covering all the assignments shall be presented for term work.

Course outcome (Course Skill Set)

the student will be able to:

- Get an introduction into the field of Architectural Design viz. a viz. the duality & the tension that exists between the form and function of a space.
- Make responsible choices for design development
- Get a perspective on design of spaces in formal and informal settlements.

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- Studio discussions, Reviews, Time problems, test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40 % marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (Term work). Based on this grading will be awarded.

Continuous Internal Evaluation:

Methods suggested:

1. Studio discussions, Reviews, Time problems, CIE tests, Seminar or micro project, Quiz, report writing etc.
2. The class teacher has to decide the topic for the Design and Seminars if any, in the beginning only. The teacher has to announce the methods of CIE for the subject in advance in writing.

Semester End Examination:

1. The student needs to submit his/her works done throughout the semester, including rough sheets for the Term work examination, at least one day prior to the Term work examination to the course teacher/coordinator.
2. The term work will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.
3. The SEE marks list is prepared to be signed by both internal and external examiners and submitted to VTU in the sealed cover through the Principal of the institution.

Suggested Learning Resources:

REFERENCES: (For all semesters of Architectural Design)

1. Alain de Botton, “How Proust Can Change your life", Picador, 1997.
2. Alain de Botton, “The Architecture of Happiness", Sep. 2006, Vintage Books.
3. Alan Fletcher, " The art of looking sideways", Phaidon Press, 2001 and Partis", Van Nostrand Reinhold, 1985
4. Anthony Di Mari and Nora Yoo, " Operative Design: A Catalogue of Spatial Verbs", 2012, BIS Publishers.
5. 5. Anthony Di Mari, " Conditional Design: An Introduction to Elemental Architecture", 2014, 1st Edition, Thames & Hudson.
6. Bruno Munari, "Design as Art", Penguin UK, 25-Sep-2008
7. Charles George Ramsey and Harold Sleeper, " Architectural Graphic Standards", 1992, Wiley
8. Christopher Alexander, "Notes on the Synthesis of Form", 1964, Harvard University Press.
9. Debkumar Chakrabarti, “Indian Anthropometric Dimensions for Ergonomic Design Practice", 1997.
10. François Blanciak, " Siteless: 1001 Building Forms", 2008, MIT Press
11. Frank Ching, James F. Eckler, "Introduction to Architecture", 2012, John Wiley & Sons, US
12. Frank D.K. Ching, " Architecture: Form, Space, and Order", 4th Edition, Sep. 2014, John Wiley & Sons
13. Herman Hertzberger, "Lessons for Students in Architecture", 2005, 010 Publishers
14. Italo Calvino, " Invisible Cities", Harcourt Brace Jovanovich (May 3, 1978)
15. John Berger, " Way of Seeing", 1972, Penguin, UK
16. John Hancock Callender, " Time-Saver Standards for Architectural Design Data", 1982, McGraw-Hill
17. Michael Pause and Roger H. Clark, " Precedents in Architecture: Analytic Diagrams, Formative Ideas, National Institute of Design.
18. Paul Jacques Grillo, " Form, Function and Design", 1975 , Dover Publications, New York
19. Paul Jacques Grillo, " What is Design?", 1960, P. Theobald
20. Paul Lewis, Marc Tsurumaki, David J. Lewis, "Manual of Section", Princeton Architectural Press, 2016
21. Peter H. Reynolds, " The Dot", 2013, Candlewick Press
22. Philip Jodidio, "Treehouses. Fairy tale castles in the air", 2012, Taschen
23. Robert W. Gill, "Rendering with Pen and Ink", Van Nostrand Reinhold (1 June 1984)
24. Tom Alphin, "The LEGO Architect", 2015, No Starch Press

Web-links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in

Activity-Based Learning (Suggested Activities in Class)/ Practical Based learning:

- Site visit the historical and contemporary buildings in the nearby area and documenting**.**
- Spatial analysis of area requirements, movement and circulation diagrams for informal settlement houses.
- Understand and appreciate various elements of Architecture such as Doors, Windows, Balconies, Otlas, Verandas, etc and document them for CIE.
- Examine the use of natural light, ventilation and comfort conditions in built environments.

MATERIALS AND METHODS IN BUILDING CONSTRUCTION-I			
Course Code	**21ARC12**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	1:0:0:3	SEE Marks (VIVA)	50
Total Hours of Pedagogy	4	Total Marks	100
Credits	04	Exam Hours	

Course objectives:

- To introduce students to primary building materials and simple construction techniques as applicable to a low-rise building- three to four-storied contemporary building.
- To develop an understanding of brick bonding, foundation details, external wall section with flat roof and parapet.

Teaching-Learning Process (General Instructions)

These are sample Strategies; which teachers can use to accelerate the attainment of the various course outcomes.

1. The students need to do the construction assignments in the studios.
2. The assignments to be submitted to the teacher as continuous internal evaluation on weekly basis.
3. Material assignments to be submitted in the portfolio form.

Module-1

1. Overview of simple masonry building, its various components and materials used for construction.
2. Various conventions used for drawing plan, section and elevation.
3. Brick: Types, properties, uses and manufacturing methods.
4. Brick Walls: Types of brick walls and bonds, mortar types, plasters, buttresses, arches and lintels.

Module-2

5. Stone: Types, properties, quarrying and finishing.
6. Stone Walls: Bonds, arches and lintels.

Module-3

7. Concrete Masonry Unit: Hollow and solid concrete Blocks: Manufacture, uses and properties, CMU Wall construction and detailing.
8. Alternative materials for Wall construction: Clay Hollow Blocks, Fly Ash Blocks, Aerated Concrete Blocks, Autoclaved Cellular Concrete (Aerocon) walls, Stabilized Mud Blocks and Glass Blocks: Manufacture, uses and properties, wall construction and Detailing.

Module-4

9. Masonry Foundation: Simple load bearing foundations in brick and stone.
10. Wood: Natural, hard and soft wood; quality, properties; joints in wood. Timber: Quality of Timber used in buildings External and Internal, defects, seasoning and preservation.

Module-5

11. Wooden doors: Types of wooden Doors - Doors with Frames, Doors on Pivot, Single & Double shutters, Wood with Glass shutters, Design an Innovative Solid Wooden Door for Public scale buildings with Low cost type and High-tech type. Types of Wood details Types of wooden windows & ventilator; Casement, Top Hung & Fixed types, Details of joinery.

Teaching-Learning Process	• Studio works by students, lecture by faculty on materials using teaching aids • Visits to construction yard/site to understand materials and methods of construction. • Seminar by students on their learning.
Note:	• Discussions, presentations, and case studies will cover three typologies. • The portfolio covering all the assignments shall be presented for term work.

Course outcome (Course Skill Set)

- The student will be able to understand the properties and uses of various materials and methods used in building construction
- The student will be able to design and draw various details used in a typical construction of a low rise

building.

- The student will be able to design and detail various basic components used in a typical building construction, such as Doors, Windows, Ventilators etc.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- Submission of construction drawing sheets, Journal of materials, Multiple Choice Question, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40% marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (01hours duration). Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Submission of Construction sheets, Journal of Materials, Test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topics for the test, Written Quiz, and Seminar. In the beginning, only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

3. The student need to submit his/her works done throughout the semester, including rough sheets for Term work examination, atleast one day prior to Term/viva work examination to the course teacher/coordinator.
4. The term work will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.

Semester End Examination:

The SEE mark list prepared to be signed by both internal and external examiners and submitted to VTU in sealed cover through the Principal of the institution.

Suggested Learning Resources:

REFERENCES:

1. Francis K. Ching‘Buildingconstruction’,Wiley;5edition(February17,2014)
2. R. Barry,“ConstructionofBuildings”Vol1.,1999byWiley-Blackwell
3. RoyChudley,"ConstructionTechnology”,3rdEdition, Longman,1999
4. W.B.Mckay,"BuildingConstruction”,Donhead,2005
5. Building Construction by Rangwala ,33rd Edition 2019
6. Building Construction by Sushil Kumar

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in
- https://www.civilengineeringforum.me/structural-design-procedure/
- https://civiljungle.com/
- http://fairconditioning.org/knowledge-resources/#204-heat-transfer

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning:

- Visit to construction site for observation of materials used and methods adopted in building construction.
- Study of vernacular materials used in different climatic zones and their thermal properties.
- Visit to material testing labs to understand various properties of building materials, and observe the testing methods.
- Discuss with the faculty/experts on life cycle and environmental impact of construction materials

ARCHITECTURAL GRAPHICS-I			
Course Code	**21ARC13**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	0:0:0:4	SEE Marks (Term Work)	50
Total Hours of Pedagogy	4	Total Marks	100
Credits	04	Exam Hours	

Course objectives:

- To introduce students to the various concepts and techniques of architectural and graphic presentations.
- To train the students to work on drawing methods both in freehand and with instruments.
- Encourage students to work with computer tools.

Teaching-Learning Process (General Instructions)

These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

1. The students need to do the assignments in the studios.
2. Use of Video animation for easy understanding of various drawings.

Module-1

Ch.1 Introduction to Graphic Representations: Basic principles and methods of drawing, methods of using instruments, and sign conventions.

- Exercises inline-weightage and its application
- Exercises in free-hand drawing.

Ch-2 Exercises of Practice in Lettering: Lettering used in architectural drawings, including different fonts.

Module-2

Ch-3 Introduction to Euclidian Geometry: Exercises in lines and angles. Basic geometrical constructions, construction of triangles, quadrilaterals and regular polygons. Introduction to the development of simple surfaces of basic geometrical shapes and their applications.

Ch-4 Arches: Typical arch shapes and their construction methods.

Module-3

Ch-5 Introduction to plane curves such as ellipse, parabola, hyperbola and ovals and their construction methods.

Ch-6 Introduction to reduced scales and its application to architectural drawings.

Module-4

Ch-7 Introduction to orthographic projection (First angle projection): Principles of orthographic projection, projections of points, lines and planes in different positions.

Ch-8 Orthographic Projection of Solids, architectural elements and built forms.

Module-5

Ch-9: 3DProjections-I: Isometric and Axonometric views of solids and architectural elements.

Ch 10: 3DProjections-II: Isometric and Axonometric views of built forms

Teaching-Learning Process	1. The students need to do the assignments in the studios. 2. Explore videos in various websites using animation of geometrical drawings
Note:	A consolidated portfolio containing exercises related to each of the above topics are to be

	submitted for term work examination.

Course outcome (Course Skill Set)

At the end of the semester, the students will be equipped with graphical skills which shall be useful in translating the graphical ideas into technically appropriate drawing presentations.

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- Studio discussions, drawings, Time problems, test, etc)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40 % marks in SEE to pass. Semester End Exam (SEE) is conducted for 50 marks (Term work). Based on this grading will be awarded.

Continuous Internal Evaluation:

Methods suggested:

1. Studio discussions, drawings, Time problems, CIE tests,
2. The class teacher has to make a list for the drawings sheets to be done in the studio, in the beginning only. The teacher has to announce the methods of CIE for the subject in advance in writing.

Semester End Examination:

1. The student need to submit his/her works done throughout the semester, including rough sheets for Term work examination, atleast one day prior to Term Work Examination to the course teacher/coordinator.
2. The term work will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.

The SEE mark list prepared to be signed by both internal and external examiners and submitted to VTU in sealed cover through the Principal of the institution.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)
The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks individually both in CIE and 35% marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (01hours duration). Based on this grading will be awarded.

Suggested Learning Resources:

REFERENCES:

1. Francis D.K.Ching,"ArchitecturalGraphics",VanNostrandReinholdCo.,1985
2. I.H. Morris, "Geometrical Drawing for Art Students", Longmans(1902)
3. ShankarMalik,"Perspective&Sciography",1994, Allied Publisher

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Encourage students to work on Computer aided Graphics.

HISTORY OF ARCHITECTURE-I			
Course Code	**21ARC14**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	3:0:0:0	SEE Marks (Theory)	50
Total Hours of Pedagogy	03	Total Marks	100
Credits	03	Exam Hours	03

Course objectives:

- Introduce the evolution of architecture, alongside the culture of early civilizations.
- To enable students to understand how different architecture solutions were evolved within the prevalent socio-economic and culture environment, demographic, political, regional influences (availability of materials, climate and topography of a region). (The scope limited from Prehistory, Stone Age to civilizations across continents, early Iron Age).
- To evaluate the architecture of river valley civilization and bygone era through the analysis of appropriate examples

Teaching-Learning Process (General Instructions)

These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

- Critically evaluate the development of architecture and settlements through ages.
- Learner need to appreciate the efforts of various civilizations in development of art and architecture.
- Understand how belief system shaped the architecture of different periods.

MODULE - 1

Introduction to Pre-Historic Civilization (early cultures):

1. **Introduction to Architectural history.** Primitive man - shelters, settlements, ritual centres (religious and burial systems) e.g.: Oval hut, Nice; settlement at Catal huyuk; Megalithic architecture (Dolmen tomb, gallery grave, passage grave); Henge Monuments, Stonehenge.
2. Generic Cross-cultural understanding of factors influencing early settlement and built form.

MODULE - 2

Introduction to architecture and planning of river valley civilizations of ancient Indus, Egypt, Mesopotamia.

3. **Indus Valley Civilization (Indus and Ghaggar Hakra):** Forces shaping settlements and habitats, E.g.: Mehrgarh, Layout of Mohenjo-Daro, dwellings and monumental architecture (House plan, Community well, Great Bath, Granary).
4. **Mesopotamia (Tigris and Euphrates):** Forces shaping settlements and habitats E.g.: Ziggurats at Warka, Ur and Tchoga Zanbil, Palace of Sargon.
5. **Egyptian Civilization (Nile):** Forces shaping settlements and habitats (funerary and sacred spaces), e.g.: Mastabas, Pyramid complex, Temple of Khons, Karnak.

MODULE - 3

6. **Introduction to Chinese Architecture:** Forces shaping settlements and habitats. Study of civic architecture, Domestic architecture, like palaces, tombs, temples and houses.
7. **Introduction to Mayan and Japanese Architecture**: Forces shaping settlements and habitats.

MODULE - 4

8. **Introduction to Pre-Classical Civilization:** Mycenaean, Etruscan, Persian (Achaemenid) E.g.: Lion Gate and Treasury of Atreus, Mycenae; Palace of Tiryns (Megaron), Etruscan Temples (Juno Sospita, Lanuvium), Tomb of Cyrus, Pasargadae, Palace of Persepolis.
9. **Introduction to Pre-Classical Architecture (Indian sub-continent):** Aryan and early Mauryan E.g.: Vedic village, typologies in Vedic Town and Vedic house. Study of civic architecture, Domestic architecture, like palaces, tombs, temples and houses. e.g.: Palace at Pataliputra.

MODULE - 5

10. **Introduction to Desert and Mountainous Cultures:** Forces shaping settlements and habitats (environmental and cultural influences) e.g.: Include first civilization of America, Andes, Mayans, early societies/cultures in the Sahara, Thar, and North America.
11. **Introduction to Tribal Cultures:** Forces shaping settlements and habitats e.g.: Indigenous Peoples

across the globe (environmental, cultural influences on settlements).	
Teaching-Learning Process	1. Theory classes to evaluate the development through ages 2. Documenting of learning through sketches, notes, assignments.
Note:	Progressive marks to include Submission of a portfolio of sketches, Assignments and study models

Course outcome (Course Skill Set)

- The students will be able to appreciate geographical, geological, social, cultural and political factors that influenced the early society and its architecture.
- They will also understand the use of materials and structural/construction systems explode during that era.
- The students will also understand and focus on local architecture context in addition to understanding the global history of architecture.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- MCQ, Quizzes, Open book test, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks individually both in CIE and 35% marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (01hours duration). Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for the closed book test, Written Quiz, and Seminar. In the beginning, only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

1. Theory examination will be conducted as per VTU rules.

Suggested Learning Resources:

REFERENCES:

1. Francis D K Ching, Mark M. Jarzombek, Vikramaditya Prakash, "A Global History of Architecture" by Wiley and Sons, 2011.
2. Percy Brown , "Indian Architecture B uddhist and Hindu", Read Books, 2010.
3. Sir Banister Fletcher; edited by Dan Cruickshank , "History of Architecture", CBS Publishers and Distributors, 2003
4. Satish Grover, "Buddhist and Hindu Architecture in India", CBS Publishers and Distributors, 2003
5. History of Architecture by James Fergusson
6. The Story of Architecture by Patrick Nuttgens

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Making sketches of various buildings in sketch book
- Seminar by students on selected topics in group or individually.
- Group discussion on a topic.

BASIC DESIGN AND VISUAL ARTS			
Course Code	**21ARC15**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	2:0:0:3	SEE Marks (Term Work)	50
Total Hours of Pedagogy	05	Total Marks	100
Credits	05	Exam Hours	

Course objectives:
To encourage a critical orientation to design thinking and action.

Teaching-Learning Process (General Instructions)
These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

- Develop observation skill in students towards design in various fields
- Appreciate art in various forms.
- Develop curiosity as how elements of design manifested in nature.

MODULE - 1

Definition of Art and role of Art in Society: Role and meaning of art, various types of arts-fine arts, performing arts, commercial arts, industrial arts, folk arts, abstract art, visual arts, spatial arts, temporal arts, pop art etc. Relationship of architecture with other arts like Painting and Sculpture.

Study Tools- Any three can be explored

- Observation & Study to develop hand & cognitive skill.
- Colours, Pattern & textures, and function
- Additive and Subtractive of Forms Freehand sketching
- Exercises of rendering techniques

MODULE - 2

Principles of Composition: Elements of Design & Principles of Design. Principles of Aesthetics and Architectural Composition -1 – Unity, Balance, Proportion, Scale in Architectural composition. Illustrations and its application to the practice of design with historical as well as contemporary buildings.

Study Tools- Any three can be explored

- Colours, Pattern & textures, and function
- Additive and Subtractive of Forms
- Freehand sketching
- Exercises of rendering techniques
- Material Study

MODULE - 3

Patterns

1. Study of pattern: Natural, Manmade and Geometric patterns
    - Recognizing patterns, analyzing ideas, synthesizing information, solving problems, and creating things involving the process of abstraction.
    - Appreciation of use of patterns in design
2. Space making through patterns

Structure

3. Understanding gravity, and the different ways we resist it. Study of material & structure in nature, and how design brings them together. Sketch analysis of structure and form in an example taken from Patterns.

Study tools - Any three can be explored

- Deconstruction of natural, manmade pattern to grid and abstract patterns
- Point, line, Plane, Form using Grid Pattern.
- Volumetric Exercises- Solid & Void.
- Freehand sketching
- Study of Material & structure in nature, and expressing through design.

MODULE - 4

Study of Art Forms & Crafts of India and Asia. Difference between art and craft.
Art Styles of India- folk, popular and modern art, Art trends, periods and Isms.

Study tools-

- Explore and learn any one Indian art form and regional craft.
- Structural/Material translation from concept mind mapping.

MODULE - 5

Appreciation of oriental and western performing arts.

Study tools-

- Exploring Performing arts of India,
- Regional Folk Dance and Crafts like, Leather puppets etc.
- To understand the oriental & western styles. Use them in product design.

Teaching-Learning Process	• Studios to conduct hands on work with models, sheets, drawings in Basic Design • Indoor and outdoor sketching in various medium to explore visual arts • Site/field visit to folklores areas • Screening documentaries, videos, films on various arts and crafts India and Asia.
Note:	Progressive marks to include Submission of a portfolio of sketches, sheets and study models, etc

Course outcome (Course Skill Set)

- The students will be able to appreciate critical orientation to design thinking and action.
- The students will be able to appreciate the concept of abstraction by experimenting with different patterns and materials.
- The student will also develop an ability to appreciate various art forms.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- Studio works, model making, Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 50% marks individually both in CIE and 40% marks in SEE to pass. Semester End Exam (SEE) is conducted for 50 marks (Term work submission). Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Test, Written Quiz, Seminar, report writing etc.
2. The class teacher has to decide the topic for the test, Written Quiz, and Seminar. In the beginning, only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

1. The student need to submit his/her works done throughout the semester, including rough sheets for Term work examination, atleast one day prior to Term Work Examination to the course teacher/coordinator.
2. The term work will be evaluated by an external teacher appointed by the University along with Course teacher or an internal examiner.

Suggested Learning Resources:

REFERENCES:

1. Donald Norman, ‘Design of Everyday Things”, Basic Books; 2 edition (5 November 2013)
2. John Berger, ‘Ways of Seeing’ 1972, Penguin, UK
3. Maitland Graves, ‘The Art of Color and Design’, McGraw-Hill, 1951
4. Robert Gill, “Rendering with Pen and Ink”, Thames & Hudson; Revised, Enlarged edition (2 April 1984)
5. Abid Husain, “National culture of India", National Book Trust, India, 1994
6. Antony Mason, John T. Spike, "A History of Western Art: from prehistory to the 21st Century", McRae Books, 2007.
7. Arthur Llewellyn Basham, ‘The Wonder That Was India", Picador; Indian edition, 2004
8. Christopher Alexander, "The Timeless way of Building" , Oxford University Press (1979)

9. Francis D.K. Ching," Architecture: form, space & order", John Wiley & Sons, 2010
10. Fred S. Kleiner, "Art through the Ages", Cengage Learning; 14 edition, 2012

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in
- https://www.researchgate.net/publication/339016810_Pedagogy_for_Basic_Design_Studio_in_Learning_Architecture_A_Qualitative_Exploration.
- https://www.shs-conferences.org/articles/shsconf/pdf/2016/04/shsconf_erpa2016_01053.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

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MODEL MAKING WORKSHOP			
Course Code	**21ARC16**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	0:0:0:4	SEE Marks	--
Total Hours of Pedagogy	04	Total Marks	50
Credits	04	Exam Hours	

Course objectives:
To train the students to experiment and manipulate materials leading to creative exploration of forms.

Teaching-Learning Process (General Instructions)
These are sample Strategies; which teacher can use to accelerate the attainment of the various course outcomes.

1. Making a student aware of various materials for model making
2. Hands on training for model making in various forms and shapes

COURSE OUTLINE

MODULE - 1

1. Generation of basic forms-cube, cone, dome and arch.
2. Generating of organic and geometrical forms/objects

MODULE - 2

3. Generation of forms &Material exploration: hands on skill by using wood, bamboo, metal wire, thread, balsa wood, clothe, paper board etc

MODULE - 3

4. Composite forms: Experimental form generation by combining various materials and shapes.(rods, pipes, slabs, etc.)
5. Free Forms: Tensile structures, Funicular Shells using wood, fabric, plastic etc.

MODULE - 4

6. Architectural forms: making of windows, wall doors, roofs, trees, shrubs, roads, vehicles etc.

MODULE - 5

7. Introduction to digital modelling like 3D printing and laser cutting. Note: Student may be encouraged to use environment friendly materials. Learning Outcome: At the end of the course the students would be able to use variety of materials to construct architectural models and different geometrical forms

Teaching-Learning Process	• Assign exercises in making different types of models using variety of materials available in the market.
Note:	Progressive marks to include Submission of models as part of CIE

Course outcome (Course Skill Set)

At the end of the course, the students will be able to experiment and manipulate materials leading to creative exploration of forms.

Assessment Details (both CIE and SEE)

(methods of CIE need to be define topic wise i.e.- Studio work, model making, sketching , Seminar or micro project)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% marks individually both in CIE and 40% marks in SEE to pass. Theory Semester End Exam (SEE) is conducted for 50 marks (01hours duration). Based on this grading will be awarded.

Continuous Internal Evaluation:

1. Methods suggested: Submission of the studio work on weekly basis in the form of drawings, models, reports of site/field trips etc.
2. The class teacher has to decide the topic for the studio work and other assignments. In the beginning, only the teacher has to announce the methods of CIE for the subject.

Semester End Examination:

1. The CIE Marks to be submitted to VTU Portal.
2. There is no SEE marks

Suggested Learning Resources:

REFERENCES:

1. Arjan Karssen & Bernard Otte, "Model Making: Conceive, Create and Convince", Frame Publishers (November 11, 2014)
2. David Neat , "Model-Making: Materials and Methods", CroWood Press, 2008
3. JocquiAtkin, "250 tips, techniques, and trade secrets for potters", Barron's Educational Series, 2009
4. Matt Driscoll, "Model Making for Architects", The Crowood Press Ltd, 2013
5. Megan Werner," Model making", Princeton Archit.Press,2010
6. Nick Dunn, "Architectural Model Making", Laurence King Publishing, 2014
7. Roark T. Congdon, "Architectural Model Building", Fairchild Books; 1 edition, 2010

Web links and Video Lectures (e-Resources):

- https://ndl.iitkgp.ac.in
- https://www.youtube.com/watch?v=Kfj2-A5rJoQ
- https://www.youtube.com/watch?v=kMil6ETrmj0

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- Group work on model making such as geodesic dome.

INNOVATION and DESIGN THINKING			
Course Code	**21ARC17/21IDT19/29**	CIE Marks	50
Teaching Hours/Week (L: T:P: S)	1:0:0	SEE Marks	50
Total Hours of Pedagogy	25	Total Marks	100
Credits	01	Exam Hours	02

Course Category: Foundation

Preamble: This course provides an introduction to the basic concepts and techniques of engineering and reverses engineering, the process of design, analytical thinking and ideas, basics and development of engineering drawing, application of engineering drawing with computer aide.

Course objectives:

- To explain the concept of design thinking for product and service development
- To explain the fundamental concept of innovation and design thinking
- To discuss the methods of implementing design thinking in the real world.

Teaching-Learning Process (General Instructions)

These are sample Strategies; which teachers can use to accelerate the attainment of the various course outcomes.

1. Lecturer method (L) does not mean only the traditional lecture method, but a different type of teaching method may be adopted to develop the outcomes.
2. Show Video/animation films to explain concepts
3. Encourage collaborative (Group Learning) Learning in the class
4. Ask at least three HOTS (Higher-order Thinking) questions in the class, which promotes critical thinking
5. Adopt Problem Based Learning (PBL), which fosters students' Analytical skills, develops thinking skills such as the ability to evaluate, generalize, and analyze information rather than simply recall it.
6. Topics will be introduced in multiple representations.
7. Show the different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
8. Discuss how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding.

Module-1

PROCESS OF DESIGN

Understanding Design thinking

Shared model in team-based design – Theory and practice in Design thinking – Explore presentation signers across globe – MVP or Prototyping

Teaching-Learning Process	Introduction about the design thinking: Chalk and Talk method Theory and practice through presentation MVP and Prototyping through live examples and videos

Module-2

Tools for Design Thinking

Real-Time design interaction capture and analysis – Enabling efficient collaboration in digital space – Empathy for design – Collaboration in distributed Design

Teaching-Learning Process	Case studies on design thinking for real-time interaction and analysis Simulation exercises for collaborated enabled design thinking

	Live examples on the success of collaborated design thinking

Module-3

Design Thinking in IT

Design Thinking to Business Process modelling – Agile in Virtual collaboration environment – Scenario based Prototyping

Teaching-Learning Process	Case studies on design thinking and business acceptance of the design Simulation on the role of virtual eco-system for collaborated prototyping

Module-4

DT For strategic innovations

Growth – Story telling representation – Strategic Foresight - Change – Sense Making - Maintenance Relevance – Value redefinition - Extreme Competition – experience design - Standardization – Humanization - Creative Culture – Rapid prototyping, Strategy and Organization – Business Model design.

Teaching-Learning Process	Business model examples of successful designs Presentation by the students on the success of design Live project on design thinking in a group of 4 students

Module-5

Design thinking workshop

Design Thinking Work shop Empathize, Design, Ideate, Prototype and Test

Teaching-Learning Process	8 hours design thinking workshop from the expect and then presentation by the students on the learning from the workshop

Course Outcomes:

Upon the successful completion of the course, students will be able to:

CO Nos.	Course Outcomes	Knowledge Level (Based on revised Bloom's Taxonomy)
CO1	Appreciate various design process procedure	K2
CO2	Generate and develop design ideas through different technique	K2
CO3	Identify the significance of reverse Engineering toUnderstand products	K2
CO4	Draw technical drawing for design ideas	K3

Assessment Details (both CIE and SEE)

methods of CIE need to be defined topic wise i.e.- Tests, MCQ, Quizzes, Seminar or micro project/Course Project, Term Paper)

The weightage of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 35% of maximum marks in SEE and a minimum of 40% of maximum marks in CIE. Semester End Exam (SEE) is conducted for 100 marks (3 hours' duration) and scaled down to 50 marks. Based on this grading will be awarded.

The student has to score a minimum of 40% (40 marks out of 100) in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

Three Unit Tests each of **20 Marks (duration 01 hour**)

1. First test at the end of 5th week of the semester
2. Second test at the end of the 10th week of the semester
3. Third test at the end of the 15th week of the semester

(All tests are similar to the SEE pattern i.e question paper pattern is MCQ)

Two assignments each of **10 Marks**

4. First assignment at the end of 4th week of the semester
5. Second assignment at the end of 9th week of the semester

Report writing /Group discussion/Seminar any one of three suitably planned to attain the COs and POs for **20 Marks** (**duration 01 hours**)

6. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination:

Theory SEE will be conducted by University as per the scheduled timetable, with common question papers for subject

SEE paper will be set for 50 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is **01 hours**

Suggested Learning Resources:

Text Books :

1. John.R.Karsnitz, Stephen O'Brien and John P. Hutchinson, "Engineering Design",Cengage learning (International edition) Second Edition, 2013.
2. Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage", Harvard Business Press , 2009.
3. Hasso Plattner, Christoph Meinel and Larry Leifer (eds), "Design Thinking: Understand – Improve – Apply", Springer, 2011
4. Idris Mootee, "Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School", John Wiley & Sons 2013.

References:

5. Yousef Haik and Tamer M.Shahin, "Engineering Design Process", CengageLearning, Second Edition, 2011.
6. Book - Solving Problems with Design Thinking - Ten Stories of What Works (Columbia Business School Publishing) Hardcover – 20 Sep 2013 by Jeanne Liedtka (Author), Andrew King (Author),

Kevin Bennett (Author).

Web links and Video Lectures (e-Resources):

1. www.tutor2u.net/business/presentations/. /**productlifecycle**/default.html
2. https://docs.oracle.com/cd/E11108_02/otn/pdf/. /E11087_01.pdf
3. www.bizfilings.com › Home › Marketing › Product Developmen
4. https://www.mindtools.com/brainstm.html
5. https://www.quicksprout.com/. /how-to-**reverse-engineer**-your-competit
6. www.vertabelo.com/blog/documentation/**reverse-engineering**
   https://support.microsoft.com/en-us/kb/273814
7. https://support.google.com/docs/answer/179740?hl=en
8. https://www.youtube.com/watch?v=2mjSDIBaUlM
   thevirtualinstructor.com/foreshortening.html
   https://dschool.stanford.edu/.../designresources/.../ModeGuideBOOTCAMP2010L.pdf
   https://dschool.stanford.edu/use-our-methods/ 6. https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process 7. http://www.creativityatwork.com/design-thinking-strategy-for-innovation/ 49 8. https://www.nngroup.com/articles/design-thinking/ 9. https://designthinkingforeducators.com/design-thinking/ 10. www.designthinkingformobility.org/wp-content/.../10/NapkinPitch_Worksheet.pdf

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- http://dschool.stanford.edu/dgift/

I Semester - BE/B.Arch common syllabus

Communicative English

Course Code	**21EGH18**	CIE Marks	50
Teaching Hours/Week (L:T:P: S)	L:2,T:1,P:0 = 03 Hours	SEE Marks	50
Total Hours of Pedagogy	03 Hours/Week	Total Marks	100
Credits	02	Exam Hours	120 Minutes

Course objectives:

The course (21EGH18) will enable the students,

- To know about Fundamentals of Communicative English and Communication Skills in general.
- To train to identify the nuances of phonetics, intonation and enhance pronunciation skills for better communication skills.
- To impart basic English grammar and essentials of important language skills.
- To enhance English vocabulary and language proficiency for better communication skills.
- To learn about Techniques of Information Transfer through presentation.

Language Lab : To augment LSRW, grammar, and Vocabulary skills (Listening, Speaking, Reading, Writing and Grammar, Vocabulary) through tests, activities, exercises etc., comprehensive web-based learning and assessment systems can be referred as per the AICTE / VTU guidelines.

Teaching-Learning Process (General Instructions)

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes.

1. Teachers shall adopt suitable pedagogy for effective teaching - learning process. The pedagogy shall involve the combination of different methodologies which suit modern technological tools and software's to meet the present requirements of the Global employment market.
   (i) Direct instructional method (Low /Old Technology),
   (ii) Flipped classrooms (High/advanced Technological tools),
   (iii) Blended learning (combination of both),
   (iv) Enquiry and evaluation based learning,
   (v) Personalized learning,
   (vi) Problems based learning through discussion,
   (vii) Following the method of expeditionary learning Tools and techniques,
   (viii) Use of audio visual methods through language Labs in teaching of of LSRW skills.
2. Apart from conventional lecture methods, various types of innovative teaching techniques through videos, animation films may be adapted so that the delivered lesson can progress the students In theoretical applied and practical skills in teaching of communicative skills in general.

Module-1

Introduction to Communicative English:

Introduction, Language as a Tool, Fundamentals of Communicative English, Process of Communication, Barriers to Effective Communicative English, Different styles and levels in Communicative English (Communication Channels). Interpersonal and Intrapersonal Communication Skills, How to improve and Develop Interpersonal and Intrapersonal Communication Skills.

Teaching - Learning Process	Chalk and talk method, Videos, Power Point presentation to teach Communication skills (LSRW Skills), Creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Module-2

Introduction to Phonetics :

Introduction, Phonetic Transcription, English Pronunciation, Pronunciation Guidelines Related to consonants and vowels, Sounds Mispronounced, Silent and Non-silent Letters, Syllables and Structure, Word Accent and Stress Shift, – Rules for Word Accent, Intonation – purposes of intonation, Spelling Rules and Words often Misspelt – Exercises on it. Common Errors in Pronunciation.

Teaching-Learning Process	Chalk and talk method, Videos, PowerPoint presentation and Animation videos to teach phonetics in Practical method, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Module-3

Basic English Communicative Grammar and Vocabulary PART - I :

Grammar: Basic English Grammar and Parts of Speech - Nouns, Pronouns, Adjectives, Verbs, Adverbs, Conjunctions, Articles and Preposition. Preposition, kinds of Preposition and Prepositions often Confused. Articles: Use of Articles – Indefinite and Definite Articles, Pronunciation of '*The*', words ending '*age*', some plural forms. Introduction to Vocabulary, All Types of Vocabulary –Exercises on it.

Teaching-Learning Process	Chalk and talk method, Videos, PowerPoint presentation to teach Grammar, Animation videos on communication and language skills, creating real-time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Module-4

Basic English Communicative Grammar and Vocabulary PART - II:

Question Tags, Question Tags for Assertive Sentences (Statements) – Some Exceptions in Question Tags and Exercises, One Word Substitutes and Exercises. Strong and Weak forms of words, Words formation - Prefixes and Suffixes (Vocabulary), Contractions and Abbreviations. Word Pairs (Minimal Pairs) – Exercises, Tense and Types of tenses, The Sequence of Tenses (Rules in use of Tenses) and Exercises on it.

Teaching-Learning Process	Chalk and talk method, PowerPoint presentation to teach Grammar and phonetics, Animation videos on communication and language skills, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Module-5

Communication Skills for Employment:

Information Transfer: Oral Presentation - Examples and Practice. Extempore / Public Speaking, Difference between Extempore / Public Speaking, Communication Guidelines for Practice. Mother Tongue Influence (MTI) – South Indian Speakers, Various Techniques for Neutralization of Mother Tongue Influence – Exercises. Reading and Listening Comprehensions – Exercises.

Teaching-Learning Process	Chalk and talk method, Videos, Power Point presentation to teach Grammar and phonetics, Animation videos on communication and language skills, creating real time stations in classroom discussions, Giving activities and assignments (Connecting Campus & community with companies real time situations).

Course outcome (Course Skill Set)

At the end of the course (21EGH18) the student will be able to :

1. Understand and apply the Fundamentals of Communication Skills in their communication skills.
2. Identify the nuances of phonetics, intonation and enhance pronunciation skills.
3. To impart basic English grammar and essentials of language skills as per present requirement.
4. Understand and use all types of English vocabulary and language proficiency.

5. Adopt the Techniques of Information Transfer through presentation.

Assessment Details (both CIE and SEE)

(methods of CIE need to be defined topic wise i.e.- MCQ, Quizzes, written test, Reports writing, Seminar and activities). Continuous internal evaluation (CIE) needs to be conducted for 50 marks like Engineering courses. The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The student has to obtain a minimum of 40% of maximum marks in CIE and 35% of maximum marks in SEE to pass. MCQ Pattern (Multiple Choice Questions) Semester End Exam (SEE) is conducted for 50 marks (120 minutes duration). Based on this grading will be awarded.

Continuous Internal Evaluation (CIE) :

Three Unit Tests each of **20 Marks (duration 01 hour**)

7. First test at the end of 5th week of the semester
8. Second test at the end of the 10th week of the semester
9. Third test at the end of the 15th week of the semester

All the tests are preferred similar to SEE pattern; however, teacher may follow test pattern similar to other theory courses of Engineering

Two assignments each of **10 Marks**

10. First assignment at the end of 4th week of the semester
11. Second assignment at the end of 9th week of the semester

Report writing /Group discussion/Seminar any one of three suitably planned to attain the COs and POs for **20 Marks** (**duration 01 hours**)

12. At the end of the 13th week of the semester

The sum of three tests, two assignments, and quiz/seminar/group discussion will be out of 100 marks and will be **scaled down to 50 marks**

CIE methods /question paper is designed to attain the different levels of Bloom's taxonomy as per the outcome defined for the course.

Semester End Examination (SEE) :

SEE paper will be set for 100 questions of each of 01 marks. The pattern of the question paper is MCQ. The time allotted for SEE is 120 minutes**.** Marks scored are scaled down to 50 Marks. *(Time duration may be made 90 minutes to train the students for engineering / non-engineering competitive examination)*

1. Communicative English has become a very important component in all engineering and non-engineering competitive examinations. In exams like GRE, TOEFL, IELTS and GATE exam, all state and Central Government recruitment examinations, placement tests and other Examinations, so the pattern of question paper, in general, will be in a multiple-choice question (MCQ) Pattern. So, to meet the relevance of the recruitment requirement of our Engineering students "Communicative English" Semester end examination (SEE) will be conducted in a multiple choice question (MCQ) pattern.
2. MCQ Pattern (Multiple Choice Questions) Semester End Exam (SEE) is conducted for 50 marks (120 minutes duration).

Suggested Learning Resources:

1) **Communication Skills** by Sanjay Kumar and Pushp Lata, Oxford University Press - 2019.
2) **English for Engineers** by N.P.Sudharshana and C.Savitha, Cambridge University Press – 2018.
3) **A Textbook of English Language Communication Skills,** Infinite Learning Solutions–(Revised Edition) 2021.
4) **A Course in Technical English – D Praveen Sam, KN Shoba,** Cambridge University Press – 2020.
5) **Technical Communication** by Gajendra Singh Chauhan and Et al, Cengage learning India Pvt Limited [Latest Revised Edition] - 2019.
6) **English Language Communication Skills – Lab Manual cum Workbook,** Cengage learning India Pvt Limited [Latest Revised Edition] – 2019.
7) **Practical English Usage** by Michael Swan, Oxford University Press – 2016.
8) **Technical Communication** – Principles and Practice, Third Edition by Meenakshi Raman and Sangeetha Sharma, Oxford University Press 2017.

Activity Based Learning (Suggested Activities in Class)/ Practical Based learning

- ✓ Contents related activities (Activity-based discussions)
- ✓ For active participation of students instruct the students to prepare Flowcharts and Handouts
- ✓ Organising Group wise discussions Connecting to placement activities
- ✓ Quizzes and Discussions
- ✓ Seminars and assignments