

# ALAGAPPA UNIVERSITY

(Accredited with A+ Grade by NAAC (CGPA: 3.64) in the Third Cycle,  
Graded as Category-I University and granted autonomy by MHRD-UGC)

## DIRECTORATE OF COLLABORATIVE PROGRAMMES



## B.Sc. Interior Design

Regulations and Syllabus

[For those who join the Course in July 2023 and after]

CHOICE BASED CREDIT SYSTEM

## ALAGAPPA UNIVERSITY

### Vision

Achieving Excellence in all spheres of Education, with particular emphasis on Pedagogy, Extension, Administration, Research and Learning (PEARL).

### Mission

Affording a High-Quality Higher Education to the learners so that they are transformed into intellectually competent human resources that will help in the uplift of the nation to Educational, Social, Technological, Environmental and Economic Magnificence (ESTEEM).

### Objectives

Providing instructions and training in such branches of learning, as the University may determine. Fostering research for the advancement and dissemination of knowledge.

## COLLABORATIVE PROGRAMMES

### BACHELOR OF SCIENCE – INTERIOR DESIGN

Name of the Subject / Discipline	: <b>Interior Design</b>
Programme of Level	: <b>Undergraduate Program – BSc Interior Design</b>
Pattern	: <b>Semester System</b>
Mode	: <b>Collaborative Programs</b>
Medium	: <b>English</b>
Duration	: <b>Three Years</b>

**Eligibility:** Candidate for admission to B.Sc. Interior Design shall be required to have a pass in the Higher Secondary Examination (10+2) conducted by the Government of Tamil Nadu or an Examination accepted as equivalent there to by the Syndicate.

Eligibility of candidates applying from abroad shall be evaluated for equivalence on case-to-case basis.

### STANDARD OF PASSING AND AWARD OF DIVISION:

- a) Students shall have a minimum of 40% of total marks of the University examinations in each subject. The overall passing minimum is 40% both in aggregate of Continuous Internal Assessment and External Assessment in each subject.
- b) The minimum marks for passing in each external assessment of Theory/Practical course shall be 40% of the marks prescribed for the course.
- c) The minimum marks for passing in each internal assessment of Theory/Practical course shall be 40% of the marks prescribed for the course.
- d) The total marks for theory/practical courses shall have a contribution of 25% from Continuous Internal Assessment and 75% from External Assessment.
- e) A candidate who secures 40% or more marks but below 50% of the aggregate marks shall be awarded **THIRD CLASS**.
- f) A candidate who secures 50% or more marks but less than 60% of the aggregate marks shall be awarded **SECOND CLASS**.
- g) A candidate who secures 60% or more of the aggregate marks shall be awarded **FIRST CLASS**.

**CONTINUOUS INTERNAL ASSESSMENT:** The respective course faculty will continuously assess the performance of students in each course. The continuous Internal Assessment marks shall be awarded by the concerned course faculty based on the performance of the students in case studies, presentations, quizzes, practical, tests and other assignments.

ATTENDANCE GUIDELINES			
0 - 59 %	60 - 69 %	70 - 74 %	75 - 100 %
NOT ELIGIBLE TO APPEAR FOR EXAMINATION	CONDONATION FEE + MEDICAL CERTIFICATES	CONDONATION FEE	MEETING THE ATTENDANCE REQUIREMENTS
SEMESTER DROP	IF NOT DEPOSITED / SUBMITTED THEN SUBJECT ARREAR		

**ATTENDANCE:**

**UNIVERSITY EXAMINATIONS:**

The University theory examinations will be held at the end of each Semester that has a theory paper for a duration of three hours for each subject.

**EVALUATION OF ANSWER PAPERS:**

Answer papers of the University Examinations shall be subjected to evaluation by a Board of Examiners constituted by Alagappa University.

**INTERNSHIP:**

The course being professional, the students are required to undergo an internship for their 5th semester of the program.

Assessment for internship shall be done by a team of one internal examiner and one external examiner

**THESIS:**

The thesis project is to motivate students to get involved in individual research and methodology, which trains them to handle independent projects. The internal assessment shall be done in the form of monthly internal reviews and VIVA VOCE at the end of the semester. Attending all the assessments is mandatory.

The external assessment for thesis shall be done by a minimum of one internal examiner and one external examiner.

The student shall be allowed to appear for the final thesis if and only if he/she has cleared all the previous courses.

**AWARD OF DEGREE:**

Students who successfully complete the program by meeting all the academic requirements within the stipulated period of five years from the year of admission shall be awarded the degree of B. Sc. (Bachelor of Science).

**PROGRAMME CONTENT AND SCHEME OF EXAMINATIONS**

The course of study shall comprise the following subjects according to the syllabus

prescribed from time to time.

## B.Sc Interior Design

Semester	Part	Course Code	Sub. Code	Title of the Paper	Theory/ Practical	Credits	Hours/W	Marks		Total
								Int.	Ext.	
I	I	T/OL	91911T/11H/11F	Tamil/Other Languages-I	T	3	5	25	75	100
	II	E	91912	General English-I	T	3	5	25	75	100
	III	CC	91913	Theory of Design	T	5	5	25	75	100
		GEC	91914	Materials and Construction-I	T	3	3	25	75	100
		GEC	91915	Graphics – I	P	2	3	25	75	100
		CC	91916	Design Studio – I	P	4	6	25	75	100
	IV	SEC	91917	Value Education	T	2	2	25	75	100
				Library			1			
<b>Total</b>						<b>22</b>	<b>30</b>	<b>175</b>	<b>525</b>	<b>700</b>
II	I	T/OL	91921T/H/F/M/TU/A/S/	Tamil/Other Languages-II	T	3	5	25	75	100
	II	E	91922	General English-II	T	3	5	25	75	100
	III	CC	91923	Elements of Interior Spaces	T	4	5	25	75	100
		CC	91924	Design Studio – II	P	4	5	25	75	100
		GEC	91925	Graphics - II	P	4	4	25	75	100
		GEC	91926	Materials and Construction – II	P	4	4	25	75	100
	IV	SEC	91927	Environmental Studies	T	2	2	25	75	100
<b>Total</b>						<b>24</b>	<b>30</b>	<b>175</b>	<b>525</b>	<b>700</b>
III	I	T/OL	91931T/H/F/M/TU/A/S	Tamil/Other Languages-III	T	3	5	25	75	100
	II	E	91932	General English-III	T	3	5	25	75	100
	III	CC	91933	Interior Services I	T	4	4	25	75	100
		CC	91934	Furniture Design Studio	P	3	3	25	75	100
		CC	91935	Design Studio -III	P	3	3	25	75	100
		GEC	91936	Spatial Design	P	3	3	25	75	100
		GEC	91937	Computer Aided Graphics	P	3	3	25	75	100
	IV	SEC	91938	Entrepreneurship	T	2	2	25	75	100
		NME	91939A	1. Adipadai Tamil	P	2	2	25	75	100
	91939B		2. Advance Tamil	T						
	91939C		3. IT Skills for Employment	T						
		4. MOOC'S	T							
<b>Total</b>						<b>26</b>	<b>30</b>	<b>225</b>	<b>675</b>	<b>900</b>
IV	I	T/OL	91941	Tamil/Other Language-IV	T	3	5	25	75	100
	II	E	91942	General English-IV	T	3	5	25	75	100
	III	CC	91943	Interior Services II	T	4	4	25	75	100
		CC	91944	Interior Construction and Detailing	P	4	4	25	75	100
		CC	91945	Design Studio -IV	P	4	4	25	75	100
		GEC	91946	History of Indian Art and Vernacular Styles	P	3	3	25	75	100
		GEC	91947	Lighting and Colors in Interiors	T	3	3	25	75	100
	IV	NME	91948A	1. Adipadai Tamil	P	2	2	25	75	100
			91948B	2. Advance Tamil	T					
	91948C		3. Small Business Management	T						
			4. MOOC'S	T						
<b>Total</b>						<b>26</b>	<b>30</b>	<b>200</b>	<b>600</b>	<b>800</b>

V	III		91951	Professional Internship	I	17	**	50	150	200
				Career Development/ Employability Skills						
		<b>Total</b>					<b>17</b>	<b>**</b>	<b>50</b>	<b>150</b>
VI	III	CC	91961A/ 91961B	Project/ Dissertation/ Thesis	PR/ D	15	20	50	150	200
		GEC	91962	Interior Project Management	P	5	5	25	75	100
		GEC	91963A 91963B 91963C	(A) Interior Scape and Gardening Studio (or) (B) Art Design Studio (or) (C) Craft and Design Studio	P	5	5	25	75	100
		<b>Total</b>					<b>25</b>	<b>30</b>	<b>100</b>	<b>300</b>
<b>Total</b>						<b>140</b>	<b>180</b>	<b>925</b>	<b>2775</b>	<b>3800</b>

**\*\*Minimum 60-75 days**

**GLOSSARY**

<b>MIL</b>	Modern Indian Language
<b>E</b>	English
<b>CC</b>	Core course ( <i>Core competency, critical thinking, analytical reasoning, research skill &amp; team work</i> )
<b>GEC(Allied)</b>	Exposure beyond the discipline
<b>AECC</b>	Ability Enhancement Compulsory Course ( <i>(Professional English &amp; Environmental Studies) - Additional academic knowledge, psychology and problem solving etc.,</i> )
<b>OE</b>	Open Elective
<b>SEC</b>	Skill Enhancement Course ( <i>Exposure beyond the discipline - Value Education, Entrepreneurship Course, Computer Application for Science, etc.,</i> )
<b>NME</b>	Non-Major Elective ( <i>Exposure beyond the discipline</i> )
<b>DSE</b>	Discipline Specific Elective
<b>MOOC</b>	Massive Open Online Course
<b>IT</b>	Information Technology

**Programme Educational Objectives (PEOs)**

<b>Programme Educational Objectives</b>	<b>On successful completion of the B.Sc. program, the graduate student is expected to achieve the following after graduation</b>
PEO1	Graduates will excel in their careers in interior design, applying their knowledge and skills to meet industry demands effectively.
PEO2	Graduates will demonstrate creativity and critical thinking in problem-solving, contributing innovative solutions to design challenges.
PEO3	Graduates will communicate and collaborate professionally, effectively engaging with clients, colleagues, and stakeholders.
PEO4	Graduates will embrace lifelong learning and stay updated with the evolving trends and technologies in interior design.
PEO5	Graduates will uphold ethical standards, contributing positively to the field of interior design and society.

### **Programme Specific Outcomes (PSOs)**

<b>Programme Specific Outcomes</b>	<b>After the successful completion of the Interior Design Program</b>
PSO1	Graduates will apply design principles to create functional and aesthetically pleasing interior spaces specific to the discipline.
PSO2	Graduates will proficiently use modern software tools and employ innovative techniques for interior design projects.
PSO3	As designers, they will excel in furniture design, considering ergonomics, cultural influences, and sustainable practices.
PSO4	Graduates will demonstrate expertise in managing interior design projects, from concept to completion.
PSO5	Graduates will have a deep understanding of interior services and systems, ensuring the safety and comfort of occupants in interior spaces.

### **Programme outcomes (POs)**

<b>Programme Outcomes</b>	<b>On the successful completion of B. Sc Interior design</b>
PO1	Demonstrate proficiency in design theory and principles, applying them effectively in practical interior design projects.
PO2	Graduates will exhibit competence in materials selection, construction techniques, and sustainable practices for interior spaces.
PO3	Graduates will effectively communicate design concepts through visual graphics, presentations, and written documentation.
PO4	Students apply computer-aided design (CAD) and other relevant technology tools to enhance design and visualization.
PO5	Students Collaborate effectively within multidisciplinary teams, demonstrating strong interpersonal and communication skills.
PO6	Graduates will demonstrate knowledge of interior services, including HVAC, plumbing, and electrical systems.
PO7	Students Evaluate and integrate principles of lighting and color to create aesthetically pleasing and functional interior spaces.
PO8	Graduates will execute furniture design concepts, considering ergonomics, aesthetics, and functionality
PO9	Graduates will implement interior construction and detailing techniques to ensure structural integrity and safety.
PO10	Graduates will manage interior design projects efficiently, adhering to timelines, budgets, and client expectations.

## SEMESTER I

## B. Sc Interior Design

(2023 Onwards)

CC	91913	Theory of Design	T	Credits -5	Hours - 5
<b>Objectives</b>	1.To familiarize the basic elements of design. 2.To Understand The Principles Of Design And Its Compositions 3.To Learn The History Of Design Through Design Philosophies. 4.To Understand The Form And Space In Different Compositions And Spatial Organizations 5.To Understand The Design Process By Following The Various Steps Involved In A Design Problem.				
<b>Unit I</b>	<i>Elements of design</i> Point, line, volume, shape, texture & colour in relation to light, pattern, Size and scale and application of the same in designing interiors.				
<b>Unit II</b>	<i>Principles of design</i> Unity, Balance, Dominance, Harmony, Rhythm, Ratio & proportion–Golden section				
<b>Unit III</b>	<i>History of design</i> Introduction to design philosophies of Meis Van De Rohe, Le Corbusier, and F.L Wright and Design styles – Modern, Contemporary, Mid-Century Modern, Minimalist, Scandinavian, Industrial, Eclectic, etc.				
<b>Unit IV</b>	<i>Form and space</i> Gestalt theory Figure ground; form and voids; Form study, Nature & form; Spatial qualities–elements, form, dimensions; Spatial organization & Composition; Spatial transitions–openings within wall planes, doorways, windows, stairways.				
<b>Unit V</b>	<i>Design control</i> Design Process–Research, Analysis, Synthesis, Design evaluation, Ideating, Proto typing; Design criteria – function, economy, form, style; Human factors – Anthropometry, Activity relationships.				
<b>Reference and Text books</b> <ul style="list-style-type: none"> <li>• <i>Sir Banister Fletcher, A History of Architecture, University of London, The AntholonePress, 1996</i></li> <li>• <i>Francis DKChing - Architecture - Form Space and Order Van Nostrand Reinhold Co (Canaa), 1979</i></li> <li>• <i>VSPramar, Design Fundamentals in Architecture, Somaiya Publications Private Ltd, NewDelhi, 1973</i></li> <li>• <i>Anthony Antoniades, Poetics of architecture- Theory of design</i></li> <li>• <i>Christopher Alexander, Pattern Language, Oxford University Press</i></li> <li>• <i>Victor Papanek, Design for the real world</i></li> </ul>					
<b>Web Resources</b> <a href="https://www.extension.iastate.edu/4hfiles/statefair/eehandbook/eehjpdesign4h634.pdf">https://www.extension.iastate.edu/4hfiles/statefair/eehandbook/eehjpdesign4h634.pdf</a> <a href="https://guides.lib.berkeley.edu/c.php?g=920740&amp;p=6634741">https://guides.lib.berkeley.edu/c.php?g=920740&amp;p=6634741</a> <a href="https://www.wichita.edu/services/mrc/oir/creative/1design/design-elements.php">https://www.wichita.edu/services/mrc/oir/creative/1design/design-elements.php</a>					
<b>Course Outcomes</b>				<b>KnowledgeLevel</b>	
CO1	Identify the design elements and its application in the interior spaces.			K1	

CO2	Evaluate and compose interior spaces with respect to design principles.	K5
CO3	Compare and evaluate different design philosophies and concepts.	K4
CO4	Analyze the form and space with respect to various design theories	K4
CO5	Design interior spaces according to the design process.	K6

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	2	2	-	-	2	1	-	-
CO2	3	-	2	2	-	-	2	2	-	1
CO3	-	2	3	1	-	-	1	2	-	1
CO4	3	-	2	2	-	-	3	1	-	2
CO5	3	2	3	3	3	3	3	3	2	3
<b>W. AV</b>	<b>2.5</b>	<b>1</b>	<b>2.4</b>	<b>2</b>	<b>0.6</b>	<b>0.6</b>	<b>2.2</b>	<b>1.8</b>	<b>0.4</b>	<b>1.4</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	1	1	-
CO2	3	2	2	1	-
CO3	2	-	-	2	-
CO4	3	-	2	2	-
CO5	3	2	3	3	2
<b>W. AV</b>	<b>2.2</b>	<b>0.8</b>	<b>1.6</b>	<b>1.8</b>	<b>0.4</b>

**B. Sc Interior Design****(2023 Onwards)**

GEC	91914	Materials and Construction I	T	Credits - 3	Hours -3
<b>Objectives</b>	1.To familiarize the basic building materials used in interiors in terms of use and properties 2.To Study Different Types Of Masonry Used In Wall Construction 3.To Learn The Different Finishes Used In Interiors. 4.To Study Different Types Of Doors And Windows In Terms Of Functions And Materials 5.To Understand The General Principles Of Carpentry.				
<b>Unit I</b>	<i>Introduction to building materials</i> Wood, Processed wood, synthetic materials, glass, plastics, fabrics – properties, manufacturing and uses.				
<b>Unit II</b>	<i>Walls - types of masonry</i> Brick masonry - Brick – types of masonry rattrap bond, Flemish bond, English bond, stretcher bond, ornamental bonds and its application for interior- Types of bonds. Stone masonry– rubble masonry, old age construction concept using stones. Types of masonry plastering, definition, process of plastering, types of plastering, tools of plastering Pointing – functions, use and application.				
<b>Unit III</b>	<i>Finishes- Wall paints</i> Wall Paints - painting materials and process -Enamels, distempers, plastic emulsions, cement-based paints- properties, uses and applications- painting on different surfaces – defects in painting, varnishes.				
<b>Unit IV</b>	<i>Doors and Windows</i> Types– Hinged, Sliding, Swing, Revolving, Panelled, Battened, Glazed and Louvered; Windows – Casement, Pivoted, Sliding, Bay window and Clerestory Windows –types- Panelled, battened, glazed, top hung, pivoted - gable window, dormer window, bay window, French window.				
<b>Unit V</b>	<i>Introduction to carpentry</i> General principles, types, Details of joints in timber –Doors – types, panelled, battened, glazed & sliding. Windows –types- panelled, battened, glazed, top hung, pivoted - gable window, dormer window, bay window, French window. Terms for various members, fasteners and fixtures used in joinery.				
<b>Reference and Text books</b>					
<ul style="list-style-type: none"> <li>• Dr. B.C Punmia, building construction, Laxmi publications Pvt. Ltd., New Delhi, 1993.</li> <li>• M.S Shetty, concrete technology, S. Chand and co. Ltd., New Delhi, 1986.</li> <li>• Sushil Kumar. T.B. of Building Construction 19th ed. Standard Pub. Delhi, 2003.</li> <li>• Chowdary, K.P. Engineering Materials used in India, 7th ed. Oxford and IBH, New Delhi, 1990.</li> <li>• Rangwala, S.C. Building Construction: Materials and types of Construction, 3rd ed. John Wiley and Sons, Inc., New York, 1963.</li> <li>• Francis D. Ching, Building Construction Illustrated, Wiley publishers, 2008</li> </ul>					

**Web Resources**

<http://www.ijdesign.org/index.php/IJDesign/article/view/129/78>

<https://www.sciencedirect.com/journal/materials-and-design>

Course Outcomes		Knowledge Level
CO1	Identify different materials used in interiors	K1
CO2	Evaluate different types of masonry used.	K5
CO3	Use different finishes to create the desired aesthetics in interiors	K3
CO4	Acquire knowledge on doors and windows	K1
CO5	Identify various details in carpentry	K1

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	-	1	-	-	-	-	-	-	-	-
CO2	-	1	-	-	-	-	-	-	1	-
CO3	1	1	-	-	-	-	3	2	-	-
CO4	-	1	-	-	-	-	1	-	3	-
CO5		2	-	-	-	-	1	3	3	1
<b>W. AV</b>	<b>0.2</b>	<b>1.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1.4</b>	<b>0.2</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	-	-	-
CO2	-	-	-	-	-
CO3	3	1	-	1	-
CO4	-	-	-	-	-
CO5	-	-	1	2	-
<b>W. AV</b>	<b>0.6</b>	<b>0.2</b>	<b>0.2</b>	<b>0.6</b>	<b>0</b>

**B. Sc Interior Design****(2023 Onwards)**

GEC	91915	Graphics I	P	Credits - 2	Hours -3
<b>Objectives</b>	1.To learn the fundamentals of free hand drawings 2.To Familiarize With Outdoor And Indoor Sketching. 3.To Understand The Fundamentals Of Measured Drawings. 4.To Understand The Fundamentals Of Orthographic Projections And Isometric Projection 5.To Understand The Principles Of Sciography				
<b>Unit I</b>	<i>Introduction of reeh and sketching</i> –lines, dots, shapes(Organic and geometric), visualization of 3d. Basic exercises, still life, Basic forms, effect of lines to represent textures				
<b>Unit II</b>	<i>Drawing with tools</i> –Introduction to fundamentals of drawing/ drafting: Construction of lines, line value, line types, lettering, dimensioning, representation, format for presentation, use of scales etc				
<b>Unit III</b>	<i>Measured drawing</i> –Use of scale in drawings, scaling and measuring of 3D forms and representing them in plan, elevations and sections using different scales. Reduction and enlarging of given drawings				
<b>Unit IV</b>	<i>Orthographic projections</i> Projection of lines, planes and solids <i>Isometric Projection</i> Isometric scale, isometric view of planes, simple solids, truncated solids, combination of objects.				
<b>Unit V</b>	<i>Sciography</i> Principles of shade and shadow on basic forms				
<b>Reference and Textbooks</b>					
<ul style="list-style-type: none"> <li>• Drawing - A Creative Process, Francis D K Ching, John Wiley Sons, New York</li> <li>• How to paint &amp; draw, Bodo W Jaxtheimer, Thames &amp; Hudson, London</li> <li>• Building drawing, 3rd edition - M G shah, c m Kale, Tata Mcgraw - Hill publishing, New Delhi</li> </ul>					
<b>Web Resources</b>					
<a href="https://fac.ksu.edu.sa/sites/default/files/ch_3_free_hand_sketching.pdf">https://fac.ksu.edu.sa/sites/default/files/ch_3_free_hand_sketching.pdf</a> <a href="https://www.iitg.ac.in/kpmech/me111-2016/orthographic%20projections-1%20(2016).pdf">https://www.iitg.ac.in/kpmech/me111-2016/orthographic%20projections-1%20(2016).pdf</a> <a href="https://www.ktunotes.in/wp-content/uploads/2018/02/session-5-isometric-projection.pdf">https://www.ktunotes.in/wp-content/uploads/2018/02/session-5-isometric-projection.pdf</a> <a href="https://www.scribd.com/document/471242922/shade-and-shadows">https://www.scribd.com/document/471242922/shade-and-shadows</a>					

<b>Course Outcomes</b>		<b>Knowledge Level</b>
CO1	Comprehend freehand drawing of simple objects.	K2
CO2	Illustrate and apply fundamental techniques of concept and presentation sketches.	K3
CO3	Illustrate and apply fundamental techniques of measured drawing	K3
CO4	Illustrate and apply fundamental techniques of geometrical drawing	K3
CO5	Illustrate and apply fundamental techniques of orthographic drawing.	K3

### Mapping Course Outcome VS Programme Outcomes

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
CO1	3	-	3	-	-	-	1	1	-	-
CO2	3	1	3	-	1	-	3	3	1	2
CO3	-	1	2	2	1	-	-	3	3	-
CO4	-	-	1	2	-	-	-	2	-	-
CO5	2	-	2	-	-	-	2	1	-	-
<b>W. AV</b>	<b>1.6</b>	<b>0.4</b>	<b>2.2</b>	<b>0.8</b>	<b>0.4</b>	<b>0</b>	<b>1.2</b>	<b>2</b>	<b>0.8</b>	<b>0.4</b>

### Mapping Course Outcome VS Programme Specific Outcomes

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
CO1	-	-	2	-	-
CO2	3	-	2	3	-
CO3	-	2	3	2	2
CO4	-	2	2	1	-
CO5	-	-	1	-	-
<b>W. AV</b>	<b>0.6</b>	<b>0.8</b>	<b>2</b>	<b>1.2</b>	<b>0.4</b>

**B. Sc Interior Design****(2023 Onwards)**

CC	91916	Design studio - I	P	Credits-4	Hours -6
<b>Objectives</b>	1.To understand the design thinking and modes of representation 2.To Familiarize With The Steps In Design Process 3.To Understand The Form And Space Through The Design Elements Used. 4.To Understand The Function And Need Of A Space 5.To Practice The Various Steps Involved In The Design Of A Residential Project According To The Design Brief				
<b>Unit I</b>	<i>What is Design</i> Design Thinking- Boosting Visual Representations using metaphors. Figures of speech - Emphasis on Empathy - Emphasis on Teamwork - Individual contribution to collective cause-Understanding non-verbal communication				
<b>Unit II</b>	<i>Introduction to design process</i> Design brief, constraints, and criteria for designing.				
<b>Unit III</b>	<i>Architectural form and space</i> Aesthetic and psychological experience of form and space in terms of scale, colour, light, texture, etc.				
<b>Unit IV</b>	<i>Function and need:</i> user requirements, anthropometrics, space standards, circulation.				
<b>Unit V</b>	<i>Typology/ project-</i> The studio period is to develop design ideas and concepts regarding a residential interior brief, designing and planning the outcome of ideas, make drawings, visualize 3d models with all the interior materials, colours, lighting, construction and finishing details The brief may contain spaces including living room, bedroom, kitchen, toilets and to integrate space into one theme and built form to bring a holistic concept of residential interiors				
<b>Reference and Textbooks</b> <ul style="list-style-type: none"> <li>• Paul Laseau, Graphic Thinking for Architects and Designers, John Wiley &amp; sons</li> <li>• David Fair, Design Graphics, Hodder and Stoughton</li> <li>• Designs for 20<sup>th</sup> century Interiors - Fiona Leolie, VH Publications, London, 2000</li> <li>• Interior Design; The New Freedom, Barbaralec Diamonstein, Rizzoli International Publications, New York, 1982</li> </ul>					
<b>Web Resources</b> <a href="https://www.perlego.com/book/2065884/the-interior-design-reference-specification-book-updated-revised-everything-interior-designers-need-to-know-every-day-pdf">https://www.perlego.com/book/2065884/the-interior-design-reference-specification-book-updated-revised-everything-interior-designers-need-to-know-every-day-pdf</a> <a href="https://pdfcoffee.com/time-saver-standards-interior-design-4-pdf-free.html">https://pdfcoffee.com/time-saver-standards-interior-design-4-pdf-free.html</a> <a href="https://eastridgedesin.com/pdf/interior-design-master-class.pdf">https://eastridgedesin.com/pdf/interior-design-master-class.pdf</a>					

Course Outcomes		Knowledge Level
CO1	Develop design thinking	K2
CO2	Develop design program through analysis.	K2
CO3	Analyze the use of design elements in form and space	K4
CO4	Design according to the needs of user groups.	K6
CO5	Apply design thinking and process to solve problem creatively.	K3

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	-	1	-	-	-	3	-	-	-
CO2	1	-	3	1	-	-	1	2	-	-
CO3	2	-	-	-	-	-	2	3	-	-
CO4	1	2	-	-	-	-	-	2	-	3
CO5	-	-	-	1	-	-	-	-	2	-
<b>W. AV</b>	<b>1.2</b>	<b>0.4</b>	<b>0.8</b>	<b>0.4</b>	<b>0</b>	<b>0</b>	<b>1.2</b>	<b>1.4</b>	<b>0.4</b>	<b>0.6</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	-	-	-
CO2	1	-	1	-	-
CO3	1	-	2	-	-
CO4	-	-	-	-	-
CO5	-	-	-	-	-
<b>W. AV</b>	<b>0.6</b>	<b>0.4</b>	<b>0.6</b>	<b>0</b>	<b>0</b>

**B. Sc Interior Design****(2023 Onwards)**

CC	91923	ELEMENTS OF INTERIOR SPACES	T	Credits- 4	Hours -5
<b>Objectives</b>	1.To understand different types of wall planes 2.To Understand Different Types Of Roof Planes 3.To Understand Different Types Of Floor Planes. 4.To Learn Types Of Staircase According To Profile. 5.To Learn Types Of Partitions				
<b>Unit I</b>	<b>Wall planes</b> Use of wall planes to create architectural effects-Natural patterns and textures obtained in masonry walls - articulation of openings in wall planes - effect of tilting the vertical axis of wall planes-niches and alcoves-cornices and moldings etc.				
<b>Unit II</b>	<b>Roof planes</b> Different types and their visual impact - articulation of skylights and roof apertures - false ceiling -materials, finishes & patterns-types of false ceiling-various types of lighting.				
<b>Unit III</b>	<b>Floor planes</b> Various types of flooring - mosaic, tile, stone etc - aesthetic effects created by flooring material and pattern-graphic patterns and their visual effects-construction details-skirting, molding, embossing etc. Floor finishes and floor coverings.				
<b>Unit IV</b>	<b>Staircase</b> Types according to profile – straight flight, doglegged, quarter turn, half turn, bifurcated, circular, spiral and helical. Types based on materials (timber, wood, steel, synthetic materials). Details of handrails and balusters.				
<b>Unit V</b>	<b>Partitions</b> Details of fixed, sliding and folding partitions with wood, steel and aluminium; frames and panels in glass, particle board, MDF, Gypboard and plywood. Single skin and double skin partition				
<b>Reference and Text books</b>					
<ul style="list-style-type: none"> <li>• The making of interiors - An introduction - Allen Tate - Harper &amp; row Publishers, New York, 1987 Interior Design &amp; Decoration, Fourth Edition, Sherrill Whiton - Prentice Hall, 1974</li> <li>• Interior lighting for Designers, Third edition - Gary Gordon &amp; Jamco L Nuckolls - John Wiley &amp; Sons, New York, 1995</li> <li>• The Encyclopaedia of Decorative Styles -William Hardy &amp; Steve Adams - New Burlington books, London, 1988</li> </ul>					
<b>Web Resources</b>					
<a href="https://www.extension.iastate.edu/4hfiles/statefair/eehandbook/eehjpdesign4h634.pdf">https://www.extension.iastate.edu/4hfiles/statefair/eehandbook/eehjpdesign4h634.pdf</a> <a href="https://guides.lib.berkeley.edu/c.php?g=920740&amp;p=6634741">https://guides.lib.berkeley.edu/c.php?g=920740&amp;p=6634741</a> <a href="https://www.wichita.edu/services/mrc/OIR/Creative/1Design/design-elements.php">https://www.wichita.edu/services/mrc/OIR/Creative/1Design/design-elements.php</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Evaluate and execute types of wall planes in a design	<b>K5</b>
<b>CO2</b>	Evaluate And Execute Types Of Roof Planes In A Design	<b>K5</b>
<b>CO3</b>	Evaluate And Execute Types Of Floor Planes In A Design	<b>K5</b>
<b>CO4</b>	Execute The Knowledge Of Staircase In Design	<b>K5</b>
<b>CO5</b>	Evaluate The Partitions Available In Market And Execute The Knowledge In Design.	<b>K5</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
<b>CO1</b>	2(M)	3(S)	2(M)	3(S)	1(L)	3(S)	2(M)	1(L)	3(S)	2(M)
<b>CO2</b>	2(M)	3(S)	2(M)	3(S)	1(L)	3(S)	1(L)	1(L)	3(S)	2(M)
<b>CO3</b>	2(M)	3(S)	1(L)	2(M)	1(L)	3(S)	2(M)	1(L)	3(S)	2(M)
<b>CO4</b>	1(L)	3(S)	3(S)	3(S)	1(L)	1(L)	3(S)	-	3(S)	2(M)
<b>CO5</b>	1(L)	3(S)	3(S)	3(S)	1(L)	1(L)	3(S)	1(L)	3(S)	2(M)
<b>W. AV</b>	<b>1.6</b>	<b>3</b>	<b>2.2</b>	<b>2.8</b>	<b>1</b>	<b>2.2</b>	<b>2.2</b>	<b>0.8</b>	<b>3</b>	<b>2</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
<b>CO1</b>	2(M)	3(S)	1(L)	2(M)	3(S)
<b>CO2</b>	2(M)	3(S)	1(L)	2(M)	3(S)
<b>CO3</b>	2(M)	3(S)	1(L)	2(M)	3(S)
<b>CO4</b>	1(L)	3(S)	-	2(M)	3(S)
<b>CO5</b>	2(M)	3(S)	1(L)	2(M)	3(S)
<b>W. AV</b>	<b>1.8</b>	<b>3</b>	<b>0.8</b>	<b>2</b>	<b>3</b>

CC	91924	DESIGN STUDIO -II	P	Credits- 4	Hours -5
<b>Objectives</b>	1. To analyze space design through function structure and materials 2.To Understand And Analyze The Basics Of Form Development 3.To Collect Preliminary Data Through Different Research Techniques 4.To Create Various Layout Plans And Details 5.To Design An Office Space According To The Design Brief.				
<b>Unit I</b>	Space design - Application and evaluating design - function, structure and materials, aesthetics, analyzing existing space and its advantages				
<b>Unit II</b>	Introduction to space development, building conceptual concepts, present preliminaries, develop final plan, present final plan using 3D drawing, models along with its benefits				
<b>Unit III</b>	Introduction to construction documents, layout plan, construction plans, telephone and electrical plans, finishes plans, furniture plans and section details.				
<b>Unit IV</b>	Space design - Data collection, analysis, synthesis - Zonal and block diagram, bubble diagram, adjacency matrix, stacking plans, circulation, execution, feedback, evaluation, literature study, case study, proto typical plan sketches, relationship diagram.				
<b>Unit V</b>	To design a small office space with a meeting area, lobby, workstation and deciding the needed services, lighting and colors for the space				
<b>Reference and Textbooks</b>					
<ul style="list-style-type: none"> <li>Ernst and Peter Neufert, “Neufert Architect’s Data”, Wiley Blackwell Publication, UK2.</li> <li>Joseph Dechiara, Julius Panero and Martin Zelnik, “Time Saver Standards for Interior design and Space Planning”, McGraw Hill, London, 2011.</li> <li>Joseph Dechiara, Julius Panero, “Standards for Interior Design and Space Planning”, McGraw Hill Professional, 2011.</li> <li>Joseph Dechiara, Michael J Crosbie, “Time Savers Standards for Building Types”, McGraw Hill Education, 4th edition, 2014.</li> </ul>					
<b>Web Resources</b>					
<a href="https://people.ohio.edu/ziff/ART%202650/Space%20Planning%202020.pdf">https://people.ohio.edu/ziff/ART%202650/Space%20Planning%202020.pdf</a> <a href="https://www.academia.edu/6101552/space_planning_for_commercial_and_residential_interiors">https://www.academia.edu/6101552/space_planning_for_commercial_and_residential_interiors</a> <a href="https://www.scribd.com/doc/315460527/The-construction-preliminary-works-docx">https://www.scribd.com/doc/315460527/The-construction-preliminary-works-docx</a> <a href="https://www.researchgate.net/publication/267624005_Introduction_to_Residential_Layout">https://www.researchgate.net/publication/267624005_Introduction_to_Residential_Layout</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Demonstrate knowledge of office interior design fundamentals.	<b>K2</b>
<b>CO2</b>	Identify Issues And Concerns Contextually Through Comparative Study.	<b>K1</b>
<b>CO3</b>	Develop Design Program Through Analysis Of Data & Case Study.	<b>K2</b>
<b>CO4</b>	Illustrate And Execute Various Plans And Details In Design Problem	<b>K3</b>
<b>CO5</b>	Apply Design Thinking And Process To Develop Creative Designs And Demonstrate Through Relevant Communication Skills.	<b>K3</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO1</b>	3(S)	2(M)	3(S)	2(M)	3(S)	-	3(S)	2(M)	-	3(S)
<b>CO2</b>	3(S)	-	3(S)	3(S)	3(S)	1(L)	1(L)	2(M)	1(L)	3(S)
<b>CO3</b>	2(M)	2(M)	1(L)	2(M)	2(M)	1(L)	2(M)	3(S)	1(L)	2(M)
<b>CO4</b>	1(L)	2(M)	2(M)	3(S)	3(S)	2(M)	2(M)	2(M)	3(S)	3(S)
<b>CO5</b>	3(S)	-	3(S)	2(M)	3(S)	2(M)	2(M)	2(M)	2(M)	3(S)
<b>W. AV</b>	<b>2.4</b>	<b>1.2</b>	<b>2.4</b>	<b>2.4</b>	<b>2.8</b>	<b>1.2</b>	<b>2.6</b>	<b>2.2</b>	<b>1.4</b>	<b>2.8</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
<b>CO1</b>	3(S)	2(M)	2(M)	3(S)	1(L)
<b>CO2</b>	3(S)	2(M)	2(M)	3(S)	1(L)
<b>CO3</b>	3(S)	2(M)	3(S)	2(M)	2(M)
<b>CO4</b>	1(L)	2(M)	3(S)	3(S)	1(L)
<b>CO5</b>	3(S)	3(S)	2(M)	3(S)	3(S)
<b>W. AV</b>	<b>2.6</b>	<b>2.2</b>	<b>2.4</b>	<b>2.8</b>	<b>1.4</b>

GEC	91925	GRAPHICS II	P	Credits - 4	Hours-4
<b>Objectives</b>	1.To Learn The Fundamentals Of Perspective Drawing. 2.To Learn Measured Drawings Of Interior Components. 3.To Learn The Drawings And Criteria For Furniture Arrangement. 4.To Learn Measured Drawings Of Interior Spaces. 5.To Familiarize With Rendering Techniques Using Pens, Pencils Etc				
<b>Unit I</b>	<i>Perspective Drawing</i> One point, two-point perspective of objects, furniture and interiors				
<b>Unit II</b>	<i>Measured Drawing</i> Measured drawing of interior components like partition wall, staircase etc				
<b>Unit III</b>	<i>Furniture arrangement</i> Residential and commercial furniture arrangements				
<b>Unit IV</b>	<i>Measured Drawing - Space</i> Understanding a building and its interiors in terms of plan, elevation and section.				
<b>Unit V</b>	<i>Rendering with colour pencils and sketch pens</i> Rendering of interior perspectives with colour pencils and sketch pens – stroke effects, smudge effects.				
<b>Reference and Textbooks</b>					
<ul style="list-style-type: none"> <li>• Perspective Principles, M G Shah &amp; K M Kale, Asia Publications, Mumbai</li> <li>• Geometrical drawing for Art students, I H Morris, Orient Longman, Chennai</li> <li>• Engineering Drawing, M S Kumar, D D Publication, Chennai</li> </ul>					
<b>Web Resources</b>					
<a href="https://static.sdcpublishations.com/pdfsamples/978-1-58503-901-2-2.pdf">https://static.sdcpublishations.com/pdfsamples/978-1-58503-901-2-2.pdf</a> <a href="http://vladlen.info/papers/furniture-slides.pdf">http://vladlen.info/papers/furniture-slides.pdf</a> <a href="https://www.academia.edu/51809297/Manual_Rendering_Techniques_in_Architecture">https://www.academia.edu/51809297/Manual_Rendering_Techniques_in_Architecture</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Illustrate And Apply Fundamental Techniques Of Perspective Drawing	<b>K3</b>
<b>CO2</b>	Execute The Knowledge Of Measured Drawing For Various Interior Components	<b>K5</b>
<b>CO3</b>	Execute The Knowledge Of Furniture Arrangement For Various Interior spaces	<b>K5</b>
<b>CO4</b>	Execute The Knowledge Of Measured Drawing For Various Interior Spaces	<b>K5</b>
<b>CO5</b>	Apply The Fundamental Techniques Of Rendering To The Presentation Sketches	<b>K3</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
CO1	3(S)	3(S)	3(S)	3(S)	2(M)	-	2(M)	3(S)	2(M)	2(M)
CO2	1(L)	3(S)	3(S)	3(S)	2(M)	3(S)	2(M)	3(S)	3(S)	2(M)
CO3	3(S)	2(M)	3(S)	3(S)	2(M)	1(L)	1(L)	3(S)	2(M)	2(M)
CO4	1(L)	3(S)	3(S)	3(S)	2(M)	3(S)	2(M)	2(M)	3(S)	3(S)
CO5	3(S)	3(S)	3(S)	1(L)	2(M)	-	2(M)	3(S)	1(L)	2(M)
<b>W. AV</b>	<b>2.2</b>	<b>2.8</b>	<b>3</b>	<b>2.6</b>	<b>2</b>	<b>1.4</b>	<b>1.8</b>	<b>2.8</b>	<b>2.2</b>	<b>2.2</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
CO1	3(S)	3(S)	3(S)	2(M)	-
CO2	1(L)	3(S)	3(S)	2(M)	3(S)
CO3	3(S)	3(S)	3(S)	2(M)	1(L)
CO4	1(L)	3(S)	2(M)	3(S)	3(S)
CO5	3(S)	1(L)	3(S)	2(M)	-
<b>W. AV</b>	<b>2.2</b>	<b>2.6</b>	<b>2.8</b>	<b>2.2</b>	<b>1.4</b>

GEC	91926	MATERIALS AND CONSTRUCTION II	P	Credits -4	Hours-4
<b>Objectives</b>	1.To familiarize different floor coverings in interior spaces. 2.To Understand Different Types Of False Ceiling In Interior Spaces. 3.To Familiarize Different Wall Cladding And Panelling. 4.To Understand The Basics Of Green Building Concept. 5.To Analyze The Recent Advances In Materials And Finishes				
<b>Unit I</b>	<i>Floor coverings</i> –Floor finishes – Definition, Hard floors - Terrazzo, wood, mosaic, tiles, marble and granite. Semi hard Floors – Vinyl, linoleum, Rubber and cork. Metal Finishes and its types and uses				
<b>Unit II</b>	<i>False ceiling</i> Materials and process – Types of false ceiling, minimalism architecture concept Construction of various kinds of false ceiling				
<b>Unit III</b>	<i>Wall Cladding and Panelling</i> – Using wooden planks, laminated plywood, fibre glass wool and fabric for sound insulation and wall panelling for thermal insulation. Natural stones, ceramics.				
<b>Unit IV</b>	<b>Concept of green building materials.</b>				
<b>Unit V</b>	<i>Recent advances in building materials and finishes</i> Construction materials, interior finishes and exterior finishes, partition materials. Approximate cost of building materials and finishes.				

**Reference and Text books**

- S C Rangwala - Engineering Materials - Charotar Publishing, Anand 1982
- W B McKay, Building Construction, Vol 1- 4, Longmans, U K 1981
- Laxmi Publications Pvt Ltd, New Delhi, 1993 Dr B C Punmia,
- Building Construction, Laxmi Publications Pvt Ltd, New Delhi, 1993
- M S Shetty, Concrete Technology, S Chand & Co Ltd, New Delhi, 1986

**Web Resources**

<https://archive.org/details/W.B.McKayVol11945>

<https://doc.lagout.org/electronics/Materials%20for%20engineering%20%5Bby%20John%20Martin%5D.pdf>

[https://civil.sairam.edu.in/wp-content/uploads/sites/4/2018/06/Concrete\\_Technology.pdf](https://civil.sairam.edu.in/wp-content/uploads/sites/4/2018/06/Concrete_Technology.pdf)

Course Outcomes		Knowledge Level
<b>CO1</b>	Apply the various techniques, technologies and materials for flooring in design.	<b>K3</b>
<b>CO2</b>	Evaluate And Execute Types Of False Ceiling In A Design.	<b>K5</b>
<b>CO3</b>	Evaluate Wall Finishes Available In Market And Execute The Knowledge In Design.	<b>K5</b>
<b>CO4</b>	Execute The Concept Of Energy Efficiency In Buildings.	<b>K5</b>
<b>CO5</b>	Develop Interior Spaces With Suitable Construction Materials According To Recent Advances.	<b>K2</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO1</b>	3(S)	3(S)	3(S)	3(S)	2(M)	2(M)	2(M)	1(L)	3(S)	2(M)
<b>CO2</b>	3(S)	3(S)	2(M)	3(S)	2(M)	3(S)	3(S)	2(M)	3(S)	2(M)
<b>CO3</b>	1(L)	3(S)	2(M)	3(S)	2(M)	1(L)	3(S)	-	3(S)	2(M)
<b>CO4</b>	1(L)	1(L)	-	-	-	3(S)	1(L)	-	1(L)	1(L)
<b>CO5</b>	-	3(S)	1(L)	2(M)	1(L)	-	1(L)	1(L)	-	-
<b>W. AV</b>	<b>1.6</b>	<b>2.6</b>	<b>1.6</b>	<b>2.2</b>	<b>1.4</b>	<b>1.8</b>	<b>2</b>	<b>0.8</b>	<b>2</b>	<b>1.4</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
<b>CO1</b>	3(S)	3(S)	1(L)	2(M)	2(M)
<b>CO2</b>	3(S)	3(S)	2(M)	2(M)	3(S)
<b>CO3</b>	1(L)	3(S)	-	2(M)	1(L)
<b>CO4</b>	-	-	1(L)	1(L)	3(S)
<b>CO5</b>	1(L)	2(M)	1(L)	-	-
<b>W. AV</b>	<b>1.6</b>	<b>2.2</b>	<b>1</b>	<b>1.4</b>	<b>1.8</b>

CC	91933	INTERIOR SERVICES -I	T	Credits - 4	Hours - 4
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To understand the need and applications of water supply and sanitation in buildings with exposure to various fixtures and fittings, water supply and sanitary installations at work sites</li> <li>2. To understand the need and applications in buildings with exposure to various systems, methods and fixtures.</li> <li>3. To expose the student to the principles of water supply and sanitation.</li> <li>4. To expose the students to the basic principles of acoustics in interiors</li> <li>5. To understand design and detailing of acoustics in interiors.</li> </ol>				
<b>Unit I</b>	<b>PLUMBING</b> Introduction of water supply & drainage in domestic and Multi-storeyed buildings Piping - systems, one and two pipe systems, materials, Size of drain pipes and materials.				
<b>Unit II</b>	<b>SANITATION</b> Standard fixtures and sanitary fittings, Caulking compounds, traps, joints, , Sinks, bath tub, water closets, flushing cisterns, urinals, wash basins, bidet, shower panel etc; Domestic hot water systems solar water heating systems; Flushing cisterns, manholes, septic tanks in relation to buildings Intercepting Chambers, inspection Chambers and their location and ventilation of sewers.				
<b>Unit III</b>	<b>PLUMBING STUDIO</b> Preparation of plumbing layout of a single storey building & working drawings of various fittings and fixtures of water supply and sanitary installations.				
<b>Unit IV</b>	<b>ROOM ACOUSTICS</b> Definition, theory of sound generation, transmission – reception of sound – Terms related to acoustics – sound waves, frequency, intensity, wavelength – measurement of sound. Sound absorption, absorption co-efficient and their measurements – sound absorbing materials – sound insulation – materials – sound amplification and sound reinforcement.				
<b>Unit V</b>	<b>ACOUSTICS IN BUILDINGS</b> Design and detailing – basic principles in designing of lecture halls, auditorium theatres, cinema halls, broadcasting studio, recording studio.				
<b>Reference and Text books</b> <ul style="list-style-type: none"> <li>• 1. S C Rangwala, Water supply and Sanitary Engineering, Charotar publishing house</li> <li>• Charangith Shah, Water supply and Sanitary Engineering, Galgotia Publishers</li> <li>• A Kamala &amp; DL Kanth Rao, Environmental Engineering, Tata McGraw - Hill publishing company Ltd,</li> <li>• Technical Teacher Training Institute (Madras), Environmental Engineering, Tata McGraw – Hill publishing company Ltd,</li> <li>• Peter Templeton &amp; Saunders – Detailing for Architectural Acoustics – Architectural press, 1994</li> <li>• Interior Design, Vol-2, CADD Centre Training Services Pvt Ltd, 2004</li> </ul>					
<b>Web Resources</b> <a href="https://www.pas.org.in/Portal/document/ResourcesFiles/pdfs/Module_1%20Basics%20of%20water%20supply%20system.pdf">https://www.pas.org.in/Portal/document/ResourcesFiles/pdfs/Module_1%20Basics%20of%20water%20supply%20system.pdf</a> <a href="https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SARA5103.pdf">https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SARA5103.pdf</a> <a href="https://www.bksv.com/media/doc/bn1329.pdf">https://www.bksv.com/media/doc/bn1329.pdf</a>					

Course Outcomes		Knowledge Level
CO1	Acquire knowledge on water supply system on village/town level	K1
CO2	Identify and distinguish the various types of Sanitary fittings and Sanitary wares used in interiors.	K4
CO3	Prepare plumbing layout of a residential space.	K6
CO4	Understand basic principles of sound, its reception, and other phenomenon related to acoustics	K2
CO5	Identify materials used for acoustic designs	K1

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1(L)	-	-	-	-	2(M)	1(L)	-	-	1(L)
CO2	2(M)	2(M)	2(M)	1(L)	-	2(M)	1(L)	1(L)	1(L)	1(L)
CO3	2(M)	2(M)	1(L)	2(M)	1(L)	2(M)	-	1(L)	-	-
CO4	1(L)	-	1(L)	1(L)	1(L)	-	1(L)	-	1(L)	-
CO5	1(L)	1(L)	-	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)
<b>W. AV</b>	<b>1.4</b>	<b>1</b>	<b>0.8</b>	<b>1</b>	<b>0.6</b>	<b>1.4</b>	<b>0.8</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1(L)	1(L)	1(L)	1(L)	2(M)
CO2	-	1(L)	-	-	1(L)
CO3	1(L)	-	1(L)	1(L)	2(M)
CO4	1(L)	1(L)	-	2(M)	-
CO5	1(L)	-	1(L)	1(L)	2(M)
<b>W. AV</b>	<b>0.8</b>	<b>0.6</b>	<b>0.6</b>	<b>1</b>	<b>1.4</b>

CC	91934	FURNITURE DESIGN STUDIO	P	Credits - 3	Hours - 3
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To help the students understand about the various anthropometric aspects, human factors &amp; other design criteria involved in the design of furniture</li> <li>2. To make the students understand about the various materials &amp; technology involved in the making of furniture.</li> <li>3. To provide the students, knowledge on history of furniture design and various aspects involved in the design of furniture for various spaces.</li> <li>4. To understand the relation between furniture and spatial planning, circulation and human comfort.</li> <li>5. To understand the furniture construction techniques.</li> </ol>				
<b>Unit I</b>	<p><b>Furniture design theory –</b> History, Principles, Types. Introduction to Furniture Design. Furniture for different purpose-Meaning, need, factors influencing – climate, family needs and preferences, availability, comfort, principles of design and financial limits. Furniture styles – Classic, Colonial, Art Deco, Art Nouveau, Minimalistic, Modern, Contemporary, etc.</p>				
<b>Unit II</b>	<p><b>Human factors –</b> Ergonomics, Anthropometry Definition, theory of standard dimension based on human figures for activities, functions, circulation, furniture design, spatial requirements etc. Study of Ergonomics with detailing aspects and Golden principles. Design of Furniture for Living, Dining, Kitchen, Office etc.</p>				
<b>Unit III</b>	<p><b>Furniture and space –</b> Furniture in relation to its space, circulation, composition. Techniques and combinations of the furniture in the Interior space, in order to satisfy the human needs for comfort and rest. Desirable layouts of furniture in building interiors Space allocation criteria, building codes and access for the disabled, furniture standards, circulation and work flow, design considerations, the constraints of fixed building elements and building system interfaces, security and privacy issues etc.</p>				
<b>Unit IV</b>	<p><b>Furniture materials and fabrication details</b> Furniture materials- Selection and arrangement (Wood, metal, plastic, fabric) Soft furnishings- Meaning and importance, Types of furnishings- carpets, rugs, cushion cover, slip cover, window treatments- curtains, draperies, blinds and shades.</p>				
<b>Unit V</b>	<p><b>Furniture construction and detailing</b> Construction features of furniture Shaping, carving, turning, fluting, reeding, joining and finishes, upholstering techniques and designs. Care and maintenance wooden furniture, wicker and cane, metal furniture, plastic, PVC, upholstered furniture, wood finishes and furniture polishes.</p>				
<p><b>Reference and Text books</b></p> <ul style="list-style-type: none"> <li>• Interior Design, John F. Pile, Harry N. Abrams Inc Publishers, New York</li> <li>• Interior Design Course, Mary Giliat Coyran, Octopus Ltd, London</li> <li>• The Encyclopaedia of Furniture, Joseph Aronson, Crwon Publishers, New York</li> <li>• Interior Design &amp; Decoration, Sherril Whiton, Prentice Hall</li> <li>• Interior Design, Francis D K Ching, John Wiley &amp; sons, New York</li> <li>• Office Furniture, Susan S Szenasy, facts on file inc, New York</li> <li>• Time Saver Standards for Interior Design, Joseph De Chiara, McGraw Hill, New York</li> </ul>					

**Web Resources**

- <https://study.com/academy/lesson/history-of-furniture-design-timeline-evolution.html>
- <https://www.designingbuildings.co.uk/wiki/Furnishings>
- <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=121403>

Course Outcomes		Knowledge Level
<b>CO1</b>	Understand the evolution of furniture design through ages.	<b>K2</b>
<b>CO2</b>	Design ergonomically	<b>K6</b>
<b>CO3</b>	Acquire the sense and relation of space and furniture within.	<b>K4</b>
<b>CO4</b>	Understand the various materials used for furniture construction.	<b>K2</b>
<b>CO5</b>	Understand the construction techniques used to achieve various shapes, forms and finishes of furniture design.	<b>K2</b>

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2(M)	1(L)	1(L)	-	1(L)	-	1(L)	1(L)	-	-
CO2	2(M)	1(L)	1(L)	1(L)	-	-	1(L)	2(M)	1(L)	-
CO3	2(M)	2(M)	2(M)	1(L)	1(L)	2(M)	2(M)	2(M)	2(M)	1(L)
CO4	2(M)	3(S)	1(L)	-	1(L)	2(M)	1(L)	2(M)	3(S)	1(L)
CO5	2(M)	3(S)	1(L)	3(S)	1(L)	2(M)	1(L)	2(M)	3(S)	-
<b>W. AV</b>	<b>2</b>	<b>2</b>	<b>1.2</b>	<b>1</b>	<b>0.8</b>	<b>1.2</b>	<b>1.2</b>	<b>1.8</b>	<b>1.8</b>	<b>0.4</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
<b>CO1</b>	2(M)	-	1(L)	-	-
<b>CO2</b>	2(M)	2(M)	3(S)	1(L)	1(L)
<b>CO3</b>	2(M)	2(M)	2(M)	1(L)	1(L)
<b>CO4</b>	2(M)	2(M)	3(S)	1(L)	2(M)
<b>CO5</b>	2(M)	2(M)	3(S)	2(M)	2(M)
<b>W. AV</b>	<b>2</b>	<b>1.6</b>	<b>2.4</b>	<b>1</b>	<b>1.2</b>

CC	91935	DESIGN STUDIO – III	P	Credits - 3	Hours - 3
<b>Objectives</b>	<ol style="list-style-type: none"> <li>To study and develop innovative schemes for public gathering spaces and like auditorium, hotel lobby, banquet halls, waiting lounges.</li> <li>To introduce the basics of designing for public space interior and to develop skills required for the same</li> <li>To understand the relationship between space and people in public spaces</li> <li>To develop an ideal spatial design to enhance social interaction and lifestyle.</li> <li>To develop detailed drawings describing public space design.</li> </ol>				
<b>Unit I</b>	<b>Introduction to the project</b> Public gathering spaces explanation and data collection.				
<b>Unit II</b>	<b>Case studies</b> Live and literature case studies supporting the design process for the project.				
<b>Unit III</b>	<b>Conceptual designs</b> Develop design ideas and concepts regarding public visiting or gathering spaces, considering the multiple tastes of many people, function of the space, the period of visit or stay, the area.				
<b>Unit IV</b>	<b>Drawings</b> Make drawings- floor plans, sections, elevations with necessary details.				
<b>Unit V</b>	<b>Interior Detailing</b> Visualize with 3d models with all the interior materials, colours, lighting, construction and finishing details				
<b>Reference and Textbooks</b>					
<ul style="list-style-type: none"> <li>• Designs for 20 th century Interiors - Fiona Leolie, VH Publications, London, 2000</li> <li>• Interior Design; The New Freedom, Barbaralec Diamonstein, Rizzoli International Publications, New York, 1982</li> <li>• Interior Colour by Design, Jonathan Poore, Rockport Publishers, 1994</li> <li>• Worldwide Interiors - International Federation of Interior Architects &amp; Designers, Rikuyo - Sha, Japan, 1987</li> </ul>					
<b>Web Resources</b>					
<ul style="list-style-type: none"> <li>• <a href="https://study.com/academy/lesson/history-of-furniture-design-timeline-evolution.html">https://study.com/academy/lesson/history-of-furniture-design-timeline-evolution.html</a></li> <li>• <a href="https://www.designingbuildings.co.uk/wiki/Furnishings">https://www.designingbuildings.co.uk/wiki/Furnishings</a></li> <li>• <a href="http://ecoursesonline.iasri.res.in/mod/page/view.php?id=121403">http://ecoursesonline.iasri.res.in/mod/page/view.php?id=121403</a></li> </ul>					
<b>Course Outcomes</b>					<b>Knowledge Level</b>
<b>CO1</b>	Demonstrate proficiency in conceptualizing and proposing innovative schemes for public gathering spaces, such as auditoriums, hotel lobbies, banquet halls, and waiting lounges.				<b>K6</b>
<b>CO2</b>	Apply fundamental principles of interior design to effectively create aesthetically pleasing and functional environments in public spaces, fostering a foundational skill set in designing for these settings.				<b>K5</b>
<b>CO3</b>	Analyze and interpret the dynamic relationship between spatial design and human behavior within public spaces, gaining insights into how people interact with and respond to their surroundings.				<b>K4</b>
<b>CO4</b>	Formulate and present comprehensive spatial designs that strategically enhance social interaction and contribute positively to lifestyle experiences in various public settings. related to acoustics				<b>K3</b>
<b>CO5</b>	Produce detailed and accurate drawings that articulate the envisioned public space designs, effectively communicating the proposed concepts and specifications for implementation.				<b>K6</b>

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3(S)	2(M)	2(M)	2(M)	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)
CO2	2(M)	2(M)	1(L)	1(L)	2(M)	2(M)	3(S)	2(M)	2(M)	2(M)
CO3	2(M)	-	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	3(S)
CO4	-	1(L)	1(L)	-	3(S)	-	-	1(L)	1(L)	-
CO5	1(L)	3(S)	3(S)	3(S)	1(L)	3(S)	2(M)	3(S)	3(S)	2(M)
<b>W. AV</b>	<b>1.6</b>	<b>1.6</b>	<b>1.8</b>	<b>1.6</b>	<b>1.8</b>	<b>1.6</b>	<b>1.6</b>	<b>1.8</b>	<b>1.8</b>	<b>1.6</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1(L)	1(L)	1(L)	1(L)	1(L)
CO2	3(S)	3(S)	2(M)	2(M)	2(M)
CO3	1(L)	-	-	1(L)	1(L)
CO4	2(M)	2(M)	2(M)	2(M)	2(M)
CO5	2(M)	2(M)	3(S)	3(S)	3(S)
<b>W. AV</b>	<b>1.8</b>	<b>1.6</b>	<b>1.6</b>	<b>1.8</b>	<b>1.8</b>

GEC	91936	SPATIAL DESIGN	P	Credits - 3	Hours -3
<b>Objectives</b>	1. To enable students to learn concept of space in interior design 2. To understand the importance of space planning 3. To understand various aspects like spatial standards, dimensions, ergonomics etc. 4. To develop conceptual design ideas. 5. To understand the importance of technical drawings				
<b>Unit I</b>	Introduction to Space Planning, terms and intent, necessity of space planning, synthesis of space planning, introduction to space design with use of computer, the design program – observation.				
<b>Unit II</b>	Space Design – Application and evaluating design – function, structure and materials. Aesthetics, analyzing existing space and its advantages.				
<b>Unit III</b>	Space Design – Data collection, analysis, synthesis – Zonal and block diagram, bubble diagram, adjacency matrix, stacking plans, circulation, execution, feedback, evaluation, literature study, case study, proto typical plan sketches, relationship diagrams.				
<b>Unit IV</b>	Introduction to Space Development, building conceptual concepts, present preliminaries, develop final plans, present final plan using 3D drawings, models along with its benefits				
<b>Unit V</b>	Introduction to construction documents, layout plan, construction plans, telephone and electrical plans, finishes detail, furniture plan and section details.				
<b>Reference and Text books</b>					
<ul style="list-style-type: none"> <li>Francis DKChing - <i>Architecture - Form Space and Order</i> Van Nostrand Reinhold Co (Canaa), 1979</li> <li>VSPramar, <i>Design Fundamentals in Architecture</i>, Somaiya Publications Private Ltd, NewDelhi, 1973</li> <li><i>Place Advantage : Applied Psychology for Interior Archietcture</i> by Sally Augustin.</li> <li><i>Spatial Strategies for Interior Design</i> by Ian Higgins</li> <li><i>Interior Design : Conceptual Basis</i> by Anthony Sully</li> </ul>					
<b>Web Resources</b>					
<a href="https://study.com/academy/lesson/what-is-space-planning-basics-architecture.html">https://study.com/academy/lesson/what-is-space-planning-basics-architecture.html</a> <a href="https://www.firstinarchitecture.co.uk/space-planning-basics/">https://www.firstinarchitecture.co.uk/space-planning-basics/</a> <a href="https://www.2020spaces.com/blog-space-planning-101/">https://www.2020spaces.com/blog-space-planning-101/</a> <a href="https://www.cmu.edu/cee/projects/PMbook/03_The_Design_And_Construction_Process.html">https://www.cmu.edu/cee/projects/PMbook/03_The_Design_And_Construction_Process.html</a> <a href="https://www.masterclass.com/articles/guide-to-construction-documents">https://www.masterclass.com/articles/guide-to-construction-documents</a>					

Course Outcomes		Knowledge Level
CO1	Understand the intents of Spatial Planning in interior.	K2
CO2	Evaluate and apply the of materials, function of spaces to achieve an ideal design	K3
CO3	Identify the design problem and produce multiple options of design proposals through zoning, adjacency matrices etc and establish ideal alternative.	K6
CO4	Develop Conceptual sketches and innovative solutions to design problems.	K2
CO5	Produce required working drawings and technical detailed drawings for design proposals.	K3

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3(S)	2(M)	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)	1(L)
CO2	3(S)	3(S)	2(M)	1(L)	2(M)	1(L)	2(M)	1(L)	1(L)	1(L)
CO3	3(S)	1(L)	3(S)	-	3(S)	-	2(M)	2(M)	-	1(L)
CO4	2(M)	2(M)	3(S)	2(M)	3(S)	-	1(L)	-	1(L)	-
CO5	3(S)	3(S)	2(M)	3(S)	2(M)	2(M)	1(L)	1(L)	3(S)	2(M)
<b>W. AV</b>	<b>2.8</b>	<b>2.2</b>	<b>2.2</b>	<b>1.4</b>	<b>2.2</b>	<b>0.8</b>	<b>1.4</b>	<b>1</b>	<b>1.2</b>	<b>1</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1(L)	1(L)	1(L)	1(L)	1(L)
CO2	2(M)	1(L)	-	2(M)	1(L)
CO3	2(M)	1(L)	1(L)	2(M)	-
CO4	1(L)	1(L)	-	2(M)	1(L)
CO5	2(M)	2(M)	1(L)	1(L)	-
<b>W. AV</b>	<b>1.6</b>	<b>1.4</b>	<b>0.6</b>	<b>1.6</b>	<b>0.6</b>

GEC	91937	COMPUTER AIDED GRAPHICS	P	Credits - 3	Hours - 3
<b>Objectives</b>	<ol style="list-style-type: none"> <li>To make a student understand the basic tools of ACAD ie formatting (limits, units, etc) drawing tools or drafting, modification of the same A knowledge on understanding of the advanced tools such as layers, line type, etc, 2D drafting and 3D modelling of building drawings.</li> <li>To provide the student of Interior Design a foundation in the techniques of drafting using computer as a tool.</li> <li>To help the student understand the technology of computer and its terminology.</li> <li>To enable the student to understand the applications of the software and graphic system.</li> <li>To introduce the technology of computer system, operation principles, use of other related hardware, with a thrust on 2D drafting and 3D modelling as a necessity for designers Coverage will be on drawing objects, fittings, setting, size and dimensioning, with a thrust on advanced 2D drafting techniques involving complex building drawings</li> </ol>				
<b>Unit I</b>	<b>INTRODUCTION TO COMPUTER AIDED 2D DRAFTING</b> Understanding the use of drawing tools, object editing, drawing objects, filing and setting drawing units, scales, limits that size and dimensioning, lettering. Setting up of drawing of various simple objects with complete text and dimensioning.				
<b>Unit II</b>	<b>ADVANCE COMPUTER AIDED 2D DRAFTING</b> Advance command programming – Transparent overlays, hatching utilities, assigned colour and line type, use of multi-line, style, block, symbol library, manipulation for accurate drawings, incorporating the above mentioned utilities.				
<b>Unit III</b>	<b>PRODUCTIVITY TOOLS</b> Introduction to tools of productivity – Blocks, slide facilities, script files and attributes. Understanding concepts of View port, concept of object linking and editing session. Enable them to understand the applications of the software and graphic system.				
<b>Unit IV</b>	<b>INTRODUCTION TO 3D DRAFTING</b> Introduction to 3D modelling techniques and construction planes, drawing objects, 3D surfaces, setting up elevation and thickness, and use of dynamic projections. Solid modelling with driving, primitive command and Boolean operations. Use of region modelling and solid modifiers.				
<b>Unit V</b>	<b>RENDERING TECHNIQUE IN CAD</b> Rendering with lighting intensity, Illumination settings in wide models, day and night study, solar study for exterior surfaces rendering settings, Camera settings for view options and application of materials in various methods				
<b>Reference and Text books</b> <ul style="list-style-type: none"> <li>Sham Tickoo, Advance Technique in AutoCAD 2010</li> <li>Auto CAD reference manual – Autodesk UNC, 1998</li> <li>AutoCAD architectural users guide – Autodesk Inc 1998</li> <li>V. Rajaraman, principles of Computer Programming – Prentice Hall of India</li> <li>Byron S.Gottfried, Theory and Problems of Programming with C.Schaum’s outline series, McGraw Hill Publishing Co.</li> </ul>					
<b>Web Resources</b> <a href="https://mrcet.com/downloads/digital_notes/HS/R20/Computer%20Aided%20Engineering%20Graphics(1).pdf">https://mrcet.com/downloads/digital_notes/HS/R20/Computer%20Aided%20Engineering%20Graphics(1).pdf</a> <a href="https://iastate.pressbooks.pub/visualgraphiccomm/chapter/chapter-1/">https://iastate.pressbooks.pub/visualgraphiccomm/chapter/chapter-1/</a> <a href="https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SMEA1501.pdf">https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SMEA1501.pdf</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Use basic AutoCAD drafting tools to draw and edit basic shapes.	<b>K6</b>
<b>CO2</b>	Use advanced editing commands in AutoCAD – Layer styles, properties, detailing etc.	<b>K6</b>
<b>CO3</b>	Use productivity tools and how to plot and export the drawing to various formats.	<b>K3</b>
<b>CO4</b>	Draft 3D models with AutoCAD	<b>K6</b>
<b>CO5</b>	Render photorealistic images of design using AutoCAD.	<b>K6</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2(M)	1(L)	1(L)	3(S)	-	-	-	-	2(M)	-
CO2	2(M)	1(L)	1(L)	3(S)	1(L)	-	1(L)	1(L)	-	-
CO3	2(M)	1(L)	-	3(S)	-	1(L)	-	-	1(L)	1(L)
CO4	2(M)	1(L)	1(L)	3(S)	1(L)	1(L)	-	-	-	-
CO5	2(M)	1(L)	1(L)	3(S)	1(L)	1(L)	1(L)	1(L)	-	1(L)
<b>W. AV</b>	<b>2</b>	<b>1</b>	<b>0.8</b>	<b>3</b>	<b>0.6</b>	<b>0.6</b>	<b>0.4</b>	<b>0.4</b>	<b>0.6</b>	<b>0.4</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	3(S)	1(L)	2(M)	1(L)
CO2	-	3(S)	2(M)	1(L)	1(L)
CO3	1(L)	3(S)	1(L)	-	2(M)
CO4	-	2(M)	-	1(L)	2(M)
CO5	3(S)	3(S)	1(L)	2(M)	-
<b>W. AV</b>	<b>0.8</b>	<b>2.8</b>	<b>1</b>	<b>1.2</b>	<b>1.2</b>

**SEMESTER IV**

CC	91943	INTERIOR SERVICES - II	T	Credits - 4	Hours - 4
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To understand the need and applications of air-conditioning, electrification and mechanical services in buildings with exposure to various systems, methods and fixtures</li> <li>2. Student shall be able to understand the relevance of air-conditioning system as building services</li> <li>3. Student shall be able to learn the theory and practices of fire safety systems in buildings.</li> <li>4. Student shall be able to learn electrical systems</li> <li>5. Student shall be able to develop awareness about the market trends and availabilities and to expertise in the practical implementation of services in interior spaces.</li> </ol>				
<b>Unit I</b>	<b>AIR CONDITIONING</b> Vapour compression cycle - compressors - evaporators - refrigerant control devices - electric motors - air handling units - cooling towers Window type and packaged air conditioners - chilled water plants -fan coiled systems - water piping - cooling load - air conditioning systems for different types of buildings - duct lay out etc.				
<b>Unit II</b>	<b>FIRE SAFETY</b> Mechanism of fire spread in building and prevention - fire safety standards - concepts in fire protection - firefighting installation and requirements - heat sensitive detectors - smoke detectors - automatic water sprinkler system - foam systems				
<b>Unit III</b>	<b>ELECTRICAL SYSTEMS</b> Single / Three phase supply - protective devices in electrical installation - ISI specifications - types of wires, wiring systems and their choice - planning electrical wiring for building interiors - main and distribution boards - typical electrical layout for interiors				
<b>Unit IV</b>	<b>ELECTRICAL STUDIO - RESIDENTIAL</b> Preparation of electrical layout of a single storey building & working drawing of various fittings and fixtures of electrical installations				
<b>Unit V</b>	<b>ELECTRICAL STUDIO - COMMERCIAL</b> Preparation of electrical layout of a commercial building & working drawings of various fittings and fixtures of electrical installations				
<b>Reference and Text books</b> <ol style="list-style-type: none"> <li>1. MHLulla, Air Conditioning</li> <li>2. VKJain, Fire Safety in Buildings</li> <li>3. Peter Templeton &amp; Saunders - Detailing for Architectural Acoustics - Architectural press, 1994</li> <li>4. R G Hopkinson and J D Kay, The Lighting of Buildings, Faber and Faber, London, 1996</li> </ol>					
<b>Web Resources</b> <a href="https://www.researchgate.net/publication/266265959_Heating_and_Air_Conditioning_For_Residential_Buildings">https://www.researchgate.net/publication/266265959_Heating_and_Air_Conditioning_For_Residential_Buildings</a> <a href="https://www.researchgate.net/publication/328075851_Fire_Safety_in_Buildings">https://www.researchgate.net/publication/328075851_Fire_Safety_in_Buildings</a> <a href="https://vf.rtu.lv/wp-content/uploads/sites/33/2015/11/07-DzEkas-EN.pdf">https://vf.rtu.lv/wp-content/uploads/sites/33/2015/11/07-DzEkas-EN.pdf</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Students will be able to coordinate the application of air-conditioning, fire safety and electrical systems as part of services in interior spaces.	<b>K3</b>
<b>CO2</b>	Students will be able to develop detailed technical layouts.	<b>K6</b>
<b>CO3</b>	Students will be able to know the types of air conditioning systems used	<b>K4</b>
<b>CO4</b>	Students will be able to know the fire safety standards and ISI Specifications of electrical systems	<b>K3</b>
<b>CO5</b>	Students will be able to be conversant with market trends and availabilities.	<b>K4</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1(L)	2(M)	1(L)	1(L)	-	3(S)	1(L)	1(L)	2(M)	-
CO2	1(L)	1(L)	2(M)	3(S)	1(L)	3(S)	2(M)	1(L)	3(S)	1(L)
CO3	1(L)	-	2(M)	2(M)	1(L)	3(S)	2(M)	2(M)	2(M)	1(L)
CO4	-	-	2(M)	-	-	3(S)	2(M)	2(M)	2(M)	-
CO5	1(L)	-	1(L)	-	-	3(S)	2(M)	-	-	2(M)
<b>W. AV</b>	<b>0.8</b>	<b>0.6</b>	<b>1.6</b>	<b>1.2</b>	<b>0.4</b>	<b>3</b>	<b>1.8</b>	<b>1.2</b>	<b>1.8</b>	<b>0.8</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1(L)	1(L)	-	1(L)	3(S)
CO2	1(L)	2(M)	1(L)	1(L)	3(S)
CO3	1(L)	2(M)	1(L)	1(L)	2(M)
CO4	-	2(M)	-	-	2(M)
CO5	-	1(L)	1(L)	-	1(L)
<b>W. AV</b>	<b>0.6</b>	<b>1.6</b>	<b>0.6</b>	<b>0.6</b>	<b>2.2</b>

CC	91944	INTERIOR CONSTRUCTION & DETAILING	P	Credits -4	Hours -4
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Students focus on making real working construction drawings with detailing and learn the real construction process on interiors</li> <li>2. The Students shall be able to focus on joinery and hardware details</li> <li>3. The Students shall be able to learn about various materials such as wood, metal, paint, fabric etc.</li> <li>4. The Students shall be able to understand the actual works and possible to connect it with working drawings through site visits</li> <li>5. The Student shall be able to have knowledge of current materials available in market.</li> </ol>				
<b>Unit I</b>	Interior construction materials like steel, aluminum, wood, stone, application areas and methods of use; Preconstruction & post construction precautions Market survey of above material –sizes, specifications & rates.				
<b>Unit II</b>	Joinery and hardware fittings details and site or showroom visit to understand the various hardware fittings.				
<b>Unit III</b>	Design and construction of mezzanine floors, intermediate floors and landings with the use of various construction materials for interior purpose, their design parameters, and detailing.				
<b>Unit IV</b>	Introduction to various workshops; wood, metal, Painting, fabric, CNC machines, its working and technology				
<b>Unit V</b>	Site visit of actual working project				
<b>Reference and Textbooks</b>					
<b>TEXT BOOKS:</b>					
<ol style="list-style-type: none"> <li>1. S C Rangwala - Engineering materials - Charotar Publishing, Anand</li> <li>2. Francis D K Ching - Building Construction Illustrated, VNR, 1975</li> <li>3. Fevicol Furniture series</li> </ol>					
<b>REFERENCE BOOKS:</b>					
<ol style="list-style-type: none"> <li>1. WBMckay - Building construction Voll - Longmans, UK 1981</li> <li>2. WBMckay - Building construction Vol</li> <li>3 - Longmans, UK 1981</li> </ol>					
<b>Web Resources</b>					
<a href="https://www.vssut.ac.in/lecture_notes/lecture1640072907.pdf">https://www.vssut.ac.in/lecture_notes/lecture1640072907.pdf</a> <a href="https://www.iqsdirectory.com/articles/mezzanine.html">https://www.iqsdirectory.com/articles/mezzanine.html</a> <a href="https://www.portcity.edu.bd/files/636444712468546444_buildingmaterials.pdf">https://www.portcity.edu.bd/files/636444712468546444_buildingmaterials.pdf</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Student will be able to learn to experiment with various building materials and techniques	<b>K1</b>
<b>CO2</b>	Students will be able to have a knowledge of all new techniques in building construction	<b>K5</b>
<b>CO3</b>	Student will be able to apply design process, as well as expertise across, construction detailing.	<b>K4</b>
<b>CO4</b>	Student will be able to learn the various stages of construction	<b>K4</b>
<b>CO5</b>	Student will be able to get hands on experience with various materials through workshops	<b>K6</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
CO1	3(S)	3(S)	2(M)	2(M)	2(M)	2(M)	-	1(L)	2(M)	-
CO2	3(S)	3(S)	-	-	1(L)	1(L)	1(L)	-	2(M)	1(L)
CO3	3(S)	3(S)	2(M)	3(S)	3(S)	2(M)	2(M)	1(L)	3(S)	2(M)
CO4	2(M)	2(M)	1(L)	-	2(M)	2(M)	-	-	2(M)	2(M)
CO5	3(S)	3(S)	2(M)	2(M)	3(S)	1(L)	2(M)	2(M)	2(M)	1(L)
<b>W. AV</b>	<b>2.8</b>	<b>2.8</b>	<b>1.5</b>	<b>1.4</b>	<b>2.2</b>	<b>1.6</b>	<b>1</b>	<b>0.8</b>	<b>2.2</b>	<b>1.2</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
CO1	2(M)	-	1(L)	1(L)	1(L)
CO2	-	-	1(L)	2(M)	1(L)
CO3	3(S)	2(M)	1(L)	2(M)	2(M)
CO4	2(M)	1(L)	1(L)	2(M)	2(M)
CO5	2(M)	1(L)	2(M)	-	-
<b>W. AV</b>	<b>1.8</b>	<b>0.8</b>	<b>1.2</b>	<b>1.5</b>	<b>1.2</b>

CC	91945	DESIGN STUDIO – IV	P	Credits - 4	Hours -4
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. The course concentrates on larger scale spaces with an emphasis on planning retail spaces.</li> <li>2. Develop a strong foundation in interior design concepts, theories, and principles for multi-user space.</li> <li>3. Acquire knowledge and skills in furniture design, ergonomics, and human factors specific to multi-user spaces.</li> <li>4. Gain expertise in material selection and construction methods for interiors</li> <li>5. Students shall be able to develop the concept for making a creative layout.</li> </ol>				
<b>Unit I</b>	<b>Introduction to Retail Space Design,</b> <ul style="list-style-type: none"> <li>• Planning for retail activity using anthropometrics - types of shop layouts modular units</li> <li>• Materials used in counters, shelves, worktops, their comparative study</li> <li>• Merchandizing ; Shopping malls</li> <li>• Exhibition stall design and fabrication</li> <li>• Lighting colours and materials for commercial interiors</li> <li>• Materials used in counters, shelves, worktops, their comparative study.</li> <li>• Lighting &amp; colour scheme – natural &amp; artificial light.</li> </ul>				
<b>Unit II</b>	Literature and Case studies of existing projects and its analysis. Market Study of interior Materials and finishes, lighting fixture, etc. A report needs to be submitted.				
<b>Unit III</b>	Designing of a retail outlet of an estimated area of 300-400sq.m. Schematic design showing plan, elevations, section and rendering of drawings.Preparation of conceptual 2D and 3D sketches.				
<b>Unit IV</b>	Designing of display units, design of boutiques, showrooms, small cafeteria, ATM Chambers including furniture details Concepts of modern-day Retail interiors with focus on different themes, designer furniture, materials & finishes colour, texture & pattern. Design of commercial Environments in Malls, lounges /outlets, Shopping Arcades Etc. with special focus on atriums, lobby, corridors and cut-outs.				
<b>Unit V</b>	Presentation sheets including completely rendered drawings with sectional elevations, surface developments, conceptual sketches, detailed model with mood board. Preparing detailed Furniture layout, Floor Finish Plan, Reflected Ceiling Plans and Interior Elevations and 3d representation of the complete interior spaces.				
<b>Reference and Textbooks</b>					
<ol style="list-style-type: none"> <li>1. Neuferts Architects Data, Ernst Neufert</li> <li>2. Time Saver Standards for Interior Design, Joseph Chiara</li> <li>3. De Chiara and Callender – Time Saver Standards for interior design, 1982</li> <li>4. Architecture: Form, Space and Order, Francis D.K. Ching</li> <li>5. Architectural Graphic Standards, Ramsey Sleeper</li> <li>6. Drawing for Interior Design, Drew Plunkett /</li> </ol>					
<b>Web Resources</b>					
<a href="https://assets.gov.ie/111195/c168eeda-d5db-4a79-a496-6a8bd9688d7b.pdf">https://assets.gov.ie/111195/c168eeda-d5db-4a79-a496-6a8bd9688d7b.pdf</a> <a href="https://www.diva-portal.org/smash/get/diva2:1447683/FULLTEXT01.pdf">https://www.diva-portal.org/smash/get/diva2:1447683/FULLTEXT01.pdf</a> <a href="https://www.smartsheet.com/store-layout">https://www.smartsheet.com/store-layout</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Students will be able to define merits & demerits related to retail spaces.	<b>K2</b>
<b>CO2</b>	Students will be able to identify the concepts of design based on retail interiors.	<b>K5</b>
<b>CO3</b>	Students will be able to develop 2D and 3D forms through models	<b>K6</b>
<b>CO4</b>	Students will be able to integrate generate the technical drawings for large scale retail and associated spaces	<b>K6</b>
<b>CO5</b>	Students will be able to identify the various materials, finishes, fittings etc. related to retail design.	<b>K5</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1(L)	1(L)	-	-	2(M)	2(M)	2(M)	2(M)	2(M)	1(L)
CO2	1(L)	-	1(L)	1(L)	2(M)	-	3(S)	3(S)	1(L)	1(L)
CO3	2(M)	-	-	2(M)	1(L)	1(L)	2(M)	2(M)	1(L)	1(L)
CO4	2(M)	2(M)	1(L)	3(S)	3(S)	3(S)	1(L)	2(M)	3(S)	2(M)
CO5	1(L)	2(M)	-	1(L)	2(M)	-	2(M)	2(M)	2(M)	2(M)
<b>W. AV</b>	<b>1.4</b>	<b>1</b>	<b>0.4</b>	<b>1.4</b>	<b>2</b>	<b>1.2</b>	<b>2</b>	<b>2.2</b>	<b>1.8</b>	<b>1.4</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3(S)	1(L)	2(M)	-	2(M)
CO2	3(S)	1(L)	3(S)	-	-
CO3	2(M)	3(S)	-	-	1(L)
CO4	1(L)	3(S)	1(L)	1(L)	3(S)
CO5	3(S)	1(L)	3(S)	1(L)	2(M)
<b>W. AV</b>	<b>2.4</b>	<b>1.8</b>	<b>1.8</b>	<b>0.4</b>	<b>1.6</b>

GEC	91946	HISTORY OF INDIAN ART & VERNACULAR STYLES	P	Credits - 3	Hours - 3
<b>Objectives</b>	1. Learn about various types of materials and styles used in construction influencing the planning aspects of interiors 2. To familiarize the students on the various components of interior spaces and the possibilities of experimenting with various materials for the same 3. To familiarize students about the Kutcha and Pucca styles of buildings without developed through experience based on local material. 4.To know about the traditional interior styling in various parts of India 5. To familiarize the students about the Indian and Indo Islamic art.				
<b>Unit I</b>	<b>INTRODUCTION TO VERNACULAR STYLES</b> 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.				
<b>Unit II</b>	<b>SOUTHERN REGION</b> Materials and construction details influencing the interiors of: 1. Kerala – Nair houses (Tarawads), Kerala Muslim houses (Mappilah houses), Temples, Palaces and theaters – Thattchushastra. 2. Tamil Nadu – Toda Huts, Chettinad Houses (Chettiars) & Palaces 3. Karnataka – Gutthu houses (land owning community), Kodava ancestral home (Aynmane) 4. Andhra Pradesh –Kaccha buildings Religious practices, beliefs, culture & climatic factors influencing the planning of the above.				
<b>Unit III</b>	<b>WESTERN REGION</b> Materials and construction details influencing the interiors of: 1. Jat houses for farming caste, Bhungas(Circular Huts) and Havelis (Pukka houses) of Rajasthan 2. Pol houses of Ahmedabad - Primitive forms, Symbolism, Color, Folk art etc in the architecture of the deserts of Kutch & Gujarat state.				
<b>Unit IV</b>	<b>NORTHERN &amp; EASTERN REGION</b> Materials and construction details influencing the interiors of: 1. Planning aspects, Materials used, Constructional details, Climatic factors influencing the planning of 2. Kashmir – Typical Kutcha houses, mosque, Dhoongas(Boathouses), Ladakhi houses, bridges 3. Himachal Pradesh – Kinnaur houses 4. Uttar Pradesh – Domestic housing of Uttar Pradesh 5. 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.				
<b>Unit V</b>	Vedic, Buddhist and Rock cut Art and design in Indian Temples: Elements and art in Nagara, Dravidian, Solanki & Jain temples. Indo-Islamic Art: Indo Islamic Architecture – Islamic tomb -Delhi or Imperial style- Provincial style – Mughal style.				
<b>Reference and Text books</b> <ol style="list-style-type: none"> <li>1. RowlBejamin. Art and Architecture of India.</li> <li>2. Gateway to Indian Architecture, GuruswamyVaidyanathan, Edifice Publication, 2003</li> <li>3. Architecture of the Indian desert, Kulbushan Jain &amp; Meenakshi Jain, Aadi Centre, Ahmedabad</li> <li>4. Havali – Wooden houses &amp; mansions of Gujarat, V.S.Pramar, Mapin Publishing Pvt. Ltd., Ahmedabad</li> <li>5. VISTARA – The architecture of India, Carmen Kagal. Pub : The Festival of India,</li> </ol>					

1986.

**Web Resources**

[https://www.researchgate.net/publication/341100086\\_An\\_Overview\\_Of\\_Vernacular\\_Architecture\\_In\\_India](https://www.researchgate.net/publication/341100086_An_Overview_Of_Vernacular_Architecture_In_India)

[https://www.researchgate.net/publication/369173563\\_Vernacular\\_Architecture\\_in\\_India\\_A\\_Review\\_Article](https://www.researchgate.net/publication/369173563_Vernacular_Architecture_in_India_A_Review_Article)

<https://www.witpress.com/Secure/elibrary/papers/STR21/STR21026FU1.pdf>

<https://www.scribd.com/document/540158978/VERNACULAR-ARCHITECTURE-OF-JAMMU-AND-Kashmir>

Course Outcomes		Knowledge Level
<b>CO1</b>	Learn about the vernacular materials used	<b>K2</b>
<b>CO2</b>	Learn about the construction techniques used in earlier times	<b>K2</b>
<b>CO3</b>	Understand the approaches and concepts of vernacular styles	<b>K2</b>
<b>CO4</b>	Learn about the different styles of houses existed in India	<b>K2</b>
<b>CO5</b>	Get an awareness about the art and designs in temples and Islamic buildings	<b>K2</b>

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2(M)	3(S)	-	1(L)	2(M)	-	1(L)	2(M)	1(L)	1(L)
CO2	2(M)	3(S)	2(M)	2(M)	1(L)	-	2(M)	1(L)	3(S)	2(M)
CO3	3(S)	2(M)	2(M)	1(L)	1(L)	2(M)	2(M)	1(L)	1(L)	2(M)
CO4	1(L)	1(L)	1(L)	-	3(S)	1(L)	1(L)	-	1(L)	-
CO5	1(L)	-	1(L)	-	1(L)	-	-	-	1(L)	
<b>W. AV</b>	<b>1.8</b>	<b>1.8</b>	<b>1.2</b>	<b>0.8</b>	<b>1.6</b>	<b>0.6</b>	<b>1.2</b>	<b>0.8</b>	<b>1.4</b>	<b>1</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1(L)	1(L)	2(M)	-	-
CO2	2(M)	1(L)	2(M)	1(L)	1(L)
CO3	2(M)	1(L)	1(L)	1(L)	-
CO4	1(L)	-	1(L)	1(L)	1(L)
CO5	1(L)	-	-	-	-
<b>W. AV</b>	<b>1.4</b>	<b>0.6</b>	<b>1.2</b>	<b>0.6</b>	<b>0.4</b>

GEC	91947	LIGHTING AND COLORS IN INTERIORS	T	Credits - 3	Hours - 3
<b>Objectives</b>	1.To help the students understand day lighting concept 2.To study about the technology of artificial lighting 3.To equip the student to understand and successfully apply lighting techniques with color effects 4.To study about color theory 5. To understand the various concepts of lighting in both exteriors and interiors through case studies				
<b>Unit I</b>	<b>INTRODUCTION TO DAY LIGHTING</b> Nature of light - wavelength, photometric quantities - intensity, flux, illumination and luminance, visual efficiency, sources of light, day light factor concept, design sky concept, day lighting requirements.				
<b>Unit II</b>	<b>ARTIFICIAL LIGHTING</b> Electric lamps - incandescent, fluorescent, sodium vapour, mercury, halogen and neon Different types of lights in interior and exterior - task lighting, special purpose lighting Calculation of artificial lighting, guidelines for lighting design, glare in artificial lighting.				
<b>Unit III</b>	<b>EFFECT OF COLOUR IN LIGHTING</b> Color schemes -monochromatic, analogous, complementary colour schemes, triadic and tetradic schemes, effects of colour in different areas, colour temperature, psycological effects of colour in interiors, factors affecting colour, prang theory - colour wheel, Munsell system and Oswald system.				
<b>Unit IV</b>	<b>LUMINARES &amp; FIXTURES</b> Definition, different luminaries for lighting, lighting control system - benefits & application, Impact of lighting, fixture types - free standing or portable, fixed, light fixture control Lighting accessories - switches, sockets, fused connection units, lamp holders, ceiling roses etc.				
<b>Unit V</b>	<b>CASE STUDY</b> Study of projects based on different lighting concepts used in interiors and exteriors.				
<b>Reference and Text books</b> <ol style="list-style-type: none"> <li>1. The Art of Living – Randall whitehead</li> <li>2. Lighting Design, Source Book – Randall Whitehead</li> <li>3. Light Right – MKHalpeth, TSenthil Kumar, GHarikumar</li> <li>4. Concepts of Lighting, Lighting Design in Architecture – Torquil Barker</li> </ol>					
<b>Web Resources</b>  <a href="https://www.aivc.org/sites/default/files/airbase_11655.pdf">https://www.aivc.org/sites/default/files/airbase_11655.pdf</a> <a href="https://www.researchgate.net/publication/350367316_The_Role_of_Artificial_Lighting_in_Architectural_Design_A">https://www.researchgate.net/publication/350367316_The_Role_of_Artificial_Lighting_in_Architectural_Design_A</a> <a href="https://www.researchgate.net/publication/333928432_Effects_of_color_in_interior_design">https://www.researchgate.net/publication/333928432_Effects_of_color_in_interior_design</a> <a href="https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/2012_residential-lighting-study.pdf">https://www1.eere.energy.gov/buildings/publications/pdfs/ssl/2012_residential-lighting-study.pdf</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Acquire knowledge about various factors of day lighting	<b>K1</b>
<b>CO2</b>	Identify various colour schemes	<b>K5</b>
<b>CO3</b>	Acquire knowledge about various types of luminaries	<b>K4</b>
<b>CO4</b>	Know about various fittings and fixtures	<b>K4</b>
<b>CO5</b>	Get a thorough knowledge for lighting systems in buildings	<b>K6</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
CO1	3(S)	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	3(S)	2(M)	3(S)
CO2	2(M)	2(M)	3(S)	2(M)	2(M)	2(M)	2(M)	3(S)	1(L)	3(S)
CO3	2(M)	3(S)	1(L)	3(S)	3(S)	3(S)	1(L)	1(L)	3(S)	1(L)
CO4	1(L)	1(L)	2(M)	1(M)	1(L)	1(L)	1(L)	2(M)	1(M)	2(M)
CO5	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	3(S)	2(M)	2(M)	2(M)
<b>W. AV</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1.8</b>	<b>2.2</b>	<b>1.8</b>	<b>2.2</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
CO1	2(M)	1(L)	-	2(M)	1(L)
CO2	3(S)	2(M)	2(M)	1(L)	1(L)
CO3	2(M)	-	2(M)	1(L)	-
CO4	1(L)	3(S)	3(S)	2(M)	3(S)
CO5	1(L)	1(L)	-	2(M)	-
<b>W. AV</b>	<b>1.8</b>	<b>1.4</b>	<b>1.5</b>	<b>1.6</b>	<b>1</b>

**SEMESTER V**

	91951	<b>PROFESSIONAL INTERNSHIP</b>	I	<b>Credits -17</b>	<b>Hours - **</b>
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To facilitate an understanding of the evolution of an interior project from design to execution</li> <li>2. To enable an orientation that would include the process of development of conceptual ideas, presentation skills, involvement in office discussions, client meetings, development of the concepts into working drawings, tendering procedure, site supervision during execution and coordination with the agencies involved in the construction process</li> <li>3. To introduce the challenges of interior design practice</li> <li>4. To enable overall understanding of different stages in real life architectural projects in practice</li> <li>5. To create involvement in design stages as much as possible within the scope of a specific interior design practice</li> </ol>				
	<p>This internship is intended to provide a pre-professional experience whereby students get the required experience to get hired into or start-up a design firm. By completing this internship students will develop the knowledge and skills employers seek in this competitive job market. Although courses taken at the study centre can help prepare for a future career in interior design field, it is the experiential component that actually provides the skills necessary to enter the field and be successful. The progress of practical training will be assessed periodically internally through submission of log books along with work done by the students in terms of drawings, reports, etc. The students will be evaluated based on the criteria related to their contribution in the office some of which are given below.</p> <ul style="list-style-type: none"> <li>• Understanding and involvement in the process of architectural practice as mentioned in the objectives within the scope of the specific office in which training is undertaken.</li> <li>• Adherence to time schedule, overall responsibility and professional conduct.</li> <li>• Ability to carry out the instructions on preparation of schematic drawings, presentation drawings, working drawings and skill in this regard.</li> <li>• Ability to work as part of a team in an office and contribute to related activities.</li> <li>• Ability to participate in client meetings and discussions.</li> <li>• Involvement in supervision at project site.</li> <li>• Involvement/ initiative/ participation in any other aspects during the course of the training.</li> </ul> <p>At the end of the Practical Training, a portfolio of work done during the period of internship along with certification from the office should be submitted for evaluation through a viva voce examination</p>				

**\*\*Internship in an Interior Design firm, subject to their office hours**

**SEMESTER VI**

CC	91961A/ 91961B	Project/ Dissertation/ Thesis	PR/ D	Credits -15	Hours - 20
<b>Objectives</b>	All the 3 years of the BSc Interior Design course culminate in the thesis project to motivate students to be involved in individual research and methodology. Thesis is done to train the students in handling projects independently				
	<ul style="list-style-type: none"> <li>• Students of the BSc Interior Design Degree course is required to prepare a Design Thesis during the last 4 months of the BSc ID Degree program.</li> <li>• The Head of the department of the institution will allot a guide for each student considering the nature of the work and specialization of the faculty member. As far as possible students' preferences may also be considered before allotting the guide.</li> <li>• Students shall obtain approval for the project of Thesis and Viva voce from the Institution.</li> <li>• The duration of the thesis will vary depending on the date of commencement of the Sixth semester semester</li> <li>• The project selected may be either a live project or a hypothetical one so that the student gets training in tackling projects similar to what he/she is likely to face in his/her professional career.</li> <li>• The project and its development shall be worked out by the student himself/herself under the guidance of guide.</li> <li>• The work should include an intensive study of the topography, climate, and problems concerned with the design of spaces and structures and this shall be reflected in the preparation of drawings and written reports.</li> <li>• Students are required to maintain a work diary of the thesis work.</li> <li>• All students are required to schedule their thesis work, get it approved by the guide, at the beginning of the thesis, and submit a copy of the same to the thesis coordinator nominated by the Head of the Department.</li> </ul>				

GEC	91962	INTERIOR PROJECT MANAGEMENT	P	Credits - 5	Hours - 5
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. Understand the fundamentals of initiating an interior design project, including client needs assessment and project scope definition.</li> <li>2. provide students with a robust understanding of project planning, budgeting, scheduling, and execution within the context of interior design</li> <li>3. Understand the importance of accurate budgeting in meeting client expectations and maintaining project profitability.</li> <li>4. Gain insight into ethical considerations and professional standards in the interior design industry.</li> <li>5. Explore project management software and tools to facilitate efficient project execution</li> </ol>				
<b>Unit I</b>	<b>Planning and elements</b> Project planning and project scheduling and project controlling, role of decision in project management, method of planning and programming, human aspects of project management, work breakdown structure, life cycle of a project, and disadvantages of traditional management system Event, activity, dummy, network rules, graphical guidelines for network, numbering of events				
<b>Unit II</b>	<b>Analysis and optimization</b> Critical Path Method And Pert Analysis; Project cost, indirect project cost, direct project cost, slope of the direct cost curve, total project cost and optimum duration, contracting the network for cost optimization, steps in cost-time optimization				
<b>Unit III</b>	<b>Project updating and allocation</b> When to update? Data required for updating, steps in the process of updating Resource usage profile: Histogram, Resource smoothing and Resource leveling, computer applications in project management				
<b>Unit IV</b>	<b>Estimation and costing</b> Data required, factors to be considered, methodology of preparation, abstract of estimate, contingencies, labour charges, bill of quantities, different methods of estimate for interior design works, methods of measurement of works; Costing of Fixtures & Fittings; Introduction to specification; GST method calculation and estimation				
<b>Unit V</b>	<b>Ipm studio</b> Preparation of detailed schedule for an interior project based on the working drawings and site condition				
<b>Text books</b> <ol style="list-style-type: none"> <li>1. Dr B C Punmia et al Project planning and control with PERT and CPM, Laxmi Publications</li> <li>2. National Building code of India 2005 - Bureau of Indian Standards</li> <li>3. M Chakraborti, Estimation, Costing, Specification and Valuation in Civil Engineering</li> <li>4. Dutta, Estimating and Costing, S Dutta and Co, Lucknow 1983</li> </ol>					
<b>Reference books</b> <ol style="list-style-type: none"> <li>1. Jerome D Wiest and Ferdinand K Levy, A Management Guide to PERT, CPM, Prentice Hall of India Publication Ltd, New Delhi, 1982</li> <li>2. R A Burgess and G White, Building Production and Project Management, The Construction Press, London, 1975</li> <li>3. IS 9668: 1990 - Fire Fighting code of Practice - Bureau of Indian Standards</li> <li>4. S C Rangwala, Elements of Estimating and Costing, Charoter publishing House, Anand, India, 1984</li> <li>5. The Interior Designers Guide: To Pricing, Estimating Budgeting By Theo Susan</li> </ol>					
<b>Web Resources</b> <a href="http://www.ijdesign.org/index.php/IJDesign/article/view/129/78">http://www.ijdesign.org/index.php/IJDesign/article/view/129/78</a> <a href="https://www.sciencedirect.com/journal/materials-and-design">https://www.sciencedirect.com/journal/materials-and-design</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Create comprehensive project plans for interior design projects, incorporating elements such as scope definition, timelines, milestones, and resource allocation.	<b>K6</b>
<b>CO2</b>	Develop accurate budgets for interior projects and implement strategies for monitoring and controlling project costs.	<b>K5</b>
<b>CO3</b>	Executing interior design projects, ensuring alignment with project plans, design specifications, and quality standards.	<b>K3</b>
<b>CO4</b>	Budget development for interior design projects, considering materials, labor, and other relevant costs.	<b>K6</b>
<b>CO5</b>	Apply ethical principles in the context of interior project management, demonstrating professionalism, integrity, and accountability in.	<b>K3</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3(S)	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	2(M)	3(S)	3(S)
CO2	2(M)	2(M)	3(S)	1(L)	2(M)	1(L)	2(M)	1(L)	2(M)	3(S)
CO3	3(S)	2(M)	3(S)	2(M)	2(M)	1(L)	1(L)	2(M)	2(M)	3(S)
CO4	2(M)	2(M)	3(S)	2(M)	2(M)	1(L)	2(M)	2(M)	2(M)	3(S)
CO5	3(S)	2(M)	2(M)	2(M)	2(M)	1(L)	2(M)	2(M)	2(M)	2(M)
<b>W. AV</b>	<b>2.6</b>	<b>2</b>	<b>2.6</b>	<b>1.8</b>	<b>2</b>	<b>1.2</b>	<b>1.8</b>	<b>1.8</b>	<b>2.2</b>	<b>2.8</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2(M)	2(M)	2(M)	3(S)	2(M)
CO2	1(L)	3(S)	2(M)	2(M)	2(M)
CO3	2(M)	3(S)	1(L)	3(S)	2(M)
CO4	2(M)	2(M)	2(M)	2(M)	2(M)
CO5	2(M)	2(M)	2(M)	2(M)	2(M)
<b>W. AV</b>	<b>1.8</b>	<b>2.4</b>	<b>1.8</b>	<b>2.4</b>	<b>2</b>

GEC	91963A	<b>ELECTIVE –(A) -INTERIOR SCAPE AND GARDENING STUDIO</b>	<b>P</b>	<b>Credits - 5</b>	<b>Hours - 5</b>
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To develop an understanding about the design of interior landscape with special emphasis on the choice and care of plant materials used in the interior spaces</li> <li>2. To study about the various landscaping elements and their application in interior spaces</li> <li>3. Understand the principles of sustainable gardening and how they can be applied to indoor spaces.</li> <li>4. Develop skills in proper planting techniques and plant maintenance.</li> <li>5. To study about the principles of design as applied to interior gardens.</li> </ol>				
<b>Unit I</b>	<b>Introduction to Landscape.</b> What is Landscape? Importance of Landscape. Landscape Design. Define the concept of landscape in the context of design. Understand the significance and role of landscape in various environments. Explore the basics of landscape design principles.				
<b>Unit II</b>	<b>Types of Landscaping-</b> Artificial Landscaping. Natural Landscaping. Hard Landscaping. Soft Landscaping Differentiate between artificial and natural landscaping. Identify elements of hard and soft landscaping. Understand the characteristics and applications of each type of landscaping.				
<b>Unit III</b>	<b>Elements and Principles of Landscape Design.</b> Order and Unity. Colors in Landscape Design. Line, Form, and Texture. Scale and Balance. Simplicity and Variety. Focalization, Repetition, Rhythm, and Sequence. Interconnection and Transition. Explore the fundamental elements and principles of landscape design. Understand how these elements contribute to creating cohesive and visually appealing landscapes.				
<b>Unit IV</b>	<b>Interior Landscaping and Landscape Design Process.</b> Factors for Interior Landscaping. Evolution of Interior Landscaping. Role of Landscape Design in the Built Environment. Landscape Design Process. Important Factors in the Design Process Discuss considerations for interior landscaping. Trace the historical evolution of interior landscaping. Examine the role of landscape design in the overall built environment. Understand the steps involved in the landscape design process and key factors to be considered.				
<b>Unit V</b>	<b>Landscape Themes, Sustainable Design, and Plant Study.</b> Themes and Styles in Landscape Design. Sustainable Landscape Design. Introduction to the Study of Plants in Relation to Landscape Design. Types of Plants for Landscaping: Ornamental, Screens, Shade, Borders, Ground Cover. Design with Plants and Basic Principles				
<b>Reference and Text books</b>					
<ul style="list-style-type: none"> <li>• <i>"Principles of Landscape Architecture"</i> by Charles A. Birnbaum and Carl Steinitz</li> <li>• <i>Landscape Architecture: An Introduction"</i> by Robert Holden and Jamie Liversedge</li> <li>• <i>Sustainable Landscape Construction: A Guide to Green Building Outdoors"</i> by J. William Thompson and Kim Sorvig</li> </ul>					
<b>Web Resources</b>					
American Society of Landscape Architects (ASLA)- <a href="https://www.tclf.org/">https://www.tclf.org/</a>					
The Cultural Landscape Foundation <a href="https://www.asla.org/">https://www.asla.org/</a>					
Landscape Institute <a href="https://www.landscapeinstitute.org/">https://www.landscapeinstitute.org/</a>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Understanding of design principles and elements as they apply to interior landscaping and gardening.	<b>K2</b>
<b>CO2</b>	Create effective layouts that enhance both aesthetic appeal and functionality.	<b>K6</b>
<b>CO3</b>	Understand the importance of different soil types and substrates for indoor plants.	<b>K2</b>
<b>CO4</b>	Create and manage budgets for interior landscaping projects.	<b>K6</b>
<b>CO5</b>	Develop skills in visually communicating design concepts through presentations and visual aids.	<b>K3</b>

### Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3(S)	1(L)	-	-	1(L)	1(L)	2(M)	2(M)	1(L)	1(L)
CO2	3(S)	1(L)	1(L)	2(M)	1(L)	1(L)	1(L)	3(S)	1(L)	1(L)
CO3	2(M)	3(S)	-	-	2(M)	-	-	-	2(M)	-
CO4	1(L)	2(M)	1(L)	1(L)	2(M)	-	-	-	1(L)	3(S)
CO5	1(L)	-	3(S)	3(S)	-	1(L)	-	1(L)	-	1(L)
<b>W. AV</b>	<b>2</b>	<b>1.4</b>	<b>1</b>	<b>1.2</b>	<b>1.2</b>	<b>0.6</b>	<b>0.6</b>	<b>1.2</b>	<b>1</b>	<b>1.2</b>

### Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3(S)	1(L)	2(M)	3(S)	-
CO2	3(S)	2(M)	2(M)	1(L)	2(M)
CO3	-	-	1(L)	2(M)	1(L)
CO4	-	2(M)	1(L)	3(S)	-
CO5	1(L)	2(M)	-	-	1(L)
<b>W. AV</b>	<b>1.4</b>	<b>1.4</b>	<b>1.2</b>	<b>1.8</b>	<b>0.8</b>

GEC	91963B	<b>ELECTIVE 1 – (B) - ART DESIGN STUDIO</b>	P	Credits - 5	Hours - 5
<b>Objectives</b>	1. Understanding Set Design Fundamentals 2. Developing Attention to Detail and Focus in Set Design 3. Application of Set Design Principles in Residential Contexts 4. Exploring Commercial and Recreational Set Design Challenges 5. Mastering Production Planning and Execution in Set Design				
<b>Unit I</b>	<b>Introduction to Set Design Principles</b> Overview of Set Design, Functional Usage in Set Design. Impact of Mood in Different Contexts Time of the Day/Night Considerations. Lighting Focus and Techniques. Location Specifications: Indoor, Outdoor, Landscaped, Barren, Waterfront				
<b>Unit II</b>	<b>Details and Focus in Set Design</b> In-depth Understanding of Set Details. Focusing Techniques in Set Design. Incorporating Environmental Factors. Sustainability in Set Design. Innovative Materials and Methods				
<b>Unit III</b>	<b>Residential Set Design</b> Key Elements of Residential Set Design. Designing for Different Residential Settings. Interactive Sessions on Residential Projects. Group Critiques and Feedback				
<b>Unit IV</b>	<b>Commercial and Recreational Set Design</b> Commercial Set Design Considerations. Designing for Recreational Spaces. Challenges and Solutions in Commercial Projects. Group Projects for Commercial and Recreational Sets				
<b>Unit V</b>	<b>Production Planning and Execution</b> Parameters of Set Design in Production. Pre-Production Planning. Execution of Set Designs. Challenges and Problem-solving Strategies				
<i>Web Resources :</i> <ul style="list-style-type: none"> <li>• <a href="https://www.scribd.com/document/485644190/Set-Design">https://www.scribd.com/document/485644190/Set-Design</a></li> <li>• <a href="https://www.perlego.com/book/1626853/scenic-design-and-lighting-techniques-a-basic-guide-for-theatre-pdf">https://www.perlego.com/book/1626853/scenic-design-and-lighting-techniques-a-basic-guide-for-theatre-pdf</a></li> <li>• <a href="https://blogs.glowscotland.org.uk/nl/public/airdrieacadddrama/uploads/sites/29123/2020/03/23223032/Set-Design-Booklet.pdf">https://blogs.glowscotland.org.uk/nl/public/airdrieacadddrama/uploads/sites/29123/2020/03/23223032/Set-Design-Booklet.pdf</a></li> <li>• <a href="https://www.academia.edu/5045638/447_The_Filmmakers_Guide_To_Production_Design">https://www.academia.edu/5045638/447_The_Filmmakers_Guide_To_Production_Design</a></li> </ul>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Understand set design principles for diverse locations.	<b>K2</b>
<b>CO2</b>	Apply focusing techniques, sustainability, and innovation in set design.	<b>K3</b>
<b>CO3</b>	Develop residential set designs with key elements.	<b>K3</b>
<b>CO4</b>	Execute commercial and recreational set designs, proposing solutions.	<b>K4</b>
<b>CO5</b>	Apply design thinking in production planning, addressing challenges.	<b>K5</b>

**Mapping Course Outcome VS Programme Outcomes**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2(M)	1(L)	2(M)	1(L)	2(M)	-	1(L)	2(M)	1(L)	2(M)
CO2	1(L)	3(S)	2(M)	1(L)	1(L)	-	2(M)	2(M)	1(L)	2(M)
CO3	2(M)	1(L)	1(L)	2(M)	1(L)	1(L)	2(M)	2(M)	1(L)	1(L)
CO4	1(L)	2(M)	2(M)	1(L)	1(L)	1(L)	2(M)	1(L)	1(L)	1(L)
CO5	2(M)	1(L)	2(M)	-	1(L)	-	2(M)	2(M)	1(L)	2(M)
<b>W. AV</b>	<b>1.6</b>	<b>1.6</b>	<b>1.8</b>	<b>1</b>	<b>1.2</b>	<b>0.4</b>	<b>1.8</b>	<b>1.8</b>	<b>1</b>	<b>1.6</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2(M)	-	1(L)	2(M)	1(L)
CO2	2(M)	1(L)	2(M)	1(L)	1(L)
CO3	3(S)	2(M)	1(L)	1(L)	-
CO4	2(M)	2(M)	2(M)	2(M)	1(L)
CO5	1(L)	1(L)	1(L)	3(S)	1(L)
<b>W. AV</b>	<b>2.0</b>	<b>1.2</b>	<b>1.4</b>	<b>1.8</b>	<b>0.8</b>

GEC	91963C	ELECTIVE – (C) -CRAFT AND DESIGN STUDIO	P	Credits -5	Hours - 5
<b>Objectives</b>	1. Mastery of Craft and Design Fundamentals 2. Proficiency in Detailed Schematics and Design Elements 3. Innovation in Art and Craft Integration 4. Application of Contemporary Design Concepts 5. Inclusive Design for Universal Accessibility				
<b>Unit I</b>	Fundamentals of Craft and Design in Performing Arts Introduction to Hard and Soft Arts and Crafts. Case Studies in Performing Arts. Literature Studies in Craft and Design. Research Methodologies in Specialization				
<b>Unit II</b>	Detailed Schematics for Auditoriums and Cinemas Schematic Design for Walls, Floors, and Roofs. Designing Furnishings and Furniture for Auditoriums. Lighting Design for Auditoriums and Multiplex Screens. Stage and Backdrop Design Principles				
<b>Unit III</b>	Art and Craft Components for Hospitality Spaces Design Themes for Rooms, Restaurants, and Bars. Craft Integration in Health Clubs and Shopping Arcades. Guest Areas with Hotel Themes. Special Ideas for Suites and Banquet Halls				
<b>Unit IV</b>	Contemporary Interior Schemes with New Concepts Introduction to Contemporary Interior Schemes. Innovative Concepts in Lighting Design. Material Integration in Modern Designs. Digital Painting Techniques				
<b>Unit V</b>	Universal Design and Accessibility Designing for Physically Handicapped and Elderly Users. Accessibility in Craft and Design Projects. Case Studies in Universal Design. Implementing Inclusive Design Practices				
<b>Web Resources :</b>					
<ul style="list-style-type: none"> <li>• <a href="https://www.unic-cinemas.org/fileadmin/user_upload/Publications/UNIC_handbook_online_02_20_1_.pdf">https://www.unic-cinemas.org/fileadmin/user_upload/Publications/UNIC_handbook_online_02_20_1_.pdf</a></li> <li>• <a href="https://www.artsandhealth.ie/assets/uploads/2022/04/The-arts-health-handbook-a-practical-guide.pdf">https://www.artsandhealth.ie/assets/uploads/2022/04/The-arts-health-handbook-a-practical-guide.pdf</a></li> <li>• <a href="https://www.scribd.com/document/450568426/Studio-Craft-Technique-for-Architects-nodrm">https://www.scribd.com/document/450568426/Studio-Craft-Technique-for-Architects-nodrm</a></li> <li>• <a href="https://www.researchgate.net/publication/315472234_Combining_Practices_in_Craft_and_Design">https://www.researchgate.net/publication/315472234_Combining_Practices_in_Craft_and_Design</a></li> <li>• <a href="https://www.arts.gov/sites/default/files/Design-for-Accessibility.pdf">https://www.arts.gov/sites/default/files/Design-for-Accessibility.pdf</a></li> </ul>					

Course Outcomes		Knowledge Level
<b>CO1</b>	Understand performing arts craft fundamentals, including hard and soft arts, case studies, and research methodologies.	<b>K2</b>
<b>CO2</b>	Create detailed auditorium and cinema schematics, covering design elements and principles.	<b>K6</b>
<b>CO3</b>	Apply art and craft in hospitality spaces, designing themes and special concepts.	<b>K3</b>
<b>CO4</b>	Implement contemporary interior schemes with new concepts, exploring lighting and material integration.	<b>K3</b>
<b>CO5</b>	Design for universal accessibility, addressing diverse user needs and implementing inclusive practices.	<b>K6</b>

**Mapping Course Outcome VS Programme Outcomes**

<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>
<b>CO1</b>	3(S)	1(L)	2(M)	2(M)	1(L)	1(L)	2(M)	1(L)	1(L)	2(M)
<b>CO2</b>	2(M)	1(L)	2(M)	1(L)	2(M)	2(M)	2(M)	1(L)	1(L)	1(L)
<b>CO3</b>	3(S)	2(M)	3(S)	2(M)	2(M)	1(L)	2(M)	3(S)	2(M)	1(L)
<b>CO4</b>	3(S)	3(S)	3(S)	2(M)	2(M)	2(M)	3(S)	3(S)	2(M)	1(L)
<b>CO5</b>	3(S)	2(M)	2(M)	1(L)	1(L)	2(M)	1(L)	2(M)	3(S)	1(L)
<b>W. AV</b>	<b>2.8</b>	<b>1.8</b>	<b>2.4</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>2</b>	<b>2</b>	<b>1.8</b>	<b>1.2</b>

**Mapping Course Outcome VS Programme Specific Outcomes**

<b>CO</b>	<b>PSO1</b>	<b>PSO2</b>	<b>PSO3</b>	<b>PSO4</b>	<b>PSO5</b>
<b>CO1</b>	2(M)	2(M)	2(M)	2(M)	1(L)
<b>CO2</b>	2(M)	2(M)	2(M)	1(L)	2(M)
<b>CO3</b>	1(L)	2(M)	2(M)	3(S)	2(M)
<b>CO4</b>	2(M)	2(M)	1(L)	3(S)	2(M)
<b>CO5</b>	1(L)	1(L)	3(S)	1(L)	1(L)
<b>W. AV</b>	<b>1.6</b>	<b>1.8</b>	<b>2</b>	<b>2</b>	<b>1.6</b>

## UG Programme

### **Passing minimum**

- A candidate shall be declared to have passed in each course if he/she secures not less than 40% marks in the End Semester Examinations and 40% marks in the Internal Assessment and not less than 40% in the aggregate, taking Continuous assessment and End Semester Examinations marks together.
- The passing minimum for CIA shall be 40% out of 25 marks (i.e.10 marks) in Theory/ Practical Examinations.
- The passing minimum for University Examinations shall be 40% out of 75 marks (i.e. 30 marks) for Theory /Practical papers.
- The candidates not obtain 40% in the Internal Assessment are permitted to improve their Internal Assessment marks in the subsequent semesters (2 chances will be given) by writing the CIA tests or by submitting assignments.
- Candidates, who have secured the pass marks in the End-Semester Examination and in the CIA but failed to secure the aggregate minimum pass mark (E.S.E + C I.A), are permitted to improve their Internal Assessment mark in the following semester and/or in University examinations.
- A candidate shall be declared to have passed in the Dissertation/Project report/Internship report if he/she gets not less than 40% marks in the Internal Assessment and End Semester Examinations and not less than 40% in the aggregate, taking Continuous assessment and End Semester Examinations marks together.
- A candidate who gets less than 40% in the Dissertation / Internship/ Project Report must resubmit the thesis. Such candidates need to take again the Viva-Voce on the resubmitted report/thesis.

### **18.2 Grading of the Courses**

The following table gives the marks, Grade points, Letter Grades, and classifications meant to indicate the overall academic performance of the candidate.

## Conversion of Marks to Grade Points and Letter Grade (Performance in Course / Paper)

RANGE OF MARKS	GRADE POINTS	LETTER GRADE	DESCRIPTION
90 - 100	9.0 – 10.0	O	Outstanding
80 - 89	8.0 – 8.9	D+	Excellent
75 - 79	7.5 – 7.9	D	Distinction
70 - 74	7.0 – 7.4	A+	Very Good
60 - 69	6.0 – 6.9	A	Good
50 - 59	5.0 – 5.9	B	Average
40 - 49	4.0 – 4.9	C	Satisfactory
00 - 39	0.0	U	Re-appear
SENT	0.0	AAA	SENT

- Successful candidates passing the examinations and earning a GPA between 9.0 and 10.0 and marks from 90 – 100 shall be declared to have Outstanding (O).
- Successful candidates passing the examinations and earning GPA between 8.0 and 8.9 and marks from 80 - 89 shall be declared to have Excellent (D+).
- Successful candidates passing the examinations and earning GPA between 7.5 – 7.9 and marks from 75 - 79 shall be declared to have Distinction (D).
- Successful candidates passing the examinations and earning GPA between 7.0 – 7.4 and marks from 70 - 74 shall be declared to have Very Good (A+).
- Successful candidates passing the examinations and earning GPA between 6.0 – 6.9 and marks from 60 - 69 shall be declared to have Good (A).
- Successful candidates passing the examinations and earning GPA between 5.0 – 5.9 and marks from 50 - 59 shall be declared to have Average (B).
- Successful candidates passing the examinations and earning GPA between 4.0 – 4.9 and marks from 40 - 49 shall be declared to have Satisfactory (C).
- Candidates earning GPA between 0.0 and marks from 00 - 39 shall be declared to have Re-appear (U).
- Absence from an examination shall not be taken as an attempt.

From the second semester onwards the total performance within a semester and continuous performance starting from the first semester are indicated respectively by Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA).

These two are calculated by the following formulae

$$\text{GRADE POINT AVERAGE (GPA)} = \frac{\sum C_i G_i}{\sum C_i}$$

GPA = Sum of the multiplication of grade points by the credits of the courses

Sum of the credits of the courses in a Semester

### 18.3 Classification of the final result

The final result of the candidate shall be based only on the CGPA earned by the candidate.

- a) Successful candidates passing the examinations and earning CGPA between 9.5 and 10.0 shall be given Letter Grade (O+) and those who earned CGPA between 9.0 and 9.4 shall be given Letter Grade (O) and declared to have First Class –Exemplary\*.
- b) Successful candidates passing the examinations and earning CGPA between 7.5 and 7.9 shall be given Letter Grade (D), those who earned CGPA between 8.0 and 8.4 shall be given Letter Grade (D+) and those who earned CGPA between 8.5 and 8.9 shall be given Letter Grade (D++) and declared to have First Class with Distinction\*.
- c) Successful candidates passing the examinations and earning CGPA between 6.0 and 6.4 shall be given Letter Grade (A), those who earned CGPA between 6.5 and 6.9 shall be given Letter Grade (A+), and those who earned CGPA between 7.0 and 7.4 shall be given Letter Grade (A++) and declared to have First Class.
- d) Successful candidates passing the examinations and earning CGPA between 5.0 and 5.4 shall be given Letter Grade (B) and those who earned CGPA between 5.5 and 5.9 shall be given Letter Grade (B+) and declared to have passed in the Second Class.
- e) Successful candidates passing the examinations and earning CGPA between 4.0 and 4.4 shall be given Letter Grade (C) and those who earned CGPA between 4.5 and 4.9 shall be given Letter Grade (C+) and declared to have passed in the Third Class.
- f) Absence from an examination shall not be taken as an attempt.

**Final Result**

<b>CGPA</b>	<b>Grade</b>	<b>Classification of Final Result</b>
9.5 – 10.0 9.0 and above but below 9.5	<b>O+</b> <b>O</b>	First Class – Exemplary*
8.5 and above but below 9.0 8.0 and above but below 8.5 7.5 and above but below 8.0	<b>D++</b> <b>D+</b> <b>D</b>	First Class with Distinction*
7.0 and above but below 7.5 6.5 and above but below 7.0 6.0 and above but below 6.5	<b>A++</b> <b>A+</b> <b>A</b>	First Class
5.5 and above but below 6.0 5.0 and above but below 5.5	<b>B+</b> <b>B</b>	Second Class
4.5 and above but below 5.0 4.0 and above but below 4.5	<b>C+</b> <b>C</b>	Third Class
0.0 and above but below 4.0	<b>U</b>	Re-appear

CUMULATIVE GRADE POINT AVERAGE (CGPA) =  $\frac{\sum_n \sum_i C_{ni} G_{ni}}{\sum_n \sum_i C_{ni}}$

CGPA = Sum of the multiplication of grade points by the credits of the entire programme

Sum of the credits of the course for the entire Programme

Where ‘Ci’ is the Credit earned for Course i in any semester; ‘Gi’ is the Grade Point obtained by the student for Course i and ‘n’ refers to the semester in which such courses were credited.

**CGPA** (Cumulative Grade Point Average) = Average Grade Point of all the Courses passed starting from the first semester to the current semester.

Note: \* The candidates who have passed in the first appearance and within the prescribed Semesters of the UG Programme (Major, Allied, and Elective courses alone) are eligible for this classification.