

# 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.

Program	Master of Science (Home Science)
Specialization	Resource Management & Interior Design
Preamble	The Master's program in Resource Management & 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.  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 topnotch education that prepares them for the real world of Interior Design.  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 & Interior Design.  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
Program Outcome	Upon completion of this Master's Program in Resource Management & Interior Design the student will be able
	<ol> <li>Demonstrate proficiency in selection and use of relevant technologies in design and in using available technologies to produce a design presentation.</li> <li>Demonstrate mastery of design techniques and concepts in interior design and commercial designing.</li> <li>Prepare and Present projects to clients, supervisors, and organizations</li> <li>Develop the plan for drainage system, plumbing system and water supply system and other Specialized services</li> <li>Formulate a creative solution for the problem keeping in mind aesthetics, functionality, legal codes, and project requirement.</li> <li>Identify the basics of contract documents and contract administration.</li> </ol>
Program Specific Outcomes (POs)	After completing this program, Learner will

	<ol> <li>Demonstrate ability to identify, analyze, conceptualize, and solve interior design problems.</li> </ol>
	<ol><li>Demonstrate the mastery of design techniques and create newer concepts in interior design.</li></ol>
	<ol> <li>Demonstrate an understanding of aesthetics and scale related to interior space, and of the history and current state of design in the world.</li> </ol>
	<ol> <li>Analyze the use of relevant technologies in design and intelligently apply available technologies to produce a meaningful design project.</li> </ol>
	<ol> <li>Demonstrate sound understanding of the cultural and societal connections linking interior design trends and processes as well as a knowledge of business practices.</li> </ol>
	<ol> <li>Demonstrate proficiency in presenting their own work as well as discussing and constructively critiquing the work of others.</li> </ol>
Eligibility Criteria for Program  Intake(For SNDT WU	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.  • 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.  • 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  • 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.
Departments and Conducted Colleges)	23

### <u>Year - I</u>:

S. No.	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester I			<u> </u>		
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
			22	550	300	250
	Semester II		<u> </u>	l l		
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
			22	550	250	300

Exit option (44 credit):

Post Graduate Diploma in Resource Management & Interior Design

### M.Sc. Resource Management & Interior Design

### **Postgraduate Program of 2 years**

#### Year II

S. No.	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester III		,	1	1	
314721	Product & Furniture Design (Pr)	Major (Core)	4	100	50	50
314712	Sustainable Interior Design (Th)	Major (Core)	4	100	50	50
314723	Statistical Computing for Data Analysis (Pr)	Major (Core)	4	100	50	50
314724	Set Design (Pr)	Major (Core)	2	50	0	50
324711	Designing for Special Population (Th)	Major (Elective)	4	100	50	50
354721	Research Project (Pr)	RP	4	100	50	50
			22	550	250	300
	Semester IV			l L	L	
414711	Professional Practices & Certification (Th)	Major (Core)	4	100	50	50
414722	Internship (Pr)	Major (Core)	8	200	100	100
424711	Project Management (Th)	Major (Elective)	4	100	50	50
454731	Research Project - Dissertation	RP	6	150	100	50
			22	550	300	250

Post Graduate Degree in Resource Management & Interior Design on completion of two years MSc Program

### Semester I

## 1.1 Major (Core)

Course Title	Residential Interior Design
Course Credits	2+2
Course Outcomes	After going through the course, learners will be able to
	Explore and apply the principles of design and create beautiful and functional spaces
	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
	3. Differentiate between various aspects of design and develop a successful design project
	4. Develop skills in selection of colour, materials and furniture's as per clientele and create emotional appeal through designs
	5. Gain professional competency in designing residential areas
Module 1 (Credit 1):	Designing Residential Interior Spaces (Th)
Learning Outcomes	After learning the module, learners will be able to
	1. Gain competency in planning residential spaces efficiently
	2. Define the elements and principles of design proficiently
Content Outline	<ul> <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>
Module 2 (Credit 1):	Designing Residential Interior Spaces (Pr)
Learning Outcomes	After learning the module, learners will be able to
	Develop the skill to judge the sizes with respect to colour, furniture and lighting
	Think in terms of design spaces as per needs and preferences of the clients with optimum use of resources
Content Outline	<ul> <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>
Module 3 (Credit 1):	Ergonomics Design Principles in Residential Spaces (Th)
Learning Outcomes	After learning the module, learners will be able to

	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
Content Outline	<ul> <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>
Module 4 (Credit 1):	Residential Design using AutoCad (Pr)
Learning Outcomes	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
Content Outline	<ul> <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.
- 2. 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.
- 3. Mitton M and Nystuen C. (2022). Residential Interior Design: A Guide to Planning Spaces. 4<sup>th</sup> Edition. Wiley publication.
- 4. Neufert Ernst. (2019). Neufert Architects' Data. Fifth Edition. Published by Wiley Blackwell.
- 5. Null Roberta (2017). Universal Design: Principles and Models. 1st Edition. CRC Press.
- 6. Panero J and Zelnik M (1979). Human Dimension & Interior Space: A Source Book of Design Reference Standards. First Edition. Published by Watson-Guptill.
- 7. Ramstedt Frida. (2020). The Interior Design Handbook: Furnish, Decorate, and Style your Space. Published by Clarkson Potter
- 8. Rao, P. M. (2020). Interior Design: Principles and Practice. Standard Publishers and Distributors Pvt. Ltd.
- 9. Starmer Anna. The Colour Scheme Bible: Inspirational Palattes for Designing Home Interiors. Cocoblu Retail. Publisher Firefly Books Ltd.

## 1.2 Major (Core)

Course Title	Human Resource Management
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	Conversant with the nature and fundamentals of human resources.
	2. Apply different methods in managing human resources.
	Competent in hiring employees and deciding employee remuneration.
	4. Proficient in motivating and maintaining employees.
	5. Capable of developing industrial relations.
Module 1 (Credit 1):	Introduction to Human Resource Management
Learning Outcomes	After learning the module, learners will be able to
	1. Formulate the human resource policies in an organization
	Design and conduct training programmes for the employees efficiently
Content Outline	<ul> <li>HRM: Nature, significance, scope, functions, objectives of HRM</li> <li>Organization of HR Department</li> <li>Principles, policies and Models of HRM</li> <li>HRD: Significance, scope, objectives and techniques of HRD</li> <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>
Module 2 (Credit 1):	Human Resource Planning and placement
Learning Outcomes	After learning the module, learners will be able to
	Plan the requirement of human resource in organization and have good recruitment and selection strategies
	Efficiently organize the orientation and training programmes for new hired employees
Content Outline	<ul> <li>Nature of Human Resource Planning - Benefits of HR planning, Process of HR planning, Problems, Factors affecting and recent trends in HRP</li> <li>Job Design and Job Analysis - Meaning and approaches to job design, Factors affecting, purpose and process, problems, uses and recent developments in job analysis</li> <li>Recruiting Human Resources - Need, Objectives and importance of recruitment, recruitment policy and strategy,</li> </ul>

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Module 3 (Credit 1):	Recruitment process, traditional and modern sources, techniques, factors affecting and alternatives to recruitment  • Selecting Human Resources - Role, nature and definition of selection, Organization and process of selection, factors affecting and barriers to effective selection  • Inducting and Placing New Hires - Nature, purpose and different stages of orientation process, employee orientation programs, evaluation and problems and placement-meaning and problems  Performance Appraisal and Job Evaluation
Learning Outcomes	After learning the module, learners will be able to
Learning Outcomes	After rearring the module, rearriers will be able to
	Design the performance appraisal forms for different categories of employees and use right method for appraisal
	Differentiate between job evaluation and performance appraisal and have alternatives to job evaluation
Content Outline	<ul> <li>Performance Appraisal - 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>Job evaluation - 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>
Module 4 (Credit 1): Development	Employee Remuneration and Career Planning and
Learning Outcomes	After learning the module, learners will be able to
	Design and implement the remuneration and reward policy for the employees
	Guide the employees for career planning and developmental stages for career advancement
Content Outline	<ul> <li>Managing Remuneration - 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>Career Planning and Development -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>

#### **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)

Course Title	Building Construction & Working Drawing
Course Credits	2+2
Course Outcomes	After going through the course, learners will be able to
	1. Apply different types of construction materials in Interiors
	2. Apply the knowledge of the properties, trends and usability of the material, and its cost.
	Apply the type of structural systems and different type of techniques in construction
	Use the structure and technical specification of items in working drawing
	Design the furniture with the knowledge of joinery for wood work
Module 1 (Credit 1):	Construction - Brick & Partition
Learning Outcomes	After learning the module, learners will be able to
	1. Define the structural knowledge in construction work
	2. Construct the partition walls efficiently
Content Outline	<ul> <li>Construction of Half Brick (Stretcher Bond with R.C.C Patli)</li> <li>Construction of Light Weight Partition walls</li> </ul>
Module 2 (Credit 1):	Construction – Furniture & Kitchen Platform
Learning Outcomes	After learning the module, learners will be able to
	1. Carry out independently the construction of furniture's
	2. Design the kitchen platform skillfully
Content Outline	<ul> <li>Wardrobe Design</li> <li>Single Bed with Side Table</li> <li>Kitchen Platform</li> </ul>
Module 3 (Credit 1):	Working Drawing
Learning Outcomes	After learning the module, learners will be able to
	1. Make the detailed drawing of the furniture's
	2. Draw the furniture with details of materials and joineries.

Content Outline	<ul><li>Sofa Chair</li><li>Dining Chair</li><li>Dining Table</li></ul>	
Module 4 (Credit 1)		
Learning Outcomes	After learning the module, learners will be able to	
	Effectively make the detail drawing for the construction of the furniture piece	
	Apply knowledge of joineries in drawing and make carpenter understand the construction	
Content Outline	<ul> <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
- 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, Londan 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)

Course Title	Specialized Services (Pr)
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	Demonstrate the knowledge of systems and technologies in home services
	2. Implement and execute the knowledge of services to spaces
	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
Module 1 (Credit 1):	Specialized Services – Water Supply & Drainage, Electrical & HAVC
Learning Outcomes	After learning the module, learners will be able to
	Recommend types of materials, fittings and fixtures for various services
	2. Explain the principles used to plan various services
Content Outline	<ul> <li>Water Supply</li> <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> <li>Drainage System</li> </ul>
	<ul> <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> <li>Electrical Layout System</li> <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> <li>Air conditioning</li> <li>Various systems, fixtures, fittings, and principles to be followed in providing the services to residential and commercial interior work.</li> </ul>

Module 2 (Credit 1):	Fire Fighting & Security Systems Services
Learning Outcomes	After learning the module, learners will be able to  1. Select the right materials for the installation of specific service
	Carry out installation of various technologies for services efficiently
Content Outline	<ul> <li>Fire Fighting System</li> <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> <li>Security System</li> </ul>
	<ul> <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>

#### **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)

Course Title	Fundamentals of Ergonomics & Design
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	Define and apply the ergonomics principles in everyday life activities
	2. Design the workspaces as per human dimensions and needs
	3. Carryout work efficiently by applying principles of good workplace design, postures, and environment at work
	Apply the principles of preventive ergonomics to overcome workplace and occupational risks
	5. Differentiate between good ergonomics and poor ergonomics
Module 1 (Credit 1)	: Domains of Ergonomics
Learning Outcomes	After learning the module, learners will be able to
	3. Define various domains of ergonomics
	4. Differentiate between fitting job to man and fitting man to job
Content Outline	<ul> <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>
Module 2 (Credit 1)	: Ergonomics, Health and Design
Learning Outcomes	After learning the module, learners will be able to
	Explore the relationship between people and design and minimize the postural risks
	Define the Man-Machine-Environment relationship and design the environment around it
Content Outline	<ul> <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>

Learning Outcomes	After learning the module, learners will be able to
	Use the various principles of design in designing different workplaces with different needs
	Design and analyze workplaces and products and apply innovative ideas to modify/develop user-friendly design
Content Outline	<ul> <li>Principles of Design, Universal Design, UX/VI Design</li> <li>Six Pillars of Ergonomics Design</li> <li>Product concept and design innovation</li> <li>Workstation Design and Analysis</li> </ul>
Module 4 (Credit 1)	Application & Benefits of Ergonomics in Design
Learning Outcomes	After learning the module, learners will be able to
	1. Create design based on anthropometric data
	2. Design furniture's, workplaces, facilities for all
	2. Design furfillure 5, workplaces, facilities for all
Content Outline	Apply the knowledge of anthropometry for designing any spaces for the varied population     Furniture and facilities Design for residences and commercial

#### **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, (SanFransico, 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
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- 12. Pleasant, S. (1991): Ergonomics, Work and Health, Mac Millan Press, London

## 1.6 Minor Stream (RM)

Course Title	Research Methodology
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	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
Module 1 (Credit 1):	The Research Process
Learning Outcomes	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.
Content Outline	<ul> <li>The Research Process</li> <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> <li>Steps in Research Process and Elements of Research</li> <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>Ethics in Research</li> </ul>
Module 2 (Credit 1):	· ·
Learning Outcomes	After learning the module, learners will be able to
	1. Understand and apply different types of research procedures.

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

- 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

Course Title	Advance Landscape Design
<b>Course Credits</b>	2+2
Course Outcomes	After going through the course, learners will be able to
	Develop landscaping skills through principles and elements of design knowledge and implement in designs
	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
Module 1 (Credit 1):	: Principles and Elements of Landscape Design
Learning Outcomes	After learning the module, learners will be able to
(Specific related to the module	Plan the designs by applying knowledge of principles and elements of design
e.g. Define, Differentiate, Carry out, Design, etc )	Develop skills in selection of accessories to match with design for landscaping
Content Outline	Principles and Elements of Landscape design
	<ul> <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>
Module 2 (Credit 1):	•
Learning Outcomes	After learning the module, learners will be able to
	Select site, take measurement, do analysis of site and make plan for landscaping
	Identify the accessories and ornamentation needed for landscaping
Content Outline	Site Analysis
	<ul> <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> </ul>

	Water and irrigation system – water needs and sources, cascades, fountains, water bodies, ponds, etc.
Module 3 (Credit 1):	Concept Drawings & Case studies
Learning Outcomes	After learning the module, learners will be able to
	Categorize different types of plants for landscaping
	2. Select the right types of plantations to design the garden
Content Outline  Module 4 (Credit 1):	<ul> <li>Concept Drawings &amp; Case studies</li> <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> Introduction to Planting Design
Learning Outcomes	After learning the module, learners will be able to
	Recommend the right placement of plants, creepers, shelters, walkways for visual appeal
	Design and plan landscaping for different areas efficiently using plantations by applying principles of sustainability
Content Outline	<ul> <li>Introduction to Planting Design</li> <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>

- 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

Course Title	Commercial Space Design
<b>Course Credits</b>	2+2
Course Outcomes	After going through the course, learners will be able to
	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
	<ol><li>Show competence and professionalism while executing the project confidently</li></ol>
Module 1 (Credit 1):	Commercial Interior Space Design (Th)
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	Differentiate between various factors and material needed for designing commercial establishments
	Plan, design and execute the projects independently and efficiently
Content Outline	Introduction to commercial interior space design.
	<ul> <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>
Module 2 (Credit 1):	Designing Considerations for Commercial Spaces (Th)
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	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.
Content Outline	<ul> <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>
Module 3 (Credit 1):	Commercial Interior Space Design (Pr)
Learning Outcomes	After learning the module, learners will be able to

	Draw the plan layouts for small and large commercial places as per design specifications
	Justify each minute detail of design project to the client efficiently and professionally.
Content Outline	<ul> <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>
Module 4 (Credit 1):	Designing Considerations for Commercial Spaces (Pr)
Learning Outcomes	After learning the module, learners will be able to
	Judge the materials while selecting them for project based on market survey and theoretical knowledge
	Plan, Design and execute the projects independently based on clientele profile and needs
Content Outline	<ul> <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>

#### 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

Course Title	Advance Software (Pr)
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	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
Module 1 (Credit 1)	
Learning Outcomes	After learning the module, learners will be able to
(Specific related to the module	1. Enhance the designing abilities with digital drafting skills
e.g. Define, Differentiate, Carry out, Design, etc )	2. Visualize the design in both 2-dimension and 3 – dimension
Content Outline	<ul><li>AutoCad</li><li>Google Sketchup</li><li>Adobe Photoshop</li></ul>
Module 2 (Credit 1)	
Learning Outcomes	After learning the module, learners will be able to
(Specific related to the module	1. Create high quality renderings with great details
e.g. Define, Differentiate, Carry out, Design, etc )	2. Carry out the design process using suitable tool
Content Outline	<ul> <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>
Module 3 (Credit 1)	<u>1</u>

Learning Outcomes	After learning the module, learners will be able to
(Specific related to the module e.g. Define,	1. Apply the knowledge of infurnia to convert 2D plans to accurate 3D depictions and create own library of materials, wallpapers, furnishings, etc.
Differentiate, Carry out, Design, etc )	2. Create beautiful designs through rendering software Archicad 25
Content Outline	<ul> <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>
Module 4 (Credit 1):	Application of Advanced Software
Learning Outcomes (Specific related to	After learning the module, learners will be able to
the module e.g. Define,	1. Use skill to update plans into 3D visualizations
Differentiate, Carry out, Design, etc )	Transfer the files and share work with ease to clients and colleagues
Content Outline	<ul> <li>Application of different software's in planning, designing, rendering, graphic presentations, etc.</li> </ul>

#### 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

Course Title	Statistics
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	Discriminate between parametric and non-parametric tests
	Apply statistical tests for data analysis for both large and small samples
	Analyse and interpret the results based on statistical inferences drawn
Module 1 (Credit 1):	Introduction to Statistics
Learning Outcomes	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
Content Outline	<ul> <li>Concepts</li> <li>Definition, conceptual understanding of statistical measures, popular concepts and misuse of statistics</li> <li>Normal Distribution and its Properties</li> <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> <li>Data Management</li> <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>
Module 2 (Credit 1):	Data Analysis
Learning Outcomes	After learning the module, learners will be able to
	1. Define the grouped and un-grouped data
	Apply the large sample and small sample tests and interpret results
Content Outline	<ul> <li>Data Analysis</li> <li>Quantitative analysis, descriptive statistics, inferential statistics: Uses and limitations, Summation sign and its properties</li> <li>Proportions, percentages, ratios</li> </ul>

- Measures of central tendency-mean, median, modearithmetic mean and its uses, mid – range, geometric mean, weighted mean
- Measures of dispersion /variability- range, variance, standard deviation, standard error, coefficient of variation, Kurtosis, skewness
- Grouped data-frequency distribution, histogram, frequency polygons, percentiles, quartiles, tertiles, ogive
- Large and Small Sample tests and interpretation
  - Z-test for single proportions and difference between proportions
  - Large sample test for single mean and difference between means
  - Small sample tests- 't'-test, paired 't'-test, 'F' Test

#### **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. 46th 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

Course Title	Organization Behavior
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	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
Module 1 (Credit 1):	Introduction to Organizational Behavior
Learning Outcomes	After learning the module, learners will be able to
	Define history of organizational behavior in chronological order
	Demonstrate the knowledge of various models of organizational behavior
Content Outline	<ul> <li>Scope, significance, History and development of Organizational Behavior as a subject.</li> </ul>
	<ul> <li>Meaning and definition of Organizational Behavior</li> <li>Models of Organizational Behavior</li> </ul>
Module 2 (Credit 1):	The Individual
Learning Outcomes	After learning the module, learners will be able to
	1. Identify leadership qualities and apply in organization
	Differentiate individual aspects of human behaviour in organization
Content Outline	<ul> <li>Foundation of individual behaviour.</li> <li>Personality and learning.</li> <li>Perception and attribution.</li> <li>Values, attitudes and job satisfaction.</li> </ul>

	Motivation, concept and application	
	<ul><li>Motivation, concept and application.</li><li>Leadership.</li></ul>	
Modulo 3 (Cradit 1):		
Module 3 (Credit 1): The Group		
<b>Learning Outcomes</b>	After learning the module, learners will be able to	
	Identify the importance of working as a team and team building in organization	
	Define different aspects of human behaviour like power, politics, conflicts in organizations	
Content Outline	<ul> <li>Foundation of group behaviour.</li> <li>Communication.</li> <li>Power and politics</li> <li>Conflicts and negotiation</li> </ul>	
Module 4 (Credit 1): Organizational Dynamics		
<b>Learning Outcomes</b>	After learning the module, learners will be able to	
	Develop the organization structure for different types of organizations	
	Bring about change in the organizations when needed for organizational development	
Content Outline	<ul> <li>Foundation of organisational structure.</li> <li>Organisational culture</li> <li>Organisational change.</li> <li>Organisational Development.</li> </ul>	

#### 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
- 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. Newstom, J.W. & Devis, K. (2000): Organisational Behaviour New Delhi, McGrawhill Publishing Co. Ltd.
- 7. Gupta, R. (2001) Organisational Behaviour New Delhi, KitabMahal.
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- 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

Course Title	Internship – Interior Design Firm/Organization
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	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
Learning Outcomes	After learning the module, learners will be able to
	Carryout all responsibilities at work place efficiently
	Apply professionalism at work and with subordinates, seniors, juniors, and employer
	Pace the projects keeping in mind time management and financial implications
	4. Apply knowledge gained to design something new with creative ideas
Content Outline	<ul> <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</li> </ul>
	<ul> <li>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)**

- 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



# **SNDT Women's University, Mumbai**

# **Department of Resource Management**

# **Master of Science**

**Resource Management & Interior Design** 

as per NEP-2020

Syllabus for Semester - III & IV

(2024-25)

# Resource Management & Interior Design - Semester - III & IV

# M.Sc. Resource Management & Interior Design

# **Postgraduate Program of 2 years**

#### Year II

S. No.	Courses	Type of Course	Credits	Marks	Int	Ext
		Course				
	Semester III					
314721	Product & Furniture Design (Pr)	Major (Core)	4	100	50	50
314712	Sustainable Interior Design (Th)	Major (Core)	4	100	50	50
314723	Statistical Computing for Data Analysis (Pr)	Major (Core)	4	100	50	50
314724	Set Design (Pr)	Major (Core)	2	50	0	50
324711	Designing for Special Population (Th)	Major (Elective)	4	100	50	50
354721	Research Project (Pr)	RP	4	100	50	50
			22	550	250	300
	Semester IV					
414711	Professional Practices & Certification (Th)	Major (Core)	4	100	50	50
414722	Internship (Pr)	Major (Core)	8	200	100	100
424711	Project Management (Th)	Major (Elective)	4	100	50	50
454731	Research Project - Dissertation	RP	6	150	100	50
			22	550	300	250

Post Graduate Degree in Resource Management & Interior Design on completion of two years MSc Program

# **Semester III: Product & Furniture Design (Pr)**

Major (Core): Product & Furniture Design (Pr)

Subject Code: 314721

# **Course Description:**

This practical course focuses on the design and development of products and furniture, tailored for MSc Interior Design & Ergonomics students. The course covers the entire design process, from conceptualization and sketching to prototyping and final presentation. Emphasis is placed on ergonomics, materials, and sustainable practices, enabling students to create functional, aesthetic, and user-centered designs.

Course Title	Product & Furniture Design (Pr)
Course Credits	4 Credits
Course Outcomes	After going through the course, learners will be able to
	6. Develop a comprehensive understanding of the product and furniture design process.
	7. Apply ergonomic & design principles to ensure comfort and usability.
	8. Explore and experiment with different materials and fabrication techniques.
	Create functional and aesthetically pleasing product and furniture designs.
	10. Produce prototypes and effectively communicate design ideas through presentations.
Module 1: Introducti	on to Product & Furniture Design
Learning Outcomes	After learning the module, learners will be able to
	Apply design thinking and user-centered design methodologies.
	4. Integrate ergonomic principles into design projects.
Content Outline	<ul> <li>Overview of Product and Furniture Design</li> <li>Design Thinking and User-Centered Design</li> <li>History and Evolution of Furniture Design</li> <li>Ergonomics and Human Factors</li> <li>Introduction to Design Software (AutoCAD, Google Sketchup)</li> </ul>
Module 2: Concept D	evelopment and Sketching

Learning Outcomes	After learning the module, learners will be able to
	3. Develop and refine design concepts through sketching.
	Use rapid visualization techniques to communicate ideas & create mood boards
	<ol><li>Analyze case studies to understand successful design elements.</li></ol>
Content Outline	<ul> <li>Ideation and Concept Development</li> <li>Sketching Techniques and Rapid Visualization</li> <li>Creating Mood Boards and Design Narratives</li> <li>Form and Function in Design</li> <li>Case Studies of Iconic Furniture Designs</li> </ul>
Module 3: Materials,	Techniques, and Prototyping
Learning Outcomes	After learning the module, learners will be able to
	Identify, select and incorporate sustainable materials for product & furniture design.
	<ol> <li>Apply various fabrication techniques &amp; utilize digital fabrication tools for precision and efficiency to create prototypes.</li> </ol>
	5. Develop and test prototypes to refine design concepts.
Content Outline	<ul> <li>Material Selection and Properties</li> <li>Sustainable Materials and Practices</li> <li>Fabrication Techniques (Woodworking, Metalworking, Upholstery, etc.)</li> <li>Digital Fabrication (3D Printing, CNC Milling)</li> <li>Prototype Development and Testing</li> </ul>
Module 4: Final Design	gn and Presentation
Learning Outcomes	After learning the module, learners will be able to
	<ol> <li>Refine design concepts &amp; produce detailed technical drawings with specifications based on prototype testing and feedback.</li> </ol>
	4. Develop effective design presentation skills.
	5. Present final designs in a professional critique and exhibition setting.
Content Outline	<ul> <li>Refining Design Concepts and Prototypes</li> <li>Creating Technical Drawings and Specifications</li> <li>Design Presentation Techniques</li> <li>Client and Stakeholder Feedback</li> <li>Final Design Critique and Exhibition</li> </ul>

# For Practical subject Total Marks - 100 (Continuous Assessment)

# Module 1: Furniture Design Case study (Marks - 25)

- Research paper on the history of furniture design (10%)
- Ergonomic analysis project (15%)

# Module 2: Sketching project (Marks - 25)

- Concept development sketches (15%)
- Mood board and design narrative (10%)

# **Module 3: Prototypes development (Marks - 25)**

- Material selection and sustainability report (10%)
- Prototype development project (15%)

# **Module 4: Final project and presentations (Marks – 25)**

- Technical drawings and specifications (10%)
- Final design presentation and critique (15%)

- 1. Lawson, S. (2013). Furniture Design: An Introduction to Development, Materials, and Manufacturing. Laurence King Publishing.
- 2. Ambrose, G., & Harris, P. (2011). **Ergonomics in Product Design**. Bloomsbury Visual Arts.
- 3. Lefteri, C. (2012). **Making It: Manufacturing Techniques for Product Design**. Laurence King Publishing.

# **Semester III: Sustainable Interior Design (Th)**

Major (Core): Sustainable Interior Design (Th)

Subject Code: 314712

# **Course Description:**

This course explores the principles and practices of sustainable interior design. MSc Interior Design students will learn about sustainable materials, energy efficiency, indoor environmental quality, and the broader impact of design choices on the environment. The course emphasizes the importance of sustainability in design and aims to equip students with the skills to create environmentally responsible and sustainable interior spaces.

Course Title	Sustainable Interior Design (Th)		
Course Credits	4 Credits		
Course Outcomes	After going through the course, learners will be able to		
	Apply the fundamental principles of sustainable interior design		
	2. Identify and evaluate sustainable materials and products.		
	Analyze & Implement strategies for energy efficiency and water conservation.		
	4. Enhance indoor environmental quality through design		
	5. Evaluate the environmental impact of design decisions and promote sustainable practices.		
Module 1: Principles	of Sustainable Interior Design		
Learning Outcomes	After learning the module, learners will be able to		
	1. Examine the environmental impact of design choices.		
	Conduct life cycle assessments for design materials and products.		
	3. Familiarize with sustainability certifications and standards.		
Content Outline	<ul> <li>Introduction to Sustainability in Interior Design</li> <li>Environmental Impact of Interior Design</li> <li>Principles of Green Design</li> <li>Life Cycle Assessment (LCA) in Interior Design</li> <li>Certifications and Standards (LEED, WELL, BREEAM)</li> </ul>		
Module 2: Sustainab	le Materials and Products		

Learning Outcomes	After learning the module, learners will be able to
	Formulate the criteria for selecting sustainable materials.
	2. Differentiate between renewable, recycled, and low-
	emitting materials & the impact of materials on indoor air quality.
	Evaluate the performance and durability of sustainable materials.
<b>Content Outline</b>	Sustainable Material Selection Criteria
	Renewable and Recycled Materials
	Low-Emitting Materials and Indoor Air Quality     Sustainable Furnishings and Finishes
	<ul><li>Sustainable Furnishings and Finishes</li><li>Evaluating Material Performance and Durability</li></ul>
Module 3: Energy Eff	ficiency and Water Conservation
Learning Outcomes	After learning the module, learners will be able to
	Implement energy-efficient lighting and HVAC systems.
	2. Assess the passive design strategies to reduce energy
	consumption & incorporate water conservation techniques in design projects.
	<ol> <li>Utilize smart building technologies to enhance sustainability by integrating renewable energy sources.</li> </ol>
Content Outline	<ul> <li>Energy-Efficient Lighting and HVAC Systems</li> <li>Passive Design Strategies</li> </ul>
	<ul> <li>Water Conservation Techniques in Interior Design</li> </ul>
	Renewable Energy Integration
	Smart Building Technologies
Module 4: Indoor En	vironmental Quality and Sustainable Practices
Learning Outcomes	After learning the module, learners will be able to
	Improve indoor air quality through design choices.
	Address lighting, acoustics & noise control in interior spaces.
	Integrate biophilic design & encourage sustainable behavior to promote health & well-being.
Content Outline	Indoor Air Quality (IAQ) Improvement Strategies
	Natural Lighting and Daylighting     Assurting and Naige Control
	<ul><li>Acoustics and Noise Control</li><li>Biophilic Design and Human Health</li></ul>
	Promoting Sustainable Behaviors and Practices
	- 1. Smothing Subtainable Behaviors and Fractices

#### For theory subject Total Internal Marks – 50

# **Module 1: Sustainable Principles (Marks - 25)**

- Assignment on sustainability principles (15%)
- Case study analysis of a sustainable interior project (10%)

#### Module 2: Sustainable Materials (Marks - 25)

- Project on selection of Sustainable material (10%)
- Comparative analysis of traditional vs. sustainable materials (15%)

# Module 3: Energy Efficiency and Water Conservation (Marks - 25)

- Energy efficiency design proposal (15%)
- Water conservation strategy report (10%)

# Module 4: Final project and presentations (Marks - 25)

- Indoor environmental quality improvement plan (10%)
- Final project incorporating sustainable design principles (15%)

- 1. Bee, F. (2012). **Sustainable interior design: Principles and practice**. Fairchild Books.
- 2. Chiras, D. D. (2014). **The solar house: Passive heating and cooling**. Chelsea Green Publishing.
- 3. Curwell, S., March, C., & Venables, R. (Eds.). (2005). **Sustainable urban design: An environmental approach**. Routledge.
- 4. Kibert, C. J. (2012). Sustainable construction: Green building design and delivery (3rd ed.). Wiley.
- 5. Kwok, A. G., & Grondzik, W. T. (2018). **The green studio handbook: Environmental strategies for schematic design** (3rd ed.). Routledge.
- 6. McLennan, J. F. (2004). The philosophy of sustainable design: The future of architecture. Ecotone Publishing.
- 7. Proctor, R. (2015). The Sustainable Design Book. Laurence King Publishing.
- 8. Reed, B., & Gordon, K. (2000). The integrative design guide to green building: Redefining the practice of sustainability. Wiley.
- 9. Smith, P. F. (2007). Sustainability at the cutting edge: Emerging technologies for low energy buildings. Routledge.
- 10. Stieg, C. (2006). **Sustainable design for interior environments**. Fairchild Books.
- 11. Winchip, S. M. (2011). **Sustainable Design for Interior Environments**. Fairchild Books.
- 12. Yudelson, J. (2009). Green building through integrated design. McGraw-Hill.

# **Semester III: Statistical Computing for Data Analysis (Pr)**

Major (Core): Statistical Computing for Data Analysis (Pr)

Subject Code: 314723

# **Course Description:**

This practical course is designed for MSc students to gain hands-on experience with statistical software for data analysis. The course focuses on practical application rather than theoretical concepts, equipping students with the skills to analyse and interpret data relevant to the research. Students will work with real-world datasets and learn how to use statistical software tools such as SPSS, R, and Excel to perform data analysis, visualization, and reporting.

Course Title	Statistical Computing for Data Analysis (Pr)
Course Credits	4 Credits
Course Outcomes	After going through the course, learners will be able to
	Develop proficiency in using statistical software tools for data analysis.
	2. Apply statistical techniques to analyze and interpret any data.
	3. Gain practical experience in data visualization and reporting.
	4. Present statistical findings in a clear and professional manner.
	5. Apply statistical methods to solve real-world design & ergonomics research problems.
Module 1 (Credit 1)	Introduction to Statistical Concepts and Software
Learning Outcomes	After learning the module, learners will be able to
	Understand basic statistical concepts relevant to ergonomics & interior design.
	2. Navigate and use SPSS, R, and Excel for data analysis.
	Learn how to import and manage data in statistical software.
	4. Conduct exploratory data analysis to summarize and visualize data.

Content Outline	Overview of Statistical Concepts (Descriptive and Inferential Statistics)
	Introduction to Statistical Software (SPSS, R, Excel)
	Data Types and Data Entry
	Basic Data Manipulation and Cleaning
	Exploratory Data Analysis (EDA)
Module 2 (Credit 1)	: Descriptive Statistics and Visualization
Learning Outcomes	After learning the module, learners will be able to
	Calculate and interpret measures of central tendency and variability.
	Create and analyze frequency distributions and cross- tabulations.
	<ol> <li>Utilize various data visualization techniques to present data.</li> </ol>
	<ol> <li>Develop skills in using statistical software to generate descriptive statistics and visualizations.</li> </ol>
Content Outline	Measures of Central Tendency (Mean, Median, Mode)
	<ul> <li>Measures of Variability (Range, Variance, Standard</li> </ul>
	riedsures of variability (Karige, Variance, Standard
	Deviation)
	Deviation)
	Deviation) • Frequency Distributions and Histograms
Module 3 (Credit 1)	Deviation)  • Frequency Distributions and Histograms  • Cross-tabulations and Contingency Tables
Module 3 (Credit 1) Learning Outcomes	Deviation)  • Frequency Distributions and Histograms  • Cross-tabulations and Contingency Tables  • Data Visualization Techniques (Charts, Graphs)  : Inferential Statistics and Hypothesis Testing
	Deviation)  • Frequency Distributions and Histograms  • Cross-tabulations and Contingency Tables  • Data Visualization Techniques (Charts, Graphs)  : Inferential Statistics and Hypothesis Testing
	Deviation)  • Frequency Distributions and Histograms  • Cross-tabulations and Contingency Tables  • Data Visualization Techniques (Charts, Graphs)  : Inferential Statistics and Hypothesis Testing  After learning the module, learners will be able to  1. Understand and apply sampling methods and confidence
	Deviation)  Frequency Distributions and Histograms  Cross-tabulations and Contingency Tables  Data Visualization Techniques (Charts, Graphs)  Inferential Statistics and Hypothesis Testing  After learning the module, learners will be able to  Understand and apply sampling methods and confidence intervals.  Perform hypothesis testing using t-tests, Chi-square tests,
	<ul> <li>Deviation)         <ul> <li>Frequency Distributions and Histograms</li> <li>Cross-tabulations and Contingency Tables</li> <li>Data Visualization Techniques (Charts, Graphs)</li> </ul> </li> <li>Inferential Statistics and Hypothesis Testing         <ul> <li>After learning the module, learners will be able to</li> </ul> </li> <li>Understand and apply sampling methods and confidence intervals.</li> <li>Perform hypothesis testing using t-tests, Chi-square tests, and ANOVA.</li> <li>Conduct correlation and regression analysis to examine</li> </ul>
	<ul> <li>Deviation)         <ul> <li>Frequency Distributions and Histograms</li> <li>Cross-tabulations and Contingency Tables</li> <li>Data Visualization Techniques (Charts, Graphs)</li> </ul> </li> <li>Inferential Statistics and Hypothesis Testing         <ul> <li>After learning the module, learners will be able to</li> <li>Understand and apply sampling methods and confidence intervals.</li> </ul> </li> <li>Perform hypothesis testing using t-tests, Chi-square tests, and ANOVA.</li> <li>Conduct correlation and regression analysis to examine relationships between variables.</li> <li>Use statistical software to perform inferential statistical</li> </ul>
Learning Outcomes	<ul> <li>Deviation)         <ul> <li>Frequency Distributions and Histograms</li> <li>Cross-tabulations and Contingency Tables</li> <li>Data Visualization Techniques (Charts, Graphs)</li> </ul> </li> <li>Inferential Statistics and Hypothesis Testing         <ul> <li>After learning the module, learners will be able to</li> <li>Understand and apply sampling methods and confidence intervals.</li> </ul> </li> <li>Perform hypothesis testing using t-tests, Chi-square tests, and ANOVA.</li> <li>Conduct correlation and regression analysis to examine relationships between variables.</li> <li>Use statistical software to perform inferential statistical analyses.</li> <li>Sampling Methods and Sampling Distributions</li> <li>Confidence Intervals</li> </ul>
Learning Outcomes	<ul> <li>Deviation)         <ul> <li>Frequency Distributions and Histograms</li> <li>Cross-tabulations and Contingency Tables</li> <li>Data Visualization Techniques (Charts, Graphs)</li> </ul> </li> <li>Inferential Statistics and Hypothesis Testing         <ul> <li>After learning the module, learners will be able to</li> <li>Understand and apply sampling methods and confidence intervals.</li> </ul> </li> <li>Perform hypothesis testing using t-tests, Chi-square tests, and ANOVA.</li> <li>Conduct correlation and regression analysis to examine relationships between variables.</li> <li>Use statistical software to perform inferential statistical analyses.</li> <li>Sampling Methods and Sampling Distributions</li> </ul>

Learning Outcomes	After learning the module, learners will be able to	
	Apply multivariate analysis techniques to complex data sets.	
	Conduct time series analysis and make forecasts based on data trends.	
	Use non-parametric methods for data that do not meet parametric assumptions.	
	Effectively report and interpret statistical results in a professional and scholarly manner.	
Content Outline	<ul> <li>Multivariate Analysis Techniques (Factor Analysis, Cluster Analysis)</li> <li>Time Series Analysis and Forecasting</li> <li>Non-parametric Methods</li> <li>Reporting and Interpreting Statistical Results</li> <li>Presenting Data in Research Papers and Reports</li> </ul>	

#### **Assessment Pattern:**

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

# For Practical subject Total Marks - 100 (Continuous Assessment)

#### Module 1: Hands-on software tutorials and exercises (Marks - 25)

- Data entry and cleaning assignment (10%)
- Exploratory data analysis project (15%)

# Module 2: Data visualization project (Marks - 25)

- Descriptive statistics report (15%)
- Data visualization assignment (10%)

# Module 3: Case studies and real-world data analysis projects (Marks - 25)

- Hypothesis testing assignment (10%)
- Correlation and regression analysis project (15%)

#### Module 4: Group projects and presentations (Marks - 25)

- Multivariate analysis project (10%)
- Final data analysis report and presentation (15%)

- Field, A. (2018). Discovering Statistics Using IBM SPSS Statistics (5th ed.). Sage Publications.
- 2. Agresti, A., & Finlay, B. (2018). **Statistical Methods for the Social Sciences** (5th ed.). Pearson.
- 3. Howell, D. C. (2016). **Fundamental Statistics for the Behavioral Sciences** (9th ed.). Cengage Learning.

- 4. Moore, D. S., McCabe, G. P., Alwan, L. C., & Craig, B. A. (2016). **The Practice of Statistics for Business and Economics** (4th ed.). W. H. Freeman.
- 5. Wooldridge, J. M. (2020). **Introductory Econometrics: A Modern Approach** (7th ed.). Cengage Learning.
- 6. Siegel, S., & Castellan, N. J. (1988). **Nonparametric Statistics for the Behavioral Sciences** (2nd ed.). McGraw-Hill.
- 7. Tabachnick, B. G., & Fidell, L. S. (2019). **Using Multivariate Statistics** (7th ed.). Pearson.
- 8. Field, A., Miles, J., & Field, Z. (2012). **Discovering Statistics Using R**. Sage Publications.
- 9. Gelman, A., Hill, J., & Vehtari, A. (2020). **Regression and Other Stories**. Cambridge University Press.
- 10. Jaccard, J., & Becker, M. A. (2009). **Statistics for the Behavioral Sciences** (5th ed.). Cengage Learning.

# **Semester III: Set Design (Pr)**

Major (Core): Set Design (Pr)

**Subject Code:** 314724

# **Course Description:**

This practical course focuses on hands-on learning and application of set design principles for theater, film, television, and events. Students will engage in the entire process of set design from conceptualization to execution, developing the skills necessary to create functional and visually compelling sets.

Course Title	Set Design (Pr)
Course Credits	2 Credits
Course Outcomes	After going through the course, learners will be able to
	Apply foundational principles of set design in practical projects.
	Develop skills in sketching, modelling, and using digital tools for set design.
	Apply hands-on experience in set construction techniques and materials.
	Collaborate effectively with team members in a design project.
	5. Create and present a complete set design project.
Module 1: Conceptua	alization and Visualization (15 hours)
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	Apply practical exercises to design set using digital tools
	2. Design, build and present scale models of set designs
Content Outline	<ul> <li>Developing a Concept for a Set Design</li> <li>Visual Research and Mood Boards</li> <li>Sketching and Drawing Techniques for Set Design</li> <li>Digital Tools for Set Design (e.g., CAD, SketchUp)</li> <li>Creating Storyboards and Scale Models</li> </ul>
Module 2: Technical	Execution and Collaboration (15 hours)
Learning Outcomes	After learning the module, learners will be able to

	Apply Practical exercises in creating and integrating scenery, props, and furniture
	2. Evaluate the integrating of light and sound into set designs
Content Outline	<ul> <li>Set Construction Techniques and Materials</li> <li>Understanding and Creating Scenery, Props, and Furniture</li> <li>Integrating Lighting and Sound Design</li> <li>Safety and Practical Considerations in Set Construction</li> <li>Collaborative Work with Directors, Producers, and Other Designers</li> <li>Problem-Solving and Adaptability in Set Design</li> </ul>

### For Practical 2 credit subject Total Marks – 50 (Continuous Assessment)

#### **Module 1: Concept Design (Marks – 25)**

 Conceptual set design project, including sketches, mood boards, and storyboards (50%)

# Module 2: Set Design project (Marks – 25)

• Technical execution of a set design project, including construction and integration of elements (50%)

- 1. Birn, R. (2002). The Art of Scenic Design: A Practical Guide to the Craft, the Tools, and the Techniques. Backstage Books.
- 2. Allen, D. (2017). The art of theatrical design: Elements of visual composition, methods, and practice. Routledge.
- 3. Appelbaum, R., & Bregna, G. (2012). **The creative director: Alternative rehearsal techniques**. Drama Publishers.
- 4. Brown, R. (2012). **The set design process**. McFarland.
- 5. Campbell, D. (2004). **Designing and painting for the theatre**. A & C Black.
- 6. Gillette, J. M. (2012). **Theatrical design and production: An introduction to scene design and construction, lighting, sound, costume, and makeup** (7th ed.). McGraw-Hill.
- 7. Ingham, R., & Covey, L. (2013). **Theatre backstage from A-Z**: Fourth edition. Drama Publishers.
- 8. Jones, R. (2004). **The dramatic imagination: Reflections and speculations on the art of the theatre**. Theatre Arts Books.
- 9. Kaye, D., & LeBrecht, J. (2009). Sound and music for the theatre: The art and technique of design (3rd ed.). Focal Press.
- 10. Pallin, G. (2010). **Stage management: The essential handbook**. Nick Hern Books.
- 11. Pecktal, L. (1995). **Designing and drafting for the theatre** (2nd ed.). McGraw-Hill
- 12. Wenger, W. (2009). **The Handbook of Set Design**. The Crowood Press.

# **Semester III: Designing for Special Population (Th)**

Major (Core): Designing for Special Population (Th)

**Subject Code:** 324711

**Elective Course** 

# **Course Description:**

This course provides MSc Interior Design students with the knowledge and skills necessary to design interior environments that meet the needs of special populations, including the elderly, children, individuals with disabilities, and other marginalized groups. The course emphasizes universal design principles, accessibility standards, and the importance of creating inclusive and supportive environments.

Course Title	Designing for Special Population (Th)	
Course Credits	4 Credits	
Course Outcomes	After going through the course, learners will be able to	
	Evaluate the unique needs of special populations.	
	Apply universal design principles to create inclusive environments.	
	3. Comply with accessibility standards and regulations.	
	Evaluate and select appropriate materials, furnishings, and technologies.	
	<ol><li>Design spaces that promote independence, safety, and well-being for special populations.</li></ol>	
Module 1: Introducti	on to Designing for Special Populations	
Learning Outcomes	After learning the module, learners will be able to	
	Define special populations and identify the importance of inclusive and universal design.	
	2. Apply universal design principles in interior design projects.	
	Employ a human-centered design approach to address user needs	
	Consider ethical implications in designing for special populations.	
Content Outline	<ul> <li>Overview of Special Populations</li> <li>Importance of Inclusive Design</li> <li>Universal Design Principles</li> <li>Human-Centered Design Approach</li> </ul>	
	Ethical Considerations in Design	

Module 2: Accessibil	ity Standards and Regulations
Learning Outcomes	After learning the module, learners will be able to
	Understand and apply key accessibility standards and regulations.
	2. Design spaces that accommodate physical disabilities,
	cognitive and sensory impairments.  3. Implement wayfinding and spatial orientation strategies.
	Navigate compliance and certification processes for accessible design.
Content Outline	Overview of Accessibility Standards (ADA, ANSI, ISO)
	Designing for Physical Disabilities
	<ul><li>Designing for Cognitive and Sensory Impairments</li><li>Wayfinding and Spatial Orientation</li></ul>
	Compliance and Certification Processes
Module 3 (Credit 1)	Designing for Special Population
Learning Outcomes	After learning the module, learners will be able to
	Create design solutions that meet the needs of the elderly.
	Design environments that are safe and stimulating for children & individuals with autism spectrum disorder.
	Develop design strategies for individuals with visual and hearing impairments.
	Incorporate multigenerational and intergenerational design concepts.
Content Outline	<ul><li>Designing for the Elderly</li><li>Designing for Children</li></ul>
	<ul> <li>Designing for Children</li> <li>Designing for Individuals with Autism Spectrum Disorder</li> <li>Designing for Individuals with Visual and Hearing</li> </ul>
	<ul><li>Impairments</li><li>Multigenerational and Intergenerational Design</li></ul>
Module 4: Technolog	y and Materials in Inclusive Design
Learning Outcomes	After learning the module, learners will be able to
	Integrate assistive technologies and smart home solutions in design.
	<ol><li>Apply ergonomic and anthropometric principles in designing for special populations.</li></ol>
	3. Design spaces that support mental health and well-being.
	4. Explore future trends and innovations in inclusive design.
Content Outline	Assistive Technologies and Smart Home Solutions
	Ergonomics and Anthropometrics in Special Populations     Sustainable and Health Promoting Materials
	<ul><li>Sustainable and Health-Promoting Materials</li><li>Designing for Mental Health and Well-being</li></ul>
	Future Trends in Inclusive Design

#### **Assessment Pattern:**

# <u>Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):</u>

# For Practical subject Total Marks - 50 (Continuous Assessment)

#### Module 1: Inclusive Design (Marks - 10)

- Assignment on the importance of inclusive design (15%)
- Case study analysis of an inclusive design project (10%)

### **Module 2: Accessibility project (Marks – 15)**

- Report on Accessibility compliance (15%)
- Design project addressing physical, cognitive, and sensory impairments (15%)

#### Module 3: Design projects (Marks - 10)

- Design proposal for a specific population (15%)
- Presentation on multigenerational design strategies (10%)

# Module 4: Group projects and presentations (Marks - 15)

- Assistive technology integration project (10%)
- Final inclusive design project and presentation (15%)

- Steinfeld, E., & Maisel, J. (2012). Universal Design: Creating Inclusive Environments. Wiley.
- 2. Leibrock, C. (1999). **Design for Dignity: Accessible Environments for People with Disabilities**. Whitney Library of Design.
- 3. Preiser, W. F. E., & Ostroff, E. (2001). **Universal Design Handbook**. McGraw-Hill Education.
- 4. Null, R. (2013). Universal Design: Principles and Models. CRC Press.
- 5. Story, M. F., Mueller, J. L., & Mace, R. L. (Eds.). (1998). **The Universal Design File: Designing for People of All Ages and Abilities**. NC State University, The Center for Universal Design.
- Sanford, J. A. (2012). Design for the Ages: Universal Design as a Rehabilitation Strategy. Springer Publishing Company.
- 7. Pullin, G. (2009). **Design Meets Disability**. MIT Press.
- 8. Farage, M. A., Miller, K. W., Ajayi, F., & Hutchins, D. (Eds.). (2012). **Designing** for Older Adults: Principles and Creative Human Factors Approaches. CRC Press.
- 9. Preiser, W. F. E., Smith, K. H., & Smith, K. (Eds.). (2011). **Design Interventions: Toward a More Humane Architecture**. Routledge.

# **Semester III: Research Project (Pr)**

Major (Core): Research Project (Pr)

**Subject Code:** 354721

# **Course Description:**

This course is designed to guide MSc Interior Design students through the process of conducting a comprehensive research project related to interior design. Students will learn how to formulate research questions, design and implement research methodologies, analyse data, and present their findings. The course aims to develop students' research skills and contribute to the body of knowledge in the field of interior design.

Course Title	Research Project (Pr)
Course Credits	4 Credits
Course Outcomes	After going through the course, learners will be able to
	<ol> <li>Develop a research proposal with clear objectives and methodology.</li> </ol>
	<ol><li>Conduct a literature review and contextualize the research within existing knowledge.</li></ol>
	3. Implement appropriate research methods and collect data.
	4. Analyze data using suitable techniques and tools.
	5. Present research findings in a coherent and scholarly manner.
Module 1: Research	Foundations and Proposal Development
Learning Outcomes	After learning the module, learners will be able to
	Develop clear and concise research questions and hypotheses.
	Design a research study with appropriate methodology.
	3. Plan & Write a comprehensive research proposal.
	4. Apply ethical principles in research.
Content Outline	Introduction to Research in Interior Design
	Formulating Research Questions and Hypotheses
	Research Design and Methodology
	Writing a Research Proposal
	Ethics in Research

Learning Outcomes	After learning the module, learners will be able to
	1. Conduct a thorough literature review on a chosen topic &
	Identify gaps and areas for further research.
	2. Develop a theoretical framework to guide the research.
	Appropriately cite sources and understand the importance of academic integrity.
	4. Design & Write a coherent literature review section.
Content Outline	Conducting a Literature Review
	Identifying Gaps in Existing Research
	Developing a Theoretical Framework
	Citing Sources and Avoiding Plagiarism
	Writing the Literature Review Section
Module 3: Data Colle	ction and Analysis
Learning Outcomes	After learning the module, learners will be able to
	1. Apply various data collection methods & design effective
	tools for data collection.
	2. Collect data systematically and ethically.
	3. Analyze data using appropriate methods and tools
	4. Interpret and present data findings.
Content Outline	<ul> <li>Qualitative and Quantitative Research Methods</li> <li>Designing Surveys, Interviews, and Observation Protocols</li> </ul>
	<ul> <li>Data Collection Techniques</li> <li>Data Analysis Methods (Statistical Analysis, Thematic Analysis)</li> </ul>
	<ul> <li>Using Software Tools for Data Analysis (SPSS, R, Excel)</li> </ul>
Module 4: Presenting	g Research Findings and Writing the Research Report
Learning Outcomes	After learning the module, learners will be able to
	Structure report and present research findings clearly and effectively.
	2. Apply visual tools to enhance the presentation of data.
	3. Write logical conclusions and recommendations.
	Prepare for and deliver an effective oral presentation during viva voce.
Content Outline	Structuring the Research Report
	Writing the Results and Discussion Sections
	<ul> <li>Visualizing Data (Charts, Graphs, Tables)</li> </ul>
	Writing Conclusions and Recommendations  Proposition for Concl. Propositions and Misses and Misses are described.
	Preparing for Oral Presentations and Viva voce

#### For Practical subject Total Marks – 100 (Continuous Assessment)

# **Module 1: Research Proposal (Marks – 25)**

- Preparation of Research proposal (15%)
- Assignment on Ethics in research (10%)

### Module 2: Review of Literature (Marks - 25)

- Collecting review of literature (10%)
- Literature review draft (15%)

# Module 3: Data Collection (Marks - 25)

- Data collection plan (10%)
- Data analysis report (15%)

# Module 4: Research Report (Marks - 25)

- • Research report draft (5%)
- Final research report (15%)
- Oral presentation/Viva voce (5%)

- 1. Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.). Sage Publications.
- 2. Bryman, A. (2016). **Social Research Methods** (5th ed.). Oxford University Press.
- 3. Babbie, E. R. (2020). **The Practice of Social Research** (15th ed.). Cengage Learning.
- 4. Yin, R. K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). Sage Publications.
- 5. Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). Research Methods for Business Students (8th ed.). Pearson.
- 6. Cohen, L., Manion, L., & Morrison, K. (2018). **Research Methods in Education** (8th ed.). Routledge.
- 7. Neuman, W. L. (2014). **Social Research Methods: Qualitative and Quantitative Approaches** (7th ed.). Pearson.
- 8. Patton, M. Q. (2015). **Qualitative Research & Evaluation Methods** (4th ed.). Sage Publications.
- 9. Kothari, C. R. (2004). **Research Methodology: Methods and Techniques** (2nd ed.). New Age International Publishers.
- 10. Robson, C., & McCartan, K. (2016). Real World Research (4th ed.). Wiley.

# **Semester IV: Professional Practices & Certification (Th)**

Major (Core): Professional Practices & Certification (Th)

**Subject Code:** 414711

# **Course Description:**

This course is designed to prepare Masters in Interior Design students for professional practice in the interior design industry. It covers ethical standards, advanced project management, effective communication skills, and industry-specific regulations, with an emphasis on practical applications and professional development.

Course Title	Professional Practices & Certification (Th)
Course Credits	4 Credits
Course Outcomes	After going through the course, learners will be able to
	Apply ethical standards and best practices in interior design.
	<ol><li>Develop advanced project management skills specific to interior design projects.</li></ol>
	Enhance professional skill in making proposals for tenders, contracts and estimation & client interaction skills.
	<ol> <li>Navigate industry-specific regulations and prepare for professional certification.</li> </ol>
Module 1: Ethics and	Professional Responsibility in Interior Design
Learning Outcomes	After learning the module, learners will be able to
	Define key ethical principles in interior design.
	Apply ethical decision-making to design scenarios.
	Apply professional codes of conduct and legal responsibilities.
	Foster sustainable and responsible design practices.
Content Outline	Introduction to Professional Ethics in Interior Design
	Ethical Decision-Making in Design Projects
	Professional Codes of Conduct (ASID, IIDA)
	Legal Responsibilities and Client Relationships
	Sustainable and Responsible Design Practices
Module 2: Writing Pr	oposals for Tenders, Contracts & Estimation
Learning Outcomes	After learning the module, learners will be able to
	Identify different types of tenders and contracts

	,
	Create well-structured and persuasive proposal content that addresses all client requirements.
	<ol><li>Apply principles of cost estimation to develop accurate and competitive budgets.</li></ol>
	4. Develop strategies for creating proposals that highlight unique selling points and competitive advantages.
Content Outline	Importance of estimating & Type of estimates
	<ul> <li>Unit and Mode of measurements, rate, analysis, bills of</li> </ul>
	quantities etc.
	Meaning of tender and contract, tender notice, tender
	document, types of tenders, earnest money etc.
	<ul> <li>Type of contract, articles of agreement, execution of</li> </ul>
	contract, scope of contract, duties and liabilities of
	designer and contractor, professional relations with client.
Module 3: Advanced	Project Management for Interior Designers
Learning Outcomes	After learning the module, learners will be able to
	Develop detailed project plans and schedules.
	Effectively manage project resources, budgets & risks in the project
	3. Coordinate seamlessly with contractors and suppliers.
	5. Coordinate seamlessiy with contractors and suppliers.
	4. Monitor and ensure quality control throughout the project lifecycle.
Content Outline	Comprehensive Project Planning and Scheduling
	Resource Management and Budgeting
	Risk Management in Design Projects
	Coordination with Contractors and Suppliers
	Project Monitoring, Reporting, and Quality Control
Module 4: Industry F	Regulations and Professional Development
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	Comply with industry regulations and codes & implement best practices for safety and accessibility in design.
	2. Navigate the professional certification process.
	3. Develop a career plan and professional network.
	Explore business development and entrepreneurial opportunities.
Content Outline	<ul> <li>Overview of Interior Design Regulations and Codes</li> <li>Building Codes, Accessibility Standards, and Safety Regulations</li> </ul>
	Compliance and Best Practices in Interior Design
	<ul> <li>Professional Certification (NCIDQ) and Continuing</li> </ul>
	Education
	<ul> <li>Career Planning, Networking, and Business Development</li> </ul>

#### For Practical subject Total Marks - 100 (Continuous Assessment)

# Module 1: Case study (Marks - 25)

- Case study analysis (15%)
- Reflective essay on ethical practice in design (10%)

### Module 2: Project (Marks - 25)

- Write tender related business letter.
- Prepare tenders and contracts for a residential site and Commercial sites.
- Preparing Bill of Quantities for any furniture.
- List units and modes of measurements of materials, labour and items of work.

# **Module 3: Group projects (Marks - 25)**

- Project management simulation (10%)
- Group project plan and presentation (15%)

#### Module 4: Classroom Project (Marks - 25)

- Assignment on Compliance and regulation (10%)
- Professional development and career plan (15%)

- 1. Harmon, S. K., & Kennon, K. E. (2019). The codes guidebook for interiors (7th ed.). Wiley.
- 2. Kendall, G. T. (2020). **Interior Design Project Management: Principles and Practices.** Fairchild Books.
- 3. Kilmer, R., & Kilmer, W. O. (2014). **Construction drawings and details for interiors** (3rd ed.). Wiley.
- 4. Martin, C., & Guerin, D. (2005). **The state of the interior design profession**. Fairchild Books.
- 5. Mitton, M. (2012). Interior design visual presentation: A guide to graphics, models, and presentation techniques (4th ed.). Wiley.
- 6. Piotrowski, C. M. (2013). **Professional practice for interior designers** (5th ed.). Wiley.
- 7. Pressman, A. (2006). **Professional practice 101: Business strategies and case studies in architecture.** Wiley.
- 8. Roshan Namavati (1984): Professional Practice (Estimating and Valuation).
- 9. Travis, J. (2013). **Ethics in Interior Design**. Prentice Hall.

# **Semester IV: Internship (Pr)**

**Internship: Internship (Pr)** 

**Subject Code:** 414722

# **Course Description:**

The Internship course offers MSc Interior Design students the opportunity to gain substantial practical experience in the field of interior design through supervised work placements in relevant industries. This extended internship allows students to deepen their understanding of interior design practice, develop advanced skills, and build professional networks. Through hands-on projects and immersive experiences, students will enhance their readiness for career advancement in the interior design profession.

Course Title	Internship (Pr)
<b>Course Credits</b>	8 (240 Hours)
Course Outcomes	After going through the course, learners will be able to
	Apply advanced theoretical knowledge and skills to real- world design projects.
	Develop advanced professional skills, work ethics, and leadership qualities.
	Establish strong connections and networks within the interior design industry.
	4. Engage in critical reflection and self-assessment to identify areas for continuous improvement and growth.
Module 1: Pre-Interr	nship Preparation and Goal Setting
Learning Outcomes	After learning the module, learners will be able to
	Apply advanced theoretical knowledge and skills to real- world design projects.
	Gain extensive practical experience across various aspects of interior design practice.
	Develop advanced professional skills, work ethics, and leadership qualities.
	Establish strong connections and networks within the interior design industry.
Content Outline	Defining Personal and Professional Objectives for the Internship
	Tailoring Resume, Portfolio, and Cover Letter for Placement Opportunities

	<u>,                                      </u>
	<ul> <li>Researching and Identifying Potential Internship Host         Organizations</li> <li>Developing Effective Networking Strategies</li> <li>Setting Learning Goals and Expectations for the Internship Experience</li> </ul>
Module 2: Immersive	e Internship Experience
Learning Outcomes	After learning the module, learners will be able to
	Familiarize oneself with the host organization's operations, culture, and projects.
	Adopt roles and responsibilities within the internship setting.
	Actively participate in real-world design projects and collaborative activities.
	Seek mentorship and guidance from experienced supervisors and peers.
Content Outline	<ul> <li>Introduction to the Host Organization's Structure, Culture, and Projects</li> <li>Understanding Internship Roles, Responsibilities, and Expectations</li> <li>Engaging in Real-World Design Projects and Collaborative Activities</li> <li>Applying Advanced Interior Design Concepts, Techniques, and Methodologies</li> <li>Seeking Mentorship and Professional Guidance from Supervisors and Peers</li> </ul>
Module 3: Profession	nal Development and Leadership
Learning Outcomes	After learning the module, learners will be able to
	Develop advanced design and presentation skills for professional settings.
	Enhance communication, negotiation, and client management abilities.
	Collaborate effectively & manage time, resources, and project deadlines efficiently and responsibly.
	4. Navigate ethical, legal, and regulatory considerations inherent in interior design practice.
Content Outline	<ul> <li>Developing Advanced Design and Presentation Skills</li> <li>Enhancing Communication, Negotiation, and Client Management Abilities</li> <li>Leading and Collaborating Effectively within Design Teams</li> <li>Managing Time, Resources, and Project Deadlines</li> </ul>

	, , , , , , , , , , , , , , , , , , , ,
	<ul> <li>Navigating Ethical, Legal, and Regulatory Considerations in Interior Design Practice</li> </ul>
Module 4: Reflective	Practice and Career Planning
Learning Outcomes	After learning the module, learners will be able to
	Reflect critically on internship experiences, achievements, and challenges.
	Evaluate progress towards initial learning objectives and goals set at the beginning of the internship.
	Gather feedback from supervisors, mentors, and peers to inform self-assessment.
	Develop a strategic career plan and set actionable goals for future advancement.
Content Outline	<ul> <li>Reflecting on Internship Experiences, Achievements, and Challenges</li> <li>Evaluating Progress Towards Initial Learning Objectives and Goals</li> <li>Gathering Feedback from Supervisors, Mentors, and Peers</li> <li>Identifying Strengths, Weaknesses, and Areas for Professional Growth</li> <li>Developing a Strategic Career Plan and Setting Future Goals</li> </ul>

# For Practical subject Total Marks - 100 (Continuous Assessment)

# Module 1: Internship Pre-preparation (Marks - 25)

- Internship goals and objectives statement (10%)
- Updated resume, portfolio, and cover letter submission (15%)

# Module 2: Progress Mid-Term (Marks - 25)

- Mid-internship progress report and evaluation (10%)
- Supervisor feedback and performance evaluation (15%)

# **Module 3: Professional Development (Marks - 25)**

- Professional development portfolio showcasing advanced skills (15%)
- Leadership and teamwork assessment (10%)

# **Module 4: Classroom Project (Marks - 25)**

- Final internship reflection report (15%)
- Presentation & Viva voce (10%)

#### References

1. Department Internship Manual. (2020).

# **Semester IV: Project Management (Th)**

Major (Core): Project Management (Th)

**Subject Code:** 424711

# **Course Description:**

This course is designed to equip MSc Interior Design students with the project management skills necessary to successfully plan, execute, and complete interior design projects. The course covers essential aspects of project management, including project planning, resource management, risk management, and project monitoring and evaluation, with a focus on the specific needs of the interior design industry.

Course Title	Project Management (Th)
Course Credits	4 Credits
Course Outcomes	After going through the course, learners will be able to
	<ol> <li>Develop comprehensive project plans tailored to the projects.</li> </ol>
	2. Effectively manage resources, budgets, and timelines.
	Identify and mitigate risks in the projects & Monitor and evaluate project progress and outcomes.
	4. Coordinate effectively with clients, contractors, and other stakeholders.
Module 1: Project Pl	anning and Scheduling
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	Understand the project life cycle and its phases.
	2. Create a detailed work breakdown structure.
	3. Develop project schedules using various techniques.
	4. Utilize project planning tools effectively.
	4. Othize project planning tools effectively.
Content Outline	<ul> <li>Introduction to Project Management in Interior Design</li> <li>Project Life Cycle and Phases</li> </ul>
Content Outline	<ul> <li>Introduction to Project Management in Interior Design</li> <li>Project Life Cycle and Phases</li> <li>Defining Project Scope and Objectives</li> </ul>
Content Outline	<ul> <li>Introduction to Project Management in Interior Design</li> <li>Project Life Cycle and Phases</li> <li>Defining Project Scope and Objectives</li> <li>Work Breakdown Structure (WBS)</li> </ul>
Content Outline	<ul> <li>Introduction to Project Management in Interior Design</li> <li>Project Life Cycle and Phases</li> <li>Defining Project Scope and Objectives</li> </ul>

Learning Outcomes	After learning the module, learners will be able to
	Allocate and manage resources efficiently.
	Estimate project costs and develop budgets.
	Handle procurement and vendor relationships & manage human resources.
	4. Prioritize and manage multiple projects concurrently.
Content Outline	Resource Allocation and Management
	Estimating Costs and Budgeting
	Procurement and Vendor Management
	Human Resource Management in Projects
	Managing Multiple Projects and Prioritization
Module 3: Risk Mana	gement in Interior Design Projects
Learning Outcomes	After learning the module, learners will be able to
	Identify potential risks in the projects & conduct risk assessments and analyses.
	2. Develop comprehensive risk management plans.
	3. Implement strategies to mitigate identified risks.
	4. Monitor and control risks throughout the project.
Content Outline	<ul> <li>Identifying Project Risks</li> <li>Risk Assessment and Analysis</li> <li>Developing Risk Management Plans</li> <li>Implementing Risk Mitigation Strategies</li> <li>Monitoring and Controlling Risks</li> </ul>
Module 4: Project Mo	onitoring, Evaluation, and Closure
Learning Outcomes	After learning the module, learners will be able to
	Monitor project progress using key performance indicators and milestones.
	Ensure quality control and assurance & prepare comprehensive project reports and documentation.
	3. Communicate effectively with stakeholders.
	4. Manage project closure and handover processes.
Content Outline	<ul> <li>Monitoring Project Progress (KPIs, Milestones)</li> <li>Quality Control and Assurance</li> <li>Project Reporting and Documentation</li> <li>Stakeholder Communication and Management</li> <li>Project Evaluation and Lessons Learned</li> </ul>

#### For Practical subject Total Marks - 100 (Continuous Assessment)

#### Module 1: Project Scope & schedule (Marks - 15)

- Project scope statement and WBS (15%)
- Project schedule creation using software tools (10%)

# Module 2: Project (Marks - 10)

- Resource allocation plan (10%)
- Budget development assignment (15%)

#### Module 3: Classroom Assignment (Marks - 10)

- Risk identification and assessment report (15%)
- Risk management plan (10%)

# Module 4: Project (Marks - 15)

- Project progress report (10%)
- Final project evaluation and closure report (15%)

- 1. Ramroth, W. G. (2006). **Project Management for Design Professionals**. Kaplan AEC Education.
- Mantel, S. J., Meredith, J. R., Shafer, S. M., & Sutton, M. M. (2011). Project
   Management in Practice (4th ed.). Wiley.
- 3. Larson, E. W., & Gray, C. F. (2021). **Project Management: The Managerial Process** (8th ed.). McGraw-Hill Education.
- 4. Kerzner, H. (2017). **Project Management: A Systems Approach to Planning, Scheduling, and Controlling** (12th ed.). Wiley.
- 5. Pinto, J. K. (2019). **Project Management: Achieving Competitive Advantage** (5th ed.). Pearson.
- Meredith, J. R., Shafer, S. M., & Mantel, S. J. (2017). Project Management: A Strategic Managerial Approach (10th ed.). Wiley.
- 7. Schwalbe, K. (2021). **Information Technology Project Management** (9th ed.). Cengage Learning.
- 8. Heldman, K. (2018). PMP: Project Management Professional Exam Study Guide (9th ed.). Sybex.
- 9. Verzuh, E. (2021). **The Fast Forward MBA in Project Management** (6th ed.). Wiley.
- 10. Lock, D. (2020). **Project Management** (11th ed.). Routledge.
- 11. Heagney, J. (2016). **Fundamentals of Project Management** (5th ed.). AMACOM.
- 12. Levine, H. A. (2002). **Practical Project Management: Tips, Tactics, and Tools**. Wiley.

# **Semester IV: Research Project – Dissertation**

**Research Project: Research Project - Dissertation** 

**Subject Code:** 454731

# **Course Description:**

The Research Project - Dissertation course is the pinnacle of the MSc Interior Design program, offering students the opportunity to delve deeply into a topic of their choose within the field of interior design. Under the mentorship of a faculty advisor, students will conceive, execute, and document an extensive research project that contributes to the advancement of knowledge in interior design. This course emphasizes critical analysis, research methodology, and scholarly writing, preparing students for careers in academia, research, or professional practice.

Course Title	Research Project - Dissertation
Course Credits	6 Credits
Course Outcomes	After going through the course, learners will be able to
	Develop a well-defined research question or hypothesis within the scope of interior design.
	Design and implement a robust research methodology suitable for investigating the research question.
	Collect, analyze, and interpret data using appropriate quantitative or qualitative research methods.
	4. Demonstrate proficiency in scholarly writing, including literature review, methodology description, and results discussion.
Module 1: Research	Proposal Development
Learning Outcomes	After learning the module, learners will be able to
	Define a clear and concise research question and objectives.
	Conduct a thorough review of existing literature and establish a theoretical framework.
	Design an appropriate research methodology and justify methodological choices.
	4. Address ethical considerations and develop a detailed research proposal outlining the research plan and timeline.
Content Outline	<ul> <li>Formulating a Research Question and Objectives</li> <li>Review of Literature and Theoretical Framework</li> </ul>

	Research Design and Methodology
	Ethical Considerations and Institutional Approval
	Developing a Comprehensive Research Proposal
Module 2: Data Colle	ction and Analysis
Learning Outcomes	After learning the module, learners will be able to
	Implement data collection techniques and ensure data quality and integrity.
	Recruit participants and obtain informed consent in accordance with ethical guidelines.
	<ol> <li>Manage and analyze collected data using appropriate statistical or qualitative analysis methods.</li> </ol>
	4. Interpret research findings derived from quantitative and qualitative data analysis & present data analysis results
<b>Content Outline</b>	Selection of Data Collection Techniques and Instruments
	Participant Recruitment and Informed Consent
	Data Management and Quality Assurance
	Quantitative Data Analysis Methods
	Qualitative Data Analysis Techniques
Module 3: Research l	Execution and Progress Reporting  After learning the module, learners will be able to
_	,
	<ol> <li>Execute research activities according to the approved research plan and timeline.</li> </ol>
	Manage project timelines and milestones effectively to ensure timely progress.
	<ol> <li>Identify and address challenges encountered &amp; maintain open communication with supervisors and seek guidance as needed.</li> </ol>
	Prepare and deliver progress reports that document research execution and findings.
Content Outline	<ul> <li>Executing Research Activities According to Plan</li> <li>Project Management and Timelines</li> <li>Addressing Challenges and Modifying Research Protocols</li> <li>Communicating Progress with Supervisors</li> <li>Preparing and Delivering Progress Reports</li> </ul>
Module 4: Data Inter	pretation and Results Presentation
Learning Outcomes	After learning the module, learners will be able to
	Analyze and interpret research findings derived from collected data.

2. Present research results clearly and effectively through written and oral means.  3. Utilize data visualization techniques to enhance the presentation of results.  4. Discuss the implications and limitations of the study findings.  Content Outline  • Analyzing and Interpreting Research Findings • Presenting Results Effectively • Utilizing Data Visualization Techniques • Discussing Implications and Limitations of the Study • Drafting the Results Section of the Dissertation  Module 5: Dissertation Writing and Revision  Learning Outcomes  After learning the module, learners will be able to  • Structure the dissertation manuscript according to established academic conventions.  • Demonstrate proficiency in scholarly writing and citation practices.  • Revise and edit the dissertation draft for clarity, coherence, and academic rigor.  • Incorporate feedback received from supervisors and peers to improve the quality of the dissertation & submit manuscript.  Content Outline  • Structuring the Dissertation: Introduction, Methodology, Results, Discussion, Conclusion • Academic Writing Style and Citation Practices • Revising and Editing the Dissertation Draft • Incorporating Feedback from Supervisors and Peers • Finalizing the Dissertation for Submission  Module 6: Dissertation Viva Voce and Presentation  Learning Outcomes  After learning the module, learners will be able to  • Prepare and deliver a comprehensive dissertation defense presentation that effectively communicates research findings and contributions.  • Respond confidently and professionally to questions and critiques posed by the examining committee.  • Reflect on the research journey, including challenges faced, lessons learned, and personal growth experienced throughout the process.  • On successful completion of the dissertation, acknowledge the support received from mentors, peers, and loved ones.
Content Outline
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Results, Discussion, Conclusion
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Celebrating the Completion of the Dissertation

#### For Practical subject Total Marks – 100 (Continuous Assessment)

#### Module 1: Research Proposal (Marks - 25)

- Research proposal submission (15%)
- Proposal presentation (10%)

#### Module 2: Data collection (Marks - 25)

- Data collection and management plan: (15%)
- Data analysis report: (10%)

#### Module 3: Progress report (Marks - 25)

- Progress report on research execution (15%)
- Presentation on research progress (10%)

# Module 4: Project (Marks - 25)

- Presentation on data interpretation and results (10%)
- Results section draft of the dissertation (15%)

# **Module 5: Progress report (Marks – 25)**

- Dissertation draft submission (15%)
- Peer review and feedback (10%)

### Module 6: Project (Marks - 25)

- Dissertation viva voce presentation evaluation by the examining committee.
- Responses to questions and critiques during the viva.

- Creswell, J. W., & Creswell, J. D. (2018). Research Design: Qualitative,
   Quantitative, and Mixed Methods Approaches (5th ed.). Sage Publications.
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