



**SNDT Women's University, Mumbai**

**Department of Resource Management**

**Master of Science**

**Resource Management & Interior Design**

*as per NEP-2020*

**Syllabus**

**(2023-24)**

  
HEAD OF THE DEPARTMENT  
UNIVERSITY DEPT. OF RESOURCE MANAGEMENT  
S.N.D.T. Women's University  
Juhu Road, Santacruz (West),  
Mumbai-400 049.

<b>Program</b>	<b>Master of Science (Home Science)</b>
<b>Specialization</b>	<b>Resource Management &amp; Interior Design</b>
<b>Preamble</b>	<p>The Master's program in Resource Management &amp; Interior Design is of two-year duration that helps students learn how to create awesome interior spaces – think homes or cool places where people work. The goal is to help students become pros in designing places that look great and make life better.</p> <p>The plan is to not only boost students' creativity but also make sure they understand the important job of being an Interior Designer. The institute is committed to giving students a top-notch education that prepares them for the real world of Interior Design.</p> <p>In today's world, being an Interior Designer is a big deal, and the institute wants to make sure students are not just good at it but also know how to do the job with honesty and integrity. As students go through this program, they'll learn a lot and be ready to kick off a cool career in Resource Management &amp; Interior Design.</p> <p>Once students finish the program, they'll have the skills to create amazing interiors. They'll be all set for exciting opportunities in the world of Interior Design, making spaces look fantastic and improving the way people live and work. Get ready for a journey that opens doors to a future full of awesome possibilities in the world of design</p>
<b>Program Outcome</b>	<p>Upon completion of this Master's Program in Resource Management &amp; Interior Design the student will be able</p> <ol style="list-style-type: none"> <li>1. Demonstrate proficiency in selection and use of relevant technologies in design and in using available technologies to produce a design presentation.</li> <li>2. Demonstrate mastery of design techniques and concepts in interior design and commercial designing.</li> <li>3. Prepare and Present projects to clients, supervisors, and organizations</li> <li>4. Develop the plan for drainage system, plumbing system and water supply system and other Specialized services</li> <li>5. Formulate a creative solution for the problem keeping in mind aesthetics, functionality, legal codes, and project requirement.</li> <li>6. Identify the basics of contract documents and contract administration.</li> </ol>
<b>Program Specific Outcomes (POs)</b>	After completing this program, Learner will

	<ol style="list-style-type: none"> <li>1. Demonstrate ability to identify, analyze, conceptualize, and solve interior design problems.</li> <li>2. Demonstrate the mastery of design techniques and create newer concepts in interior design.</li> <li>3. Demonstrate an understanding of aesthetics and scale related to interior space, and of the history and current state of design in the world.</li> <li>4. Analyze the use of relevant technologies in design and intelligently apply available technologies to produce a meaningful design project.</li> <li>5. Demonstrate sound understanding of the cultural and societal connections linking interior design trends and processes as well as a knowledge of business practices.</li> <li>6. Demonstrate proficiency in presenting their own work as well as discussing and constructively critiquing the work of others.</li> </ol>
Eligibility Criteria for Program	<p>Students who have obtained any one of the following degrees from any recognized University and have obtained the degree as specified below are eligible to apply: Kindly note that University updates the Revised Eligibility before the New Academic year.</p> <ul style="list-style-type: none"> <li>• Anyone with a Bachelor’s degree with minimum of 45% to 50% passing / Minimum “B / C” grade can enroll themselves for the above-mentioned post-graduation program.</li> <li>• For students with 50% in BSc Resource Management, B. Design, B. Voc, BSc Family Resource Management, BSc Home Economics, BSc General Home Science, BSc Composite Home Science, BSc Family and Community Sciences</li> <li>• For students with 45% percent in BSc Resource Management, B. Design, B. Voc, BSc Family Resource Management, BSc Home Economics, BSc General Home Science, BSc Composite Home Science, BSc Family and Community Sciences will have to undergo Bridge courses of 2 Credits in Interior Design.</li> </ul>
Intake(For SNTD WU Departments and Conducted Colleges)	25

**Year – I:**

S. No.	Courses	Type of Course	Credits	Marks	Int	Ext
<b>Semester I</b>						
114711	Residential Interior Design (2+2)	Major (Core)	4	100	50	50
114712	Human Resource Management (Th)	Major (Core)	4	100	50	50
114723	Building Construction & Working Drawing (Pr)	Major (Core)	4	100	50	50
114724	Specialized Services - I (Pr)	Major (Core)	2	50	50	0
124711	Fundamentals of Ergonomics & Design (Th)	Major (Elective)	4	100	50	50
134711	Research Methodology (Th)	Minor Stream (RM)	4	100	50	50
			<b>22</b>	<b>550</b>	<b>300</b>	<b>250</b>
<b>Semester II</b>						
214721	Advance Landscape Design (Pr)	Major (Core)	4	100	50	50
214712	Commercial Space Design (2+2)	Major (Core)	4	100	50	50
214723	Advance Software (Pr)	Major (Core)	4	100	50	50
214714	Statistics (Th)	Major (Core)	2	50	0	50
224711	Organization Behaviour (Th)	Major (Elective)	4	100	50	50
244641	Internship – Interior Design Firm/ Organization	OJT	4	100	50	50
			<b>22</b>	<b>550</b>	<b>250</b>	<b>300</b>

Exit option (44 credit):

Post Graduate Diploma in Resource Management &amp; Interior Design

**Year - II**

<b>S. No.</b>	<b>Courses</b>	<b>Type of Course</b>	<b>Credits</b>	<b>Marks</b>	<b>Int</b>	<b>Ext</b>
<b>Semester III</b>						
314711	Product & Furniture Design (2+2)	Major (Core)	4	100	50	50
314712	Designing for Special Population (2+2)	Major (Core)	4	100	50	50
314723	Set Design (Pr)	Major (Core)	4	100	50	50
314724	Project Management (Pr)	Major (Core)	2	50	0	50
324721	Statistical Software for Data Analysis (Pr)	Major (Elective)	4	100	50	50
354731	Research Project (Pr)	RP	4	100	50	50
			<b>22</b>	<b>550</b>	<b>250</b>	<b>300</b>
<b>Semester IV</b>						
414711	Professional Practices & Certification	Major (Core)	4	100	50	50
414712	Sustainable Interior Design (2+2)	Major (Core)	4	100	50	50
414713	Latest Material and Technologies in Interiors (2+2)	Major (Core)	4	100	50	50
424711	Scientific Writing (2+2)	Major (Elective)	4	100	50	50
454731	Research Project - Dissertation	RP	6	150	100	50
			<b>22</b>	<b>550</b>	<b>300</b>	<b>250</b>

## Semester I

### 1.1 Major (Core)

<b>Course Title</b>	<b>Residential Interior Design</b>
<b>Course Credits</b>	2+2
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Explore and apply the principles of design and create beautiful and functional spaces</li> <li>2. Plan and Design using knowledge about spaces, sizes, furniture, elements of design, colour theory, materials, textures, etc. and create balanced design for any spaces</li> <li>3. Differentiate between various aspects of design and develop a successful design project</li> <li>4. Develop skills in selection of colour, materials and furniture's as per clientele and create emotional appeal through designs</li> <li>5. Gain professional competency in designing residential areas</li> </ol>
<b>Module 1 (Credit 1): Designing Residential Interior Spaces (Th)</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Gain competency in planning residential spaces efficiently</li> <li>2. Define the elements and principles of design proficiently</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Factors considered in planning of residential interior spaces</li> <li>● Factors contributing to selection of furniture and furnishing: climate, needs and preferences, availability of materials, cost etc.</li> <li>● Considerations for designing residential interior spaces: big and small apartment blocks</li> </ul>
<b>Module 2 (Credit 1): Designing Residential Interior Spaces (Pr)</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Develop the skill to judge the sizes with respect to colour, furniture and lighting</li> <li>2. Think in terms of design spaces as per needs and preferences of the clients with optimum use of resources</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Drawing Plan of one bedroom apartment</li> <li>● Design aspects- sectional elevations, rendering of plan and elevations, flooring, lighting layout, false ceiling and views for residential plan</li> </ul>
<b>Module 3 (Credit 1): Ergonomics Design Principles in Residential Spaces (Th)</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p>

	1. Design places keeping in mind the users for whom the space is created
	2. Visualize the space with respect to purpose of usage of the place
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>Ergonomic principles, its importance and application in designing residential interior spaces with focus on usability of spaces</li> <li>Special reference to furniture requirements and placement for different habitable areas and family composition</li> </ul>
<b>Module 4 (Credit 1): Residential Design using AutoCad (Pr)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Gain the competence in using software for designing purpose
	2. Design efficiently using shortcut commands of AutoCAD
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>AutoCAD plan for residential block for bungalow design</li> <li>Sectional elevations, rendering, flooring layout and electrical layout</li> <li>Two views of any two areas.</li> </ul>

#### **Total Marks: 50 (Internal)**

- 1. Individual Assignment:** Designing small residence spaces
- 2. Group Project:** Presentation on Application of Design principles used in interior design
- 3. Individual Project:** AutoCad design project
- 4. Case Study:** Field Visit to study Bungalow design

#### **References:**

- Dechiara J., Panero J and Zelnik M (2017). Time-Saver standards For Interior Design and Space Planning. Second Edition. Published by McGraw-Hill Education (India) Pvt. Ltd., UP.
- Grimley C and Love M. (2018). The Interior Design Reference & Specification Book Updated & Revised: Everything Interior Designers Need to Know Every Day. Sudarshan Book Distributors.
- Mitton M and Nystuen C. (2022). Residential Interior Design: A Guide to Planning Spaces. 4<sup>th</sup> Edition. Wiley publication.
- Neufert Ernst. (2019). Neufert Architects' Data. Fifth Edition. Published by Wiley Blackwell.
- Null Roberta (2017). Universal Design: Principles and Models. 1st Edition. CRC Press.
- Panero J and Zelnik M (1979). Human Dimension & Interior Space: A Source Book of Design Reference Standards. First Edition. Published by Watson-Guptill.
- Ramstedt Frida. (2020). The Interior Design Handbook: Furnish, Decorate, and Style your Space. Published by Clarkson Potter
- Rao, P. M. (2020). Interior Design: Principles and Practice. Standard Publishers and Distributors Pvt. Ltd.
- Starmer Anna. The Colour Scheme Bible: Inspirational Palattes for Designing Home Interiors. Cocoblu Retail. Publisher Firefly Books Ltd.

## 1.2 Major (Core)

<b>Course Title</b>	<b>Human Resource Management</b>
<b>Course Credits</b>	<b>4</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Conversant with the nature and fundamentals of human resources.
	2. Apply different methods in managing human resources.
	3. Competent in hiring employees and deciding employee remuneration.
	4. Proficient in motivating and maintaining employees.
	5. Capable of developing industrial relations.
<b>Module 1 (Credit 1): Introduction to Human Resource Management</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Formulate the human resource policies in an organization
	2. Design and conduct training programmes for the employees efficiently
<b>Content Outline</b>	<p><b>HRM:</b> Nature, significance, scope, functions, objectives of HRM</p> <ul style="list-style-type: none"> <li>• Organization of HR Department</li> <li>• Principles, policies and Models of HRM</li> </ul> <p><b>HRD:</b> Significance, scope, objectives and techniques of HRD</p> <ul style="list-style-type: none"> <li>• Functions and Attributes of HRD manager</li> <li>• Communication skills and organizational development</li> <li>• Employee Training: Assessment of training needs, training methods, training procedures, advantages of training and evaluation of training programs</li> </ul>
<b>Module 2 (Credit 1): Human Resource Planning and placement</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Plan the requirement of human resource in organization and have good recruitment and selection strategies
	2. Efficiently organize the orientation and training programmes for new hired employees
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• <b>Nature of Human Resource Planning</b> - Benefits of HR planning, Process of HR planning, Problems, Factors affecting and recent trends in HRP</li> <li>• <b>Job Design and Job Analysis</b> - Meaning and approaches to job design, Factors affecting, purpose and process, problems, uses and recent developments in job analysis</li> <li>• <b>Recruiting Human Resources</b> - Need, Objectives and importance of recruitment, recruitment policy and strategy,</li> </ul>



	<p>Recruitment process, traditional and modern sources, techniques, factors affecting and alternatives to recruitment</p> <ul style="list-style-type: none"> <li>• <b>Selecting Human Resources</b> - Role, nature and definition of selection, Organization and process of selection, factors affecting and barriers to effective selection</li> <li>• <b>Inducting and Placing New Hires</b> - Nature, purpose and different stages of orientation process, employee orientation programs, evaluation and problems and placement-meaning and problems</li> </ul>
<b>Module 3 (Credit 1): Performance Appraisal and Job Evaluation</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Design the performance appraisal forms for different categories of employees and use right method for appraisal
	2. Differentiate between job evaluation and performance appraisal and have alternatives to job evaluation
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• <b>Performance Appraisal</b> - Need for performance appraisers and appraisal, Process and methods of performance appraisal - Modern methods (BARS, assessment center MBO, HRA, Psychological appraisals), Sensitivity training and management grid, Uses and purposes of performance appraisal, Potential appraisal and challenges in performance appraisal, Edward Deming's view on performance appraisal</li> <li>• <b>Job evaluation</b> - Meaning and objectives of job evaluation, difference between job evaluation and performance appraisal, Principles and Procedure of Job Evaluation, Problems and alternative to job evaluation</li> </ul>
<b>Module 4 (Credit 1): Employee Remuneration and Career Planning and Development</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Design and implement the remuneration and reward policy for the employees
	2. Guide the employees for career planning and developmental stages for career advancement
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• <b>Managing Remuneration</b> - Employee Remuneration, Components of employee remuneration, Theories of employee remuneration, Influencing factors of remuneration, Remuneration plans, challenges of remuneration. Concepts of wage and salary administration and their Objectives, Role of reward system, factors affecting wage/salary levels, Wage Boards and Pay Commissions, Wage Incentive, profit sharing, Bonus and Managerial Compensation, Fringe Benefits, Non-Monetary Rewards</li> <li>• <b>Career Planning and Development</b> –Career planning and development for employee and organization, career development programs, Job satisfaction, career personality test, career planning process, potential challenges in Career Planning and Development</li> </ul>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Total Marks: 50 (Internal)**

5. **Individual Assignment:** Differentiate between HRM & HRP
6. **Group Project:** Recruitment, selection and hiring methods employed by organizations
7. **Individual Project:** Design an appraisal form for different categories of employees
8. **Case Study:** To take up any one organization and study their career planning and career development strategies.

**References:**

1. Ashwathappa, K. (2004) Human Resource and Personnel Management, 3rd edition Tata McGraw Hill Publication.
2. Bratton, J. & Gold, J (1999) Human Resource Management Theory and Practice, London, MacMillan Business.
3. Bhambra, A. (1999), Nature of Human Resource Management, New Delhi, Commonwealth Publishers.
4. Rao, S. (2002) Personnel and Human Resource Management, Himalaya Publishing House.
5. Armstrong, M. (1992): A Handbook of Human Resource Management, New Delhi, Adity Books Pvt Ltd
6. Chopra, R.K. (2001): Management of Human Resources. Allahabad, KitabMahal.
7. Dessler, G. (2001): Human Resource Management. New Delhi, Prentice Hall.
8. SubbaRao, P. (2002): Personnel and Human Resource Management, Himalaya Publishing House.

### 1.3 Major (Core)

<b>Course Title</b>	<b>Building Construction &amp; Working Drawing</b>
<b>Course Credits</b>	<b>2+2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to <ol style="list-style-type: none"> <li>1. Apply different types of construction materials in Interiors</li> <li>2. Apply the knowledge of the properties, trends and usability of the material, and its cost.</li> <li>3. Apply the type of structural systems and different type of techniques in construction</li> <li>4. Use the structure and technical specification of items in working drawing</li> <li>5. Design the furniture with the knowledge of joinery for wood work</li> </ol>
<b>Module 1 (Credit 1): Construction – Brick &amp; Partition</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to <ol style="list-style-type: none"> <li>1. Define the structural knowledge in construction work</li> <li>2. Construct the partition walls efficiently</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Construction of Half Brick (Stretcher Bond with R.C.C Patli)</li> <li>• Construction of Light Weight Partition walls</li> </ul>
<b>Module 2 (Credit 1): Construction – Furniture &amp; Kitchen Platform</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to <ol style="list-style-type: none"> <li>1. Carry out independently the construction of furniture's</li> <li>2. Design the kitchen platform skillfully</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Wardrobe Design</li> <li>• Single Bed with Side Table</li> <li>• Kitchen Platform</li> </ul>
<b>Module 3 (Credit 1): Working Drawing</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to <ol style="list-style-type: none"> <li>1. Make the detailed drawing of the furniture's</li> <li>2. Draw the furniture with details of materials and joineries.</li> </ol>

<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Sofa Chair</li> <li>● Dining Chair</li> <li>● Dining Table</li> </ul>
<b>Module 4 (Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Effectively make the detail drawing for the construction of the furniture piece
	2. Apply knowledge of joineries in drawing and make carpenter understand the construction
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Service Counter</li> <li>● Executive Table with Credenza</li> </ul>

### **Total Marks: 50 (Internal)**

1. **Individual Assignment:** Documentation of 10 materials used in Interior Design
2. **Group Project:** Joineries sample identification and presentation
3. **Individual Project:** Market Survey with Cost Analysis
4. **Classroom discussion:** Practically studying the construction in the classroom.

### **References:**

1. Allen E. and Iano J. (2019). Fundamentals of Building Construction – Materials & Methods. Seventh Edition. Wiley.
2. Arora, S. P., and Bindra, S.P. (2010). A Textbook of Building Construction. 2014<sup>th</sup> Edition. Dhanpat Rai & Company Publication.
3. Barry, R. (1978). Construction of Buildings. Metric 2 Revised Edition, Vol, V, HarperCollins Publishers Ltd.
4. Barry, R. (1986). Construction of Buildings. Third Revised Edition, Vol, IV, HarperCollins Publishers Ltd.
5. Barry, R. (1999). The Construction of Buildings. Sixth Edition. Vol. I, ELBS Publication.
6. Barry, R. (1999). The Construction of Buildings. Fifth Edition, Vol, II, ELBS Publication.
7. Barry, R. (1999). The Construction of Buildings. Fourth Edition, Vol, IV, Affiliated East-West Press Pvt. Ltd.
8. Barry, R. (2010). The Construction of Buildings. Fourth Edition, Vol, III, ELBS Publication.
9. Bisharat KA (2008). Construction Graphics – A Practical Guide to Interpreting Working Drawings 2e. Second Edition. John Wiley and sons Inc. CBS Publishers & Distributors Pvt. Ltd.
10. Boyne, D.A.C.A. and Wright, L. Architect's Working Detail Vol. I-V, The Architectural Press Ltd. London.
11. Boyne, D.A.C.A. and Wright, L. (1982). Best of Architect's Working Detail Vol. I External. Nichols Publishing Company.
12. Boyne, D.A.C.A. and Wright, L. (1982). Best of Architect's Working Detail Vol. 2 Internal. John Wiley and Sons.
13. Chiara Joseph De and John Haneock Callender (1980)- Time Saver Standards for Building Types. New York: MC Graw Hill Book Company

14. Ching, F.D.K. (2020). Building Construction Illustrated. Sixth Edition. Wiley. Van Nostrand.
15. Chudley, R. Construction Technology, Vol 1 to 4 ,(1985) EL/BS & Longman Groups Ltd.
16. Chudley, R., Greeno, R., & Kovac, K. (2020). Building Construction Handbook. Twelfth Edition. Routledge.
17. Diwan S (1999): Sanskruti- A Manual of Interior Design
18. Duggal S.K. (2019). Building Materials. Fifth Edition. New Age International Publishers.
19. Hasluck P. N. (2019). Cabinetwork and Joinery.: Comprising Designs and Details of Construction with 2021 Working Drawings and Twelve Plates (Classic Reprint). Forgotten Books.
20. Kumar, S. (2020). Building Construction. Standard Publishers Distributors.
21. Kumar, S. (2018). Building Construction. Twentieth Edition. Standard Publishers Distributors.
22. Mac kay WB (2013). Building Construction. Fourth & Fifth Edition. Vol. 1-5. Pearson Education India.
23. McHugh, R. C. (1977). Working Drawing Handbook: A Guide for Architects and Builders. New Edition. Van Nostrand Reinhold.
24. Mehta, M., Scarborough, W., & Armpriest, D. (2016). Building Construction: Principles, Materials, Systems. Second Edition. Pearson Education India.
25. Muller, E.F. & Grau P.A. (1999). Reading Architectural Working Drawings: Residential and Light Construction. Fifth Edition. Peachpit Press.
26. Pierce, S.R. and Mills, E.D. (1985) Planning: The Architect's Handbook. Tenth Edition. Butterworth-Heinemann Ltd.
27. Porter, Brian (1990) Carpentry and Joinery, London Arnold
28. Punmia, B. CA. K. & Jain A. K. (2016). Building Construction. Eleventh Edition. Laxmi Publications.
29. Rangwala S.C, Building Construction Book. Charotar Publishing House Pvt. Ltd. Anand
30. Sharma, R. K. (2020). Building Materials. Dreamtech Press.
31. Styles, K. & Bichard, A. Working Drawings Handbook. Fourth Edition. Elsevier. Architectural Press.
32. Whalton, J.A (1948): Wood work theory and Practice, George, G. Harrap & Co. Ltd.

## 1.4 Major (Core)

<b>Course Title</b>	<b>Specialized Services (Pr)</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Demonstrate the knowledge of systems and technologies in home services
	2. Implement and execute the knowledge of services to spaces
	3. Analyse the requirement of services in building and provide immediate solution
	4. Apply the knowledge in implementation of services in interiors
	5. Comprehend the knowledge of market survey for efficient use of materials present
<b>Module 1 (Credit 1): Specialized Services – Water Supply &amp; Drainage, Electrical &amp; HAVC</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Recommend types of materials, fittings and fixtures for various services
	2. Explain the principles used to plan various services
<b>Content Outline</b>	<p><b>Water Supply</b></p> <ul style="list-style-type: none"> <li>• Water supply systems to residential and commercial premises</li> <li>• Fixtures, pipes and fittings used in water supply system and its selection.</li> <li>• Principles to be followed in water supply system for residential and commercial interior work.</li> </ul> <p><b>Drainage System</b></p> <ul style="list-style-type: none"> <li>• Types of drainage systems provided in residential and commercial Buildings</li> <li>• Fixtures, fittings and pipes used in drainage systems and its selection.</li> <li>• Principles to be followed in drainage system for residential and commercial interior work</li> </ul> <p><b>Electrical Layout System</b></p> <ul style="list-style-type: none"> <li>• Fixtures, fittings and luminaries used in electrical supply for residential and commercial interior work.</li> <li>• Electrical wiring and qualitative and quantitative aspects of lighting arrangements.</li> <li>• Principles of supplying electricity to residential and commercial interior work</li> </ul> <p><b>Air conditioning</b></p> <ul style="list-style-type: none"> <li>• Various systems, fixtures, fittings, and principles to be followed in providing the services to residential and commercial interior work.</li> </ul>

<b>Module 2 (Credit 1): Fire Fighting &amp; Security Systems Services</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Select the right materials for the installation of specific service
	2. Carry out installation of various technologies for services efficiently
<b>Content Outline</b>	<p><b>Fire Fighting System</b></p> <ul style="list-style-type: none"> <li>• Systems for suppression of Fire (Dry risers, Wet Risers, sprinklers, etc.,) and their installation norms</li> <li>• Systems for fire extinguishers, Dry chemical powders, CO<sub>2</sub>, Water type etc., and their installation norms.</li> <li>• Identification of material which are used in interior work – a) fire resistance b) prone to catching fire fact.</li> </ul> <p><b>Security System</b></p> <ul style="list-style-type: none"> <li>• Introduction to security and principles of security (as per situations).</li> <li>• Types of security systems, field devices such as switches, sensors, card-readers, locks, cameras etc.</li> <li>• Access controls Installation norms, Uses and applications</li> </ul>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

#### **Total Marks – 50 (Internal)**

1. **Group Project:** Making security layout for interior layout common to all students
2. **Individual Project:** Preparing Air- Conditioning layout for given interior layout along with distribution and ducting along with sizes and legend
3. **Individual Project:** Market Surveys of materials/services with Costing and presentation.
4. **Field Visit:** Field observation of Residential building, colony, and Commercial building with Costing with presentation.

#### **References:**

1. Ananthanarayanan, P. N. (2013). Basic Refrigeration and Air Conditioning. Fourth Edition. McGraw-Hill Education, India.
2. Arora, C.P. (2010). Refrigeration and Air Conditioning. Fourth Edition. Prentice Hall India Learning Pvt. Ltd.
3. Arora, C.P. (2021). Refrigeration and Air Conditioning. Fourth Edition. McGraw-Hill Education, India.
4. Arora, D. (2018). A Course in Refrigeration and Air-Conditioning (Environment Engineering). Dhanpat Rai & Company.
5. Chatterjee, S. K. (2021). A Practical Approach to Air Conditioning and Refrigeration. First Edition. Notion Press.
6. Rangwala S.C. (2015). Water Supply and Sanitary Engineering. Twenty-eighth Edition. Charotar Publishing House Pvt. Ltd. Anand.
7. Rangwala S.C. (2022). Water Supply and Sanitary Engineering. Thirtieth Edition. Charotar Publishing House Pvt. Ltd. Anand.

8. Khurmi R.S. & Gupta J.K. (2019). A Textbook of Refrigeration and Air Conditioning. S. Chand Publication.
9. Punmia, B. Jain, A. K. & Jain A. K. (2016). Water supply Engineering. Second Edition. Laxmi Publications.



## 1.5 Major (Elective)

<b>Course Title</b>	<b>Fundamentals of Ergonomics &amp; Design</b>
<b>Course Credits</b>	4
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Define and apply the ergonomics principles in everyday life activities</li> <li>2. Design the workspaces as per human dimensions and needs</li> <li>3. Carryout work efficiently by applying principles of good workplace design, postures, and environment at work</li> <li>4. Apply the principles of preventive ergonomics to overcome workplace and occupational risks</li> <li>5. Differentiate between good ergonomics and poor ergonomics</li> </ol>
<b>Module 1 (Credit 1) : Domains of Ergonomics</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>3. Define various domains of ergonomics</li> <li>4. Differentiate between fitting job to man and fitting man to job</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• History of Ergonomics, FJM &amp; FMJ</li> <li>• Physical Ergonomics – Anthropometry, Anatomy, Work Physiology, Biomechanics</li> <li>• Cognitive Ergonomics – Stress, Fatigue, perception, memory, reasoning, and motor response</li> <li>• Organizational Ergonomics - team work, job shifts, work satisfaction, schedules, policies, and ethics</li> </ul>
<b>Module 2 (Credit 1) : Ergonomics, Health and Design</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Explore the relationship between people and design and minimize the postural risks</li> <li>2. Define the Man-Machine-Environment relationship and design the environment around it</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Anthropometry principles in designing workplaces</li> <li>• Relationship between Ergonomics, health and design, MME system</li> <li>• Workplace and Postural risks – MSD's, Injuries, Pains/aches, etc.</li> <li>• Impact of design on Human Health</li> <li>• Preventive measures</li> </ul>

<b>Module 3 (Credit 1) : Design Principles</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Use the various principles of design in designing different workplaces with different needs
	2. Design and analyze workplaces and products and apply innovative ideas to modify/develop user-friendly design
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Principles of Design, Universal Design, UX/UI Design</li> <li>• Six Pillars of Ergonomics Design</li> <li>• Product concept and design innovation</li> <li>• Workstation Design and Analysis</li> </ul>
<b>Module 4 (Credit 1) : Application &amp; Benefits of Ergonomics in Design</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Create design based on anthropometric data
	2. Design furniture's, workplaces, facilities for all
	3. Apply the knowledge of anthropometry for designing any spaces for the varied population
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Furniture and facilities Design for residences and commercial areas</li> <li>• Application in workplace design – offices, industrial design, hospital, institutions, school facilities, common spaces, etc.</li> <li>• Inclusive Designing for special population</li> </ul>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

#### **Total Marks – 50 (Internal)**

5. **Individual Assignment:** To observe and analyze various workplace in terms whether ergonomics principles are followed or violated. Report to be submitted.
6. **Group Project:** To make a checklist by referring various available checklist to assess the Impact of MME system on workers in terms of MSD's and other occupational risks.
7. **Individual Project:** Using principles of design, design/redesign/modify any one tool/product
8. **Laboratory Study:** To learn how to take anthropometric measurements using anthropometer and design any one furniture/workplace.

#### **References**

1. Anshel, J. (1998): Visual Ergonomics in the Work Place, Taylor and Francis (UK, USA); published by Taylor and Francis, C., London.
2. Anton, T.J. (1989): Occupational Safety and Health Management, 2nd edition, (SanFrancisco, Tokyo).
3. Astrand & Rodahl. (1977). Textbook of Work Physiology: Physiological Bases of Exercise McGraw-Hill Series, USA.

4. Bhattacharya, A. and McGlothlin (1996): Occupational Ergonomics: Theory and Applications, Marcel Dekker Inc. (New York, Basel, Hong Kong); Marcel Dekker Inc., New York
5. Dul, J. and Weerdmeestre, B. (2001): Ergonomics for Beginners: A Quick Reference Guide; 2nd edition, Taylor and Francis (London, New York); published by Taylor and Francis, C., London
6. Harkness, S.P. (1976): Building without Barriers for the Disabled, Whitthey Library of Design, New York
7. Koncelik, J.A. (1982): Aging and the Product Environment, Hutchinson Ross Publication, Pennsylvania
8. Kroemer, K.H.E. and Grandjean, E. (1997) (5th edition): Fitting the Task to the Human, Taylor and Francis (London, New York); published by Taylor and Francis, C., London
9. Nicholson, A. and Ridd, J.E. (1988): Health Safety and Ergonomics, Butterworths, London, Butterworths, C.
10. Osborne, D.J. (1982) (2nd edition): Ergonomics at Work, (Chichester, New York, Toronto); Chichester: John Wiley & Sons.
11. Pleasant, S. (2001): Body Space, Taylor and Francis (Great Britain); published by Taylor and Francis, C., London.
12. Pleasant, S. (1991): Ergonomics, Work and Health, Mac Millan Press, London

## 1.6 Minor Stream (RM)

<b>Course Title</b>	<b>Research Methodology</b>
<b>Course Credits</b>	<b>4</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Develop a scientific approach and know the processes of research
	2. Develop the competence for selecting methods and tools appropriate for research topics
	3. Understand concepts of statistical measures of central tendency, dispersion, variability and probability
<b>Module 1 (Credit 1): The Research Process</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Understand process of research and its relationship to knowledge and science.
	2. Identify research process based on actual researches conducted.
	3. Recognize process of research problem formulation.
<b>Content Outline</b>	<p><b>The Research Process</b></p> <ul style="list-style-type: none"> <li>• Scientific approach to enquiry in comparison to native, common-sense approach</li> <li>• Knowledge, theory and research</li> <li>• Role, need and scope of research in the discipline of Home Science</li> <li>• Assignment: Differentiate between investigative reporting and research report (with examples to be brought by students as exercise)</li> </ul> <p><b>Steps in Research Process and Elements of Research</b></p> <ul style="list-style-type: none"> <li>• Identifying interest areas and prioritizing</li> <li>• Selection of topic and considerations in selection</li> <li>• Review of related literature and research</li> <li>• Variables- types of variables including discrete and continuous variables</li> <li>• Conceptual definitions and operational definitions</li> <li>• Concepts, hypotheses and theories</li> <li>• Hypothesis- meaning, attributes of a sound hypothesis, Stating the hypothesis and types of hypothesis</li> <li>• Hypothesis testing- null hypothesis, sample distribution, level of significance, critical regions, Type I and Type II errors</li> <li>• Research Design</li> <li>• Research questions, objectives and assumptions</li> <li>• <b>Ethics in Research</b></li> </ul>
<b>Module 2 (Credit 1): Types of Research</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Understand and apply different types of research procedures.

	2. Able to design research studies by knowing methods of research.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Basic and Applied research, Qualitative and Quantitative research (brief review of differences)</li> <li>• Historical research</li> <li>• Descriptive research methods – survey, case study, correlational study, content analysis, causal-comparative research</li> <li>• Analytic studies- pre-experimental, experimental research, quasi experimental research</li> <li>• Qualitative research, Ethnography</li> <li>• Evaluative research- general characteristics, use of qualitative methods in enquiry</li> <li>• Scope and importance in Home Science.</li> </ul>
<b>Module 3 (Credit 1): Sampling</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Understand different techniques of sampling.
	2. Apply sampling procedures for specific research problems.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Rationale, characteristics- meaning, concept of population and sample, and utility</li> <li>• Types of sampling and generalizability of results</li> <li>• Probability sampling - simple random sample, systematic random sample, stratified random sampling etc - random and non-random samples, random numbers and use</li> <li>• Non-probability sampling - purposive samples, incidental samples, quota samples, snowball samples</li> <li>• General consideration in determination of sample size</li> </ul>
<b>Module 4 (Credit 1): Tools for Data Collection</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Define and differentiate different tools of data collection.
	2. Design different tools of data collection
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Primary and secondary methods of data collection</li> <li>• Different types of questionnaires, rating scales, check lists, schedules, attitude scales, inventories, standardized tests, interviews, observation</li> <li>• Development of tools, estimation of reliability and validity of tools</li> <li>• Procedure for preparation of the tool, administration of tools for data collection</li> <li>• Procedure for data collection</li> <li>• Planning for data analysis-coding of responses</li> </ul>

## **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

1. **Assignment 1:** Recognize different Types of variables.
2. **Classroom activity 1:** Hypothesis formations and research questions from Research readings – students identify hypothesis/research questions – Discussion
3. **Presentation 1:** Construction of tools for data collection a) types of questions b) Questionnaire c) interview schedule d) observation e) scales
4. **Presentation 2:** Types of sampling methods used in research
5. **Classroom Activity 2:** Differentiate between (a) basic and applied research (Exercise to be based on actual research papers published in accredited journals) (b) qualitative and quantitative research
6. **Assignment 2:** Identify 5 research papers on particular area/topic of research and write review.

## **References**

1. Bell, J. (1997): How to Complete Your Research Project Successfully: A Guide for First-time Researchers, UBSPD, New Delhi.
2. Festinger, L. and Katz, D. (ed.) (1977): Research Methods in the Behavioral Sciences, Amerind Publishing, New Delhi.
3. Gupta, S. (2001) "Research Methodology and Statistical Techniques", Deep and Deep, New Delhi.
4. Jain, G. (1998): Research Methodology: Methods and Techniques, Mangal Deep, Jaipur.
5. Kothari, C.R. (2000): Research Methodology: Methods and Techniques, WishwaPrakashan, New Delhi.
6. Kumar, A. (1997): Social Research Method (The Art of Scientific Investigation), Anmol Publication, New Delhi.
7. Kumar, A. (2002): Research Methodology in Social Sciences, Sarup and Sons, New Delhi.
8. McBurney, D.H. (2001): Research Methodology, Thomson-Wadsworth, Australia.

## 2.1 Major Core

<b>Course Title</b>	<b>Advance Landscape Design</b>
<b>Course Credits</b>	<b>2+2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Develop landscaping skills through principles and elements of design knowledge and implement in designs
	2. Demonstrate proficiency in selection of plants, shrubs, creepers, accessories, and lighting solutions
	3. Gain competency in designing roof top gardening, terrace landscaping, kitchen gardening, organic farming, etc.
	4. Use practical experience from field visits to nursery, survey of terrace / rooftop for projects
	5. Justify the plan and design through illustrations to the clients competently
<b>Module 1 (Credit 1): Principles and Elements of Landscape Design</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
<i>(Specific related to the module.. e.g. Define, Differentiate, Carry out, Design, etc. ... )</i>	1. Plan the designs by applying knowledge of principles and elements of design
	2. Develop skills in selection of accessories to match with design for landscaping
<b>Content Outline</b>	<p><b>Principles and Elements of Landscape design</b></p> <ul style="list-style-type: none"> <li>● Principles of Landscaping</li> <li>● Elements of design - Basic - Line, colour, texture, forms, scale</li> <li>● Advanced – water features, sculptures, stones, sitting, fencing, lighting, other artifacts used in landscaping</li> <li>● Benefits, principles, applications in design</li> <li>● Case study</li> </ul>
<b>Module 2 (Credit 1): Site Analysis</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Select site, take measurement, do analysis of site and make plan for landscaping
	2. Identify the accessories and ornamentation needed for landscaping
<b>Content Outline</b>	<p><b>Site Analysis</b></p> <ul style="list-style-type: none"> <li>● Site selection, landscape zoning, measurement, site checklist, soil water bodies, site analysis, etc.</li> <li>● Hard landscape – Functions, types, criteria's, design, etc.</li> <li>● Outdoor Lighting – types of light, lighting fixtures, electrical accessories, solar energy, etc.</li> <li>● Water and irrigation system – water needs and sources, cascades, fountains, water bodies, ponds, etc.</li> </ul>

<b>Module 3 (Credit 1): Concept Drawings &amp; Case studies</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Categorize different types of plants for landscaping
	2. Select the right types of plantations to design the garden
<b>Content Outline</b>	<p><b>Concept Drawings &amp; Case studies</b></p> <ul style="list-style-type: none"> <li>• Concept drawings for soft landscape, planting plans, specifications, and estimation.</li> <li>• Case study on terrace garden, balconies, organic farming, medicinal, butterfly garden, bird attracting garden, etc.</li> <li>• Actual field study – selection of site and implementation of landscape design e.g., Terrace Garden, kitchen garden, roadside landscaping, garden design, etc.</li> <li>• Visit to local nursery for plant knowledge and selection</li> </ul>
<b>Module 4 (Credit 1): Introduction to Planting Design</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Recommend the right placement of plants, creepers, shelters, walkways for visual appeal
	2. Design and plan landscaping for different areas efficiently using plantations by applying principles of sustainability
<b>Content Outline</b>	<p><b>Introduction to Planting Design</b></p> <ul style="list-style-type: none"> <li>• Understanding plant use and selection, ecologically sustainable plant use, criteria for planting design</li> <li>• Functional &amp; Visual consideration in plant designing - Boundaries, screening, shade, shelter, barriers, Trees, shrubs, ground cover and creepers, form, shape, colour, texture, growth characteristics</li> <li>• Planting for special areas – hotels, parking area, highways, roadside, corporate areas, industries sites, institutions, hospitals, terraces, roofs, vertical gardens, air plants, etc.</li> <li>• Plants for sustainability – ratings GRIHA, LEEDS, etc.</li> </ul>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

1. **Assignment 1:** To visit the SNDTWU Juhu campus and see the existing landscaping and preparing a report on visit and observations made.
2. **Classroom activity 1:** To select the site for landscaping on SNDTWU Juhu Campus and make plan requirements, make concept design, site measurement, execute plan either in AutoCAD or drawing on paper.
3. **Presentation 1:** Visit the local nursery for plant information and make PPT presentation



4. **Presentation 2:** Presentation of any ONE case study on Terrace Garden, vertical garden, kitchen garden, organic farming, airport landscaping, corporate office landscaping, roadside landscaping, hospital/hotel/park landscaping, etc.
5. **Classroom Activity 2:** Classroom discussion and brainstorming on the designs of the fellow classmates.

### References

1. Brown J.(2000) The Modern Garden: Princeton Architectural Press
2. Harris.C.W and Dine.N.T. (1997) Time Saver Standards For Landscape Architecture, Mcgraw- Hill International Edition, Arch. Series
3. Lyall S; (1992) Designing the New Landscape: Thames and Hudson
4. Reid G. W: (1993). From Concept to Form: In Landscape Design. John Wiley & Sons
5. Storm.S and Kurt Nathan P.E. (1985) Site Engineering for Landscape Architects, AVI Publishing Company
6. Shaheer .M, Dua G.W and Pal.A .(2012) Landscape Architecture in India: a reader .India: La, Journal of Landscape Architecture

## 2.2 Major Core

<b>Course Title</b>	<b>Commercial Space Design</b>
<b>Course Credits</b>	<b>2+2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Optimize the space usage and apply trends in designing commercial spaces
	2. Conceptualize innovations in commercial designing
	3. Relate the theories to practical applications in designing
	4. Demonstrate the abilities to resolve on site challenges in implementation of designs
	5. Show competence and professionalism while executing the project confidently
<b>Module 1 (Credit 1): Commercial Interior Space Design (Th)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Differentiate between various factors and material needed for designing commercial establishments
	2. Plan, design and execute the projects independently and efficiently
<b>Content Outline</b>	<b>Introduction to commercial interior space design.</b> <ul style="list-style-type: none"> <li>• Types of commercial interior spaces</li> <li>• Factors influencing designing of commercial interior spaces</li> <li>• Materials used in designing commercial interior spaces</li> </ul>
<b>Module 2 (Credit 1): Designing Considerations for Commercial Spaces (Th)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Appraise the plan layouts for small and large commercial places as per design specifications
	2. Relate design critically with respect to different factors that will influence the outcome of any design project.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Planning factors for the commercial space, attributing factors, composition of design, factors influencing design, Specifications for Design</li> <li>• Designing for Shops, Restaurants, Clinic, Offices, Library etc.</li> </ul>
<b>Module 3 (Credit 1): Commercial Interior Space Design (Pr)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to

	1. Draw the plan layouts for small and large commercial places as per design specifications
	2. Justify each minute detail of design project to the client efficiently and professionally.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Interior designing layout of large (100 m2 to 250 m2) commercial spaces (banks, offices, polyclinics etc.)</li> <li>• Floor Plan, Elevations, Ceiling layout, Electrical layout, Perspectives of the given project.</li> </ul>
<b>Module 4 (Credit 1): Designing Considerations for Commercial Spaces (Pr)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Judge the materials while selecting them for project based on market survey and theoretical knowledge
	2. Plan, Design and execute the projects independently based on clientele profile and needs
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Survey of existing commercial space</li> <li>• Continuous assessment of different needs of the users' group, conceptualization of design with reference to space, purpose and User needs i.e., Client Profile and Requirements, while planning the furniture layout and selection of materials for the design.</li> </ul>

### Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

#### Marks 50 (Internal)

1. **Assignment 1:** Planning and layout of one Commercial place (bank, office, clinic, etc.).
2. **Classroom activity 1:** Preparing Client Profile and requirements
3. **Presentation 1:** Visit the local commercial establishments, do survey, write report and make PPT presentation
4. **Classroom Activity 2:** Classroom discussion and brainstorming on the designs of the fellow classmates.

#### References

1. Neufert Ernst. (2019). Neufert Architects' Data. Fifth Edition. Published by Wiley Blackwell.
2. Grant Camden Kirkpatrick. (1994). Architecture & Interior Design Library.
3. Cerver, F. A. (1996). Commercial Space: Boutiques. Arco Editorial SA, 1996.
4. Stafford Cliff, The Best Exhibition Stand Design 2, Roto Vision Sa Switzerland
5. Velarde G. (2017). Designing Exhibitions: Museums, heritage, trade and world fairs. Second Exhibition. eBook. Routledge.
6. Barr, V and Field, K. (1999). Stores: Retail Display and Design, PBC International Inc.
7. Arian Mostaedi. (2003). HotShops. Carles Broto & Josep Ma. Minguet.
8. Rolshoven Martin, Exhibition Design, Rockport Publications
9. Jeong J.I., Seong E.D., Interior Design Bar and Restaurant.

## 2.3 Major Core

<b>Course Title</b>	<b>Advance Software (Pr)</b>
<b>Course Credits</b>	<b>4</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Gain technological professional competence and apply in interior design projects
	2. Use right type of software based on design requirements
	3. Develop skills through technology and become confident in using the software's
	4. Apply different commands for editing the design at different stages of project
	5. Save time by making use of different user-friendly software's
<b>Module 1 (Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
<i>(Specific related to the module.. e.g. Define, Differentiate, Carry out, Design, etc. ... )</i>	1. Enhance the designing abilities with digital drafting skills
	2. Visualize the design in both 2-dimension and 3 - dimension
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● AutoCad</li> <li>● Google Sketchup</li> <li>● Adobe Photoshop</li> </ul>
<b>Module 2 (Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
<i>(Specific related to the module.. e.g. Define, Differentiate, Carry out, Design, etc. ... )</i>	1. Create high quality renderings with great details
	2. Carry out the design process using suitable tool
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Autodesk 3Ds Max – superb graphics for 3D animations, images, high quality rendering, materials, textures, colour editor making design look realistic.</li> <li>● V-Ray – 3D computer graphics/rendering software, perfect tool for lighting effects and to create quality 3D visualizations all in Sketchup</li> </ul>
<b>Module 3 (Credit 1)</b>	

<b>Learning Outcomes</b>	After learning the module, learners will be able to
<i>(Specific related to the module.. e.g. Define, Differentiate, Carry out, Design, etc. ... )</i>	1. Apply the knowledge of infurnia to convert 2D plans to accurate 3D depictions and create own library of materials, wallpapers, furnishings, etc.
	2. Create beautiful designs through rendering software Archicad 25
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Infurnia – for collaborative work, customized cabinet tools</li> <li>• Revit Software -3D visualizations</li> <li>• Archicad 25– architectural rendering software, easy 2D to 3D switchover, creates beautiful designs</li> <li>• Gather – project management software</li> </ul>
<b>Module 4 (Credit 1): Application of Advanced Software</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
<i>(Specific related to the module.. e.g. Define, Differentiate, Carry out, Design, etc. ... )</i>	1. Use skill to update plans into 3D visualizations
	2. Transfer the files and share work with ease to clients and colleagues
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Application of different software’s in planning, designing, rendering, graphic presentations, etc.</li> </ul>

### Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

#### Marks 50 (Internal)

1. **Assignment 1:** To make plan and render using Autocad software
2. **Classroom activity 1:** To make your own library of materials and create design
3. **Classroom Activity 2:** To make 3D views of the plan in google sketchup
4. **Presentation 1:** Use adobe photoshop and make graphic presentation
5. **Presentation 2:** Presentation of any ONE project in one of the software’s

#### References

1. Online software’s – students’ version

## 2.4 Major Core

<b>Course Title</b>	<b>Statistics</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Discriminate between parametric and non-parametric tests
	2. Apply statistical tests for data analysis for both large and small samples
	3. Analyse and interpret the results based on statistical inferences drawn
<b>Module 1 (Credit 1): Introduction to Statistics</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Use the concept of statistical measures in research
	2. Carryout the management of data using SPSS and MS Excel
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● <b>Concepts</b> <ul style="list-style-type: none"> <li>● Definition, conceptual understanding of statistical measures, popular concepts and misuse of statistics</li> </ul> </li> <li>● <b>Normal Distribution and its Properties</b> <ul style="list-style-type: none"> <li>● Normal distribution</li> <li>● Binomial distribution</li> <li>● Probability, use of normal probability tables, area under normal distribution curve</li> <li>● Parametric and non-parametric tests</li> </ul> </li> <li>● <b>Data Management</b> <ul style="list-style-type: none"> <li>● Planning for data analysis – coding of responses, preparation of code book</li> <li>● Coding of data</li> <li>● Use of statistical programs</li> <li>● MS Excel</li> <li>● SPSS</li> </ul> </li> </ul>
<b>Module 2 (Credit 1): Data Analysis</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Define the grouped and un-grouped data
	2. Apply the large sample and small sample tests and interpret results
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● <b>Data Analysis</b> <ul style="list-style-type: none"> <li>● Quantitative analysis, descriptive statistics, inferential statistics: Uses and limitations, Summation sign and its properties</li> <li>● Proportions, percentages, ratios</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Measures of central tendency-mean, median, mode- arithmetic mean and its uses, mid – range, geometric mean, weighted mean</li> <li>• Measures of dispersion /variability- range, variance, standard deviation, standard error, coefficient of variation, Kurtosis, skewness</li> <li>• Grouped data-frequency distribution, histogram, frequency polygons, percentiles, quartiles, tertiles, ogive</li> <li>• <b>Large and Small Sample tests and interpretation</b> <ul style="list-style-type: none"> <li>• Z-test for single proportions and difference between proportions</li> <li>• Large sample test for single mean and difference between means</li> <li>• Small sample tests- 't'-test, paired 't'-test, 'F' Test</li> </ul> </li> </ul>
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### Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

#### Total Marks – 25 (Internal)

1. **Individual Assignment:** Assignment on probability, Non-parametric & parametric tests
2. **Classroom Assignment:** To carryout large and small sample tests and interpretation of results

#### References:

1. Gupta S.P. (2019). Statistical Methods. 46<sup>th</sup> Edition. Sultan Chand and Sons, India.
2. Pandit, D.N. (2022). Statistics: A Modern Approach. Hindustan Publishing Corporation, India.
3. Gun, A.M., Gupta, M.K. and Dasgupta, B. (2013). Fundamentals of Statistics. Vol. 1, World Press.

## 2.5 Major Elective

<b>Course Title</b>	<b>Organization Behavior</b>
<b>Course Credits</b>	<b>4</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Understands the behaviour of individuals and group processes in organizations.
	2. Know the processes used in organization to achieve efficiency and effectiveness
	3. Know organizational structure through practical experience
	4. Understand different personality traits of individuals, their values, attitudes, and perceptions
	5. Demonstrate the characteristics and qualities needed for leadership and motivation
	6. Comprehend the knowledge to understand the group behavior, power and politics used in organizations
	7. Understand the reasons for conflicts and apply techniques to resolve them for development of the organization and employees
	8. Demonstrate organizational skills to communicate the organizational structure, culture and changes taking place in organization
<b>Module 1 (Credit 1): Introduction to Organizational Behavior</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Define history of organizational behavior in chronological order
	2. Demonstrate the knowledge of various models of organizational behavior
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Scope, significance, History and development of Organizational Behavior as a subject.</li> <li>● Meaning and definition of Organizational Behavior</li> <li>● Models of Organizational Behavior</li> </ul>
<b>Module 2 (Credit 1): The Individual</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Identify leadership qualities and apply in organization
	2. Differentiate individual aspects of human behaviour in organization
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Foundation of individual behaviour.</li> <li>● Personality and learning.</li> <li>● Perception and attribution.</li> <li>● Values, attitudes and job satisfaction.</li> </ul>



	<ul style="list-style-type: none"> <li>• Motivation, concept and application.</li> <li>• Leadership.</li> </ul>
<b>Module 3 (Credit 1): The Group</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Identify the importance of working as a team and team building in organization
	2. Define different aspects of human behaviour like power, politics, conflicts in organizations
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Foundation of group behaviour.</li> <li>• Communication.</li> <li>• Power and politics</li> <li>• Conflicts and negotiation</li> </ul>
<b>Module 4 (Credit 1): Organizational Dynamics</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Develop the organization structure for different types of organizations
	2. Bring about change in the organizations when needed for organizational development
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Foundation of organisational structure.</li> <li>• Organisational culture</li> <li>• Organisational change.</li> <li>• Organisational Development.</li> </ul>

### Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

#### Marks 50 (Internal)

3. **Assignment 1:** To study different organizational structures
4. **Classroom activity 1:** To prepare organizational structure for different types of organizations
5. **Presentation 1:** Individual presentations on personality, perception, values and attitudes, motivation and leadership
6. **Presentation 2:** Team presentation on communication, power & Politics and Conflicts & Negotiations
7. **Classroom Activity 2:** Quiz on Organization Culture and Organization Change

#### References

1. K. Ashwathappa (2002) Organisational Behaviour, Mumbai, Himalaya Publishing House.
2. Stephen P. Robbins (2001): Organisational Behaviour – concepts, controversies and applications – New Delhi, Prentice Hall of India.
3. Fred Luthons (1998) Organisational Behaviour, Boston, McGrawhill Publishing Co.
4. Mcshane, S.L. &Glinow, M.A. (2000): Organisational Behaviour – New Delhi, McGraw-hill Publishing Co. Ltd.
5. Singh, M. (2001), Organisational Behaviour – New Delhi, Deep and Deep Publications Pvt. Ltd.

6. Newstrom, J.W. & Devis, K. (2000): Organisational Behaviour – New Delhi, McGraw-hill Publishing Co. Ltd.
7. Gupta, R. (2001) Organisational Behaviour – New Delhi, KitabMahal.
8. Cook, C.W. & Hunaskar, P.L. (2001): Management and Organisational Behaviour – Boston, McGraw-hill Irwin.
9. Kumar, M. & Mittal R. (2001) Organisational Behaviour – New Delhi, Anmol Publication Pvt. Ltd.
10. Chandan, J.S. (2001): Organisational Behaviour – New Delhi, Vikas Publishing House Pvt. Ltd.
11. Pettinger, R. (1996): Organisational Behaviour – London, Macmillan Press Ltd.
12. Hersey, P. & Blanchard, K. (1996): Management of Organisational Behaviour – New Delhi, Prentice Hall India.

## 2.6 OJT

<b>Course Title</b>	<b>Internship – Interior Design Firm/Organization</b>
<b>Course Credits</b>	<b>4</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Design their own CV to apply in any Interior Design firm/organization/industry, etc.
	2. Communicate confidently the technical skills as an individual and as a team member in small and large projects
	3. Apply the knowledge from internship manual for Professional ethics at workplace
	4. Gain competency in soft skills and technical skills in managing the clients, projects, and finances efficiently
5. Prioritize the time management when planning as per the expectation of organization and clientele	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Carryout all responsibilities at work place efficiently
	2. Apply professionalism at work and with subordinates, seniors, juniors, and employer
	3. Pace the projects keeping in mind time management and financial implications
	4. Apply knowledge gained to design something new with creative ideas
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>● Structured Internship Manual covering the learning outcomes</li> <li>● Aspects covered in manual-time management, punctuality, dress code, work ethics, application of soft skills and technical skills, creativity, etc.</li> <li>● Period for internship – 4 credits – 120 hours of practical working in firms/industries/organizations, etc.</li> <li>● Weekly report on learning during the week, site visits, any issues, and concerns, etc.</li> <li>● Mid-term report from trainer/supervisor for progress at internship</li> <li>● Final report at the end of the internship programme.</li> <li>● Final Evaluation of internship - viva voce in presence of external examiner - Presentation of internship report by the student</li> </ul>

### Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Training session on How to make effective CV  
**Classroom activity 1:** To prepare CV for applying for internship programme in organizations/firms
2. Training students for soft skill set for development of soft skills needed at workplace  
**Classroom Activity 2:** Demonstrate Soft skill by role play
3. Training for Ethics and Professionalism at Workplace

**Classroom Activity 3:** Professional Practices in role play

4. Training on Framing Learning Objectives for Internship
5. **Classroom Activity 4:** Students write what they expect from firms/organizations in the form of learning objects

**External**

1. Weekly Reports of Internship with achievement of learning outcomes every week
2. Mid-Term Evaluation Report from Supervisor/employer/trainer
3. Final Report submission
4. External Final Exam – Presentation of report to external examiner and Viva Voce.

**Total Marks for Internship – 100 Marks**

**Internal Marks – 50**

**External Marks (Jointly by Internal & External Examiner) - 50**