LEVEL 4 & 5 HIGHER INTERNATIONAL DIPLOMA IN

ARCHITECTURAL ENGINEERING

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PROGRAMME OUTCOMES:

I. Apply the Knowledge of Engineering Sciences and Architecture.

II. Possess applied Knowledge of Design, Construction, Safety and Building system maintenance of Structural, Electrical, Mechanical, Lighting, Acoustics and Fire Protection Systems, Subsystem and Components.

III. Identify, Formulate, Analyze and solve Engineering and Industrial complex problems using applied Engineering Mathematics, Science and Engineering Principles.

IV. To impart sound knowledge of all aspects of modern building, technological and Engineering aspects that have been remarkably incorporated in the curriculum.

V. Understand the Impact and Safety Practices of Engineering Solutions in Societal, Environmental, Global and Economic contexts.

VI. Intended to reinforce intellectual capabilities and develop proficiency to students and to pursue alternative career with in the broad spectrum of Architecture.

VII. Apply the appropriate IT skills, modern Engineering tools and Techniques for engineering practice.

VIII. Effective communication by reading designs and drawing, resource and material requirement according to the contemporary constructional needs.

IX. Engage themselves in life-long learning by recognizing the need and technological changes.

X. Apply engineering and management principles to manage projects in multidisciplinary environments and enhance our standard of living and improve our quality of life

PROGRAMME GUIDELINES	
PROGRAMME TITLE	**Level 4 & 5 Higher International Diploma in Architectural Engineering**
QUALIFICATION CODE	**701/1023/4**
LEVEL	**LEVEL – 4**
TOTAL CREDITS	**240**
TOTAL LEARNING HOURS	**2400 HOURS**
GUIDED LEARNING HOURS	**960 HOURS**

Total learning hour 2400 Hours

1 Credit = 10 hours of effort (10 hours of learning time which includes everything a learner has to do to achieve the outcomes in a qualification including the assessment procedures and practical's).

Guided Learning Hour for first year is 480 hours and second year is 480 hours.
Total Guided Learning Hours for Higher International Diploma in Architectural Engineering is 960 hours.

HID IN ARCHITECTURAL ENGINEERING
COURSE STRUCTURE

YEAR	SCHEDULE	UNIT SPECIFICATION	NO. OF. UNITS	UNIT CREDIT	CREDIT/YEAR
I	SCHEDULE 1	Common unit	3	36	120
		Essential unit	2	24	
		Elective (or) Open unit	-	-	
	SCHEDULE 2	Common unit	-	-	
		Essential unit	3	36	
		Elective (or) Open unit	2	24	
II	SCHEDULE 3	Common unit	-	-	120
		Essential unit	2	30	
		Elective (or) Open unit	2	30	
	SCHEDULE 4	Common unit	-	-	
		Essential unit	1	15	
		Special Unit (Essential)*	1	30	
		Elective (or) Open unit	1	15	
				TOTAL	**240**

FIRST YEAR	Common unit carries	12 credit
	Essential unit carries	12 credit
	Elective unit carries	12 credit
SECOND YEAR	Essential unit carries	15 credit
	Elective unit carries	15 credit
	Special unit (Essential)* carries	30 credit

LIST OF UNITS

S. No.	SUBJECT CODE	UNIT	UNIT SPECIFICATION	CREDIT
1	CUP001	Technical Drawings with Engineering Graphics	Common unit	12
2	CUP002	Workshop and General Safety	Common unit	12
3	CUP003	IT Application for Engineers	Common unit	12
4	ARC001	Architectural Graphics	Essential unit	12
5	ARC002	Applied Mathematics for Architects	Essential unit	12
6	ARC003	Architectural Design in Rural Study	Essential unit	12
7	ARC004	Structural mechanics in Architecture	Essential unit	12
8	ARC005	Architectural Delineation	Essential unit	12
9	ARC006	History of Architecture	Essential unit	15
10	QEP003	Civil Estimation and costing.	Essential unit	15
11	ARC007	Architectural Acoustics	Essential unit	15
12	SU001	Project	Special unit (Essential)*	30
I YEAR ELECTIVE UNITS				
13	QEP015	Construction Technology	Elective (or) Open unit	12
14	ARC008	Site Planning	Elective (or) Open unit	12
15	ARC009	Interior Design	Elective (or) Open unit	12
16	ARC010	Quantity Surveying and Estimating	Elective (or) Open unit	12
17	ARC011	Urban Design	Elective (or) Open unit	12
II YEAR ELECTIVE UNITS				
18	ARC012	Computer Aided Visualization	Elective (or) Open unit	15
19	QEP008	Sustainable Design and Construction	Elective (or) Open unit	15
20	ARC013	Vernacular Architecture	Elective (or) Open unit	15
21	CEP011	Environmental impact of construction	Elective (or) Open unit	15
22	ARC014	Landscape Engineering	Elective (or) Open unit	15
23	ARC015	Art Studio	Elective (or) Open unit	15
24	CEP008	Civil Blueprint reading and estimation	Elective (or) Open unit	15
25	ARC016	Low-Cost Building	Elective (or) Open unit	15

Schedule : I

Year : 1
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
CUP001	Technical Drawings with Engineering Graphics	Common unit	12
CUP002	Workshop and General Safety	Common unit	12
CUP003	IT Application for Engineers	Common unit	12
ARC001	Architectural Graphics	Essential unit	12
ARC002	Applied Mathematics for Architects	Essential unit	12

Schedule : **II**
Year : 1
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
ARC003	Architectural Design in Rural Study	Essential unit	12
ARC004	Structural mechanics in Architecture	Essential unit	12
ARC005	Architectural Delineation	Essential unit	12
QEP015	Construction Technology	Elective (or) Open unit	12
ARC008	Site Planning	Elective (or) Open unit	12

Schedule : **III**
Year : 2
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
ARC006	History of Architecture	Essential unit	15
QEP003	Civil Estimation and costing.	Essential unit	15
ARC012	Computer Aided Visualization	Elective (or) Open unit	15
QEP008	Sustainable Design and Construction	Elective (or) Open unit	15

Schedule : **IV**
Year : 2
Credit : 60

UNIT CODE	UNIT	UNIT SPECIFICATION	CREDIT
ARC007	Architectural Acoustics	Essential unit	15
ARC014	Landscape Engineering	Elective (or) Open unit	15
SU001	Project	Special unit (Essential)*	30

UNIT CODE : CUP001

UNIT TITLE : Technical drawings with Engineering Graphics

CREDIT : 12

SPECIFICATION : Common Unit

UNIT DESCRIPTION

This unit develops students to understand technical drawing and importance. This unit teaches the vital role of technical drawings in engineering documents and communication. This unit covers angle of projection, multi-view, section, detail drawing and symbol.

UNIT LEARNING OUTCOMES

ULO1 - Use appropriate tool to develop technical drawings

ULO2 - Ability to understand and interpret technical drawings.

ULO3 - Ability to provide required information in technical drawing according to process and operation.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M		M			M	M		M
ULO2				M			M	M		
ULO3		M		M			M	M	M	

UNIT CODE : CUP002

UNIT TITLE : Workshop and General Safety

CREDIT : 12

SPECIFICATION : Common Unit

UNIT DESCRIPTION

This unit helps to know about tools used for diverse application in engineering workshop. This unit helps to learn skill-oriented experience in manufacturing process and production technology. This unit teaches safety procedure and workshop safety in various workshop practice.

UNIT LEARNING OUTCOME

ULO1 – Ability to select appropriate tool and process for required application

ULO2 – Ability to understand basic operation in manufacturing and production

ULO3 - Ability to maintain safety procedure and use safety tools and equipment in engineering practice.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M		M		M	M			
ULO2		M		M				M		
ULO3	M	M		M	M	M				M

UNIT CODE : CUP003

UNIT TITLE : IT Application for Engineers

CREDIT : 12

SPECIFICATION : Common Unit

UNIT DESCRIPTION

This unit covers foundation concept in Information technology and develop usage IT skills in engineering practices. This unit guide to simplify complex data work using IT software tools and helps in synthesis of information for engineering needs.

UNIT LEARNING OUTCOME

ULO1 - Ability to create, select or apply appropriate software tool to improve the performance.

ULO2 - Develop documents and report preparation skill for various engineering activity such as approval, quotation, design and estimation.

ULO3 - Ability to performance analytical calculation, synthesis and interpret the data.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M	M	M			M			
ULO2	M		M	M			M	M		
ULO3	M		M				M			

UNIT CODE : ARC001

UNIT TITLE : Architectural Graphics

CREDIT : 12

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit aims to develop skills of basic Architectural Drawing and helps to understand geometrical drawing and its application. Also it focus on applications of projected drawing method in interior perspective, and how to adapt them for varieties of different interiors.

UNIT LEARNING OUTCOME

ULO1 – Geometric shapes in Architectural implications.

ULO2 – Isometric projections of simple plane geometry &solid geometry.

ULO3 – Measured Drawings of simple objects.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M	M	M		M		M		
ULO2			M							M
ULO3	M	M		M	M				M	M

UNIT CODE : ARC002

UNIT TITLE : Applied Mathematics for Architects

CREDIT : 12

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit aims to develop the analytical knowledge to solve the architectural problems. Also it helps to understand the topics in mathematics necessary for effective understanding of related architecture subjects.

UNIT LEARNING OUTCOME

ULO1 - Ability to Identifying practical problems to obtain solutions involving trigonometric and exponential functions.

ULO2 - Studying the properties of lines and planes in space, along with sphere.

ULO3 – Understanding the functions of more than one variable, along with differentiation under integral sign.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M		M	M		M			
ULO2		M	M							M
ULO3			M	M		M			M	

UNIT CODE : ARC003

UNIT TITLE : Architectural Design in Rural Study

CREDIT : 12

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

To understand the basic issues of socio-cultural and physical context of built environment and experiencing rural contexts of diverse typologies and in transformation. To study basic materials, technologies in design and question the notion of sustainability

UNIT LEARNING OUTCOME

ULO1 - Drawings Project to Rural studio with brief report - on Contemporary challenges and typologies of villages.

ULO2 - Design Project to explore an innovative rural institution, or a cluster of dwellings.

ULO3 – Design exercises exploring Organization/cluster, scale, structural module, functions

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M							
ULO2				M		M	M		M	
ULO3	M	M	M				M			M

UNIT CODE : ARC004

UNIT TITLE : Structural mechanics in Architecture

CREDIT : 12

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

To understand how structural resolutions are important in realization of architectural design concept and students shall be exposed to forces, moments, and resolution of forces. To understand basic properties of solids and sections which influence their behavior under the effect of various types of forces.

UNIT LEARNING OUTCOME

ULO1 – Ability to understand Forces and Structural Systems.

ULO2 - Ability to understand the properties of sections.

ULO3 – Apply the concepts of action of forces on a body and should be able to apply the equilibrium concepts.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M				M	M		
ULO2				M				M	M	
ULO3							M			M

UNIT CODE : ARC005

UNIT TITLE : Architectural Delineation

CREDIT : 12

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

To introduce students to analytical and illustrative drawing techniques as tools in the materialization and expression of thoughts. Initiating the students model making as a generative process and to inculcate the dynamic act of constructing in thinking process.

UNIT LEARNING OUTCOME

ULO1 – Ability to explore the conventional techniques of representation in an attempt to creative visualization.

ULO2 – Ability to understand and visualize diagramming techniques in technical aspects.

ULO3 – To study models as a tool in architectural design process.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M	M						
ULO2	M		M			M		M		
ULO3		M		M		M	M	M		M

UNIT CODE : ARC006

UNIT TITLE : History of Architecture

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit aims to understand the Architecture in terms of historical Ideas and directions. To impart knowledge of evolution architecture in various cultural aspects and techniques of the place.

UNIT LEARNING OUTCOME

ULO1 – To impart the development of architecture in cultural and contextual factors.
ULO2 – To Demonstrate awareness of global architectural history
ULO3 – Ability to appreciate universal qualities of architecture and their effects.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M		M			M			
ULO2	M	M				M		M		
ULO3		M	M	M			M		M	M

UNIT CODE : QEP003

UNIT TITLE : Civil Estimation and costing.

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

This unit aims to introduce the students in depth knowledge of professional practice as well the quantity analysis of construction works like, multi-storied structures, Water works & sanitary works, Irrigation works, Road estimates, to understand the Determination of quantities of items and labor requirement and Preparation of estimate of the civil engineering works.

UNIT LEARNING OUTCOME

ULO1 - Ability to introduce the students in depth knowledge of professional practice as well the quantity analysis of construction works like, multi-storied structures, Water works & sanitary works, Irrigation works

ULO2 - Ability to understand the Determination of quantities of items and labor requirement and Preparation of estimate of the civil engineering works.

ULO3 – Preparation of specification of construction items.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M		M				M			
ULO2	M	M								M
ULO3	M		M		M		M		M	

UNIT CODE : ARC007

UNIT TITLE : Architectural Acoustics

CREDIT : 15

SPECIFICATION : Essential Unit

UNIT DESCRIPTION

To develop the exposure of basic principles of building acoustics and their integration with architectural design. Also, to acquire the knowledge of choosing suitable materials in the design of auditoria and the method to achieve noise control in built spaces.

UNIT LEARNING OUTCOME

ULO1 – Ability to understand the effects of the materials and overall design of buildings on the transmission of sound within the building and the acoustic suitability of the rooms for their purpose.

ULO2 – Ability to understand the specific acoustic design of large rooms intended for concerts, theatre or as lecture rooms.

ULO3 – To be familiar noise control and sound reinforcement techniques.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M		M					
ULO2	M		M				M			
ULO3		M				M	M		M	

UNIT CODE : SU001

UNIT TITLE : Project

CREDIT : 30

SPECIFICATION : Special unit (Essential)*

UNIT DESCRIPTION

This unit support students to identify, formulate, organize, develop and implement a successful project by applying the skills and knowledge that they acquired through various units finished in previous and current schedule.

UNIT LEARNING OUTCOME

ULO1 - Ability to define, plan, organize and implement a project.

ULO2 - Ability to formulate a project to find out problem solution.

ULO3 - Ability to perform a plan of work in stipulated time period.

ULO4 - Ability to communicate idea, result and outcomes in both written and oral mode

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M	M	M	M			M	M
ULO2	M	M	M	M						M
ULO3				M			M	M		M
ULO4							M	M		M

UNIT CODE : QEP015

UNIT TITLE : Construction Technology

CREDIT : 12

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit aims to give the general principles of construction and scope of building bye-laws. The regulations that governing the construction of large buildings and explains setting out showing under pinning access to roads, temporary building and other preliminary activities on site.

UNIT LEARNING OUTCOME

ULO1 - Ability to understand the general principles of construction and scope of building bye-laws and regulations governing the construction of large buildings

ULO2 - Ability to Explain setting out showing under pinning access roads, storage and temporary building are preliminary activities on site.

ULO3 - Ability to Identify problems of ground water on adjacent property.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M							
ULO2				M	M				M	
ULO3	M	M	M			M				

UNIT CODE : ARC008

UNIT TITLE : Site Planning

CREDIT : 12

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

The aim of this unit is to develop an understanding of the importance of site conditions for the creation of good architectural solutions and focus on the site as a fundamental component of a building. To emphasize the synthesis of programmatic and environmental requirements into a coherent concept for building placement and site improvements.

UNIT LEARNING OUTCOME

ULO1 – Ability to understand the site analysis and influencing factors.

ULO2 – Ability to understand the site planning principles and techniques.

ULO3 – Ability to Identify the site characteristics and design requirements.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M	M						
ULO2		M						M		M
ULO3				M	M	M		M	M	

UNIT CODE : ARC009

UNIT TITLE : Interior Design

CREDIT : 12

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

The aim of this unit is to develop the skills in choosing appropriate interiors and to impart the necessity of various aspects of interior design.

UNIT LEARNING OUTCOME

ULO1 – To Identify the stylistic characteristics and psychological perception in interior design.

ULO2 – To maintain ventilation and another systems integration like electrical, plumbing, HVAC etc.,

ULO3 – To emphasize the need of Interior Landscaping in modern construction.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M	M			M			
ULO2				M		M	M	M		M
ULO3	M		M						M	

UNIT CODE : ARC010

UNIT TITLE : Quantity Surveying and Estimating

CREDIT : 12

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit aims to understand the types of estimates and the methods used for different structural components and rate analysis in the process of preparation of bills

UNIT LEARNING OUTCOME

ULO1 – Ability to understand the analysis of rates

ULO2 – To understand the building and road estimation.

ULO3 – To understand the Valuation and accounting procedure.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M					M		
ULO2			M	M			M			
ULO3		M		M				M	M	M

UNIT CODE : ARC011

UNIT TITLE : Urban Design

CREDIT : 12

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

To create an understanding of urbanism and urban morphology as rising from various forces through history. Also, it deals with the components of the modern city and their interdependencies. To introduce key theories associated with urbanism and cities.

UNIT LEARNING OUTCOME

ULO1 – Ability to understand the scope and design of modern urbanism.

ULO2 – To Understanding of urbanism through theories, aspects, issues and solutions

ULO3 – To understand the contemporary urbanism and interventions in urbanism.

MAPPING

	PLO1	PLO2	PLO3	PLO4		PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M	M								
ULO2		M					M	M	M		M
ULO3				M			M	M			M

UNIT CODE : ARC012

UNIT TITLE : Computer Aided Visualization

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit introduces computer operation principles and explore image editing through a graphical composition. To impart training in computer aided 2D drafting and 3D modelling through projects. To enable the rendering of a building so as to create a photo realistic image.

UNIT LEARNING OUTCOME

ULO1 – Ability to perform image editing and basics of building modelling

ULO2 – Ability to view the building model and to introduce 3D modelling.

ULO3 – 3D Rendering and scene setting to visualizing a building and exploring the potential of lights and camera.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1							M		M	M
ULO2				M	M					M
ULO3	M	M	M	M			M			M

UNIT CODE : QEP008

UNIT TITLE : Sustainable Design and Construction

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

The purpose of this unit is to provide an overview of emerging delivery systems for high performance green buildings and the basis on which their sustainability can be evaluated. Also, it covers green building assessment systems.

UNIT LEARNING OUTCOME

ULO1 - Ability to Understand the concept of high-performance green buildings and the forces shaping them.

ULO2 - Become familiar with the advantages of high-performance green buildings

ULO3 – Understand the concepts of whole-building design and integrated design

ULO4 - Understand the global and local environmental problems connected to the built environment

UNIT LEARNING OUTCOME AND PROGRAM OUTCOME MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1			M		M				M	
ULO2					M	M			M	
ULO3		M	M		M		M	M	M	
ULO4					M				M	M

UNIT CODE : ARC013

UNIT TITLE : Vernacular Architecture

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit aims to introduce the study of vernacular architecture as a process and not a product. To provide an overview of the different approaches and concepts to the study of vernacular architecture. To study the various vernacular architecture forms in the different regions of the country.

UNIT LEARNING OUTCOME

ULO1 – An understanding of vernacular architecture of different regions as a process and also to provide an overview of various approaches and concepts towards its study.

ULO2 – Understanding various approaches and concepts of vernacular architecture.

ULO3 – Understanding Western Influences on Vernacular Architecture of India.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1		M	M	M			M		M	
ULO2		M				M		M		
ULO3	M			M		M	M			M

UNIT CODE : CEP011

UNIT TITLE : Environmental impact of construction

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit enables learners to develop an understanding of the hydrological cycle and the importance of hydrological influences for civil engineering projects. Learners will also cover water supply, water treatment, and wastewater and apply hydrological design to civil engineering projects.

UNIT LEARNING OUTCOME

ULO1 - Ability to Understand the importance of hydrological influences for civil engineering projects

ULO2 - Ability to Identify quality control methods for water supply and discharge

ULO3 – Ability to Understand water & wastewater treatment processes

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO-1	M	M				M	M		M	M
ULO-2		M		M	M	M				M
ULO-3			M			M	M		M	M

UNIT CODE : ARC014

UNIT TITLE : Landscape Engineering

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit introduces the various aspects of outdoor design and site planning in enhancing and improving the quality of built environment, functionally and aesthetically. To stress on the role of landscape design in sustainability, to provide an overview of ecological balance and impacts of human activities and the need for environmental protection and landscape conservation.

UNIT LEARNING OUTCOME

ULO1 – Ability to understand the basic elements of Landscape Design.

ULO2 – Sensitivity towards evolution of different garden and landscape design across time and context.

ULO3 – An understanding of landscape design with respect to site planning and different functional typologies of spaces.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M	M								M
ULO2		M	M						M	
ULO3						M	M			

UNIT CODE : ARC015

UNIT TITLE : Art Studio

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit aims to develop presentation skills, visual expression and representation, imaginative thinking and creativity through a hand on working with various mediums and materials. To familiarize the students with the various mediums and techniques of art through which artistic expression can be achieved.

UNIT LEARNING OUTCOME

ULO1 – Ability to gain mastery in sketching, visualizing and expression through manual drawing.
ULO2 – Ability to acquire contents in graphic design.

ULO3 – Sensitized to culture, craft and context.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1				M				M		
ULO2		M						M	M	
ULO3	M	M	M			M				M

UNIT CODE : CEP008

UNIT TITLE : Civil Blueprint reading and estimation

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

This unit involves hands on training in civil technical drawings and practice to synthesis building information from blueprint. The student will take practice on reading plan, elevation, section and details information of foundation and structures.

UNIT LEARNING OUTCOME

ULO1 - Ability to understand title block, scale, line, symbols and bill of quantity.

ULO2 - Ability to gather building information from blueprint.

ULO3 - Ability to read plan, elevation, section and details drawing in blueprint.

ULO4 – Ability to perform cost estimation of civil buildings

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M			M		M	M	M		
ULO2			M	M				M		
ULO3				M				M		
ULO4	M			M		M	M	M	M	

UNIT CODE : ARC016

UNIT TITLE : Low Cost Building

CREDIT : 15

SPECIFICATION : Elective Unit

UNIT DESCRIPTION

To make the students aware of the use of conventional and non-conventional resources for low cost construction and to understand the various building techniques adopted in different climatic zones of the country with the use of cost-effective technologies through the use of local materials.

UNIT LEARNING OUTCOME

ULO1 – To understand the need for low cost buildings in rural and urban areas.

ULO2 – Ability to use cost effective technologies through the use of local materials

ULO3 – To make a comparative analysis of building materials and costing.

MAPPING

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ULO1	M		M				M			M
ULO2					M	M	M			
ULO3			M		M		M		M	

ASSESSMENT METHODS FOR HID IN ARCHITECTURAL ENGINEERING

Assessment technique	Type of Assessment	Description	Formative or Summative
Case studies	Oral/ Problem based/ Practical	Students are required to work through a case study to identify the problem(s) and to offer potential solutions; useful for assessing students' understanding and for encouraging students to see links between theory and practice. Case studies could be provided in advance of a time-constrained assessment.	**Formative**
Concept maps	Written/ Oral	Students map out their understanding of a particular concept. This is a useful (and potentially quick) exercise to provide feedback to staff on students' understanding.	**Formative**
'Doing it' exam	Written	An exam which requires students to do something, like read an article, analyze and interpret data etc.	**Formative / Summative**
Field report	Written/ Oral	Students are required to produce a written/ oral report relating to a field/ site visit.	**Formative**
Laboratory books / Reports	Practical/ Written	Students are required to write a report for all (or a designated sample) of practical's in a single lab book. A sample of lab books will be collected each week to mark any reports of labs done in previous weeks; this encourages students to keep their lab books up to date. Each student should be sampled the same number of times throughout the module with a designated number contributing to the assessment mark.	**Summative**
Multiple choice questions (MCQs)	Written	Can be useful for diagnostic, formative assessment, in addition to summative assessment. Well-designed questions can assess more than factual recall of information, but do take time to design.	**Formative / Summative**
Online discussion boards	Written	Students are assessed on the basis of their contributions to an online discussion for example, with their peers; this could be hosted on a virtual learning environment (VLE).	**Formative**
Open book exams	Written	Students have the opportunity to use any or specified resources to help them answer set questions under time constraints. This method removes the over-reliance on memory and recall and models the way that professionals manage information.	**Summative**
Oral presentations	Oral / Written	Students are asked to give an oral presentation on a particular topic for a specified length of time and could also be asked to prepare associated handout(s). Can usefully be combined with self- and peer-assessment.	**Summative**

Problem sheets	Written	Students complete problem sheets, e.g. on a weekly basis. This can be a useful way of providing students with regular formative feedback on their work and/or involving elements of self- and peer assessment.	**Formative**
Research projects / Group projects	Written/ Practical/ Oral/ Performance/ Problem based/ Work placement	Potential for sampling wide range of practical, analytical and interpretative skills. Can assess wide application of knowledge, understanding and skills.	**Formative / Summative**
Short answer questions	Written	Useful to assess a wide range of knowledge/skills across a module.	**Summative**
Simulations	Practical/ Written/ Oral/ Problem-based	Text or virtual computer-based simulations are provided for students, who are then required to answer questions, resolve problems, perform tasks and take actions etc. according to changing circumstances within the simulation. Useful for assessing a wide range of skills, knowledge and competencies.	**Formative**
Viva voce	Oral	Often used for assessing 'borderline' degree classifications but also useful to explore students' understanding of a wide range of topics. Depending on class size however, they can be time consuming for staff.	**Summative**