School of Architecture and planning

**University of Management and technology**

**Course Outline (on OBE)**

**Bachelor of Interior Architecture**

**UMT’s Vision**

**Our Vision is... Learning**

It defines our existence, inspires all stakeholders associated with us, creates a powerful momentum inside, and responds to the challenges outside. It continues to evolve as present captures new realities and foresight to unfold new possibilities. All in an incessant attempt to help individuals and organizations discover their God-given potentials to achieve Ultimate Success actualizing the highest standards of efficiency, effectiveness, excellence, equity, trusteeship and sustainable development of global human society.

**UMT Mission**

**Our Mission is.... Leading**

We aspire to become a learning institution and evolve as the LEADING COMMUNITY for the purpose of integrated development of the society by actualizing strategic partnership with stakeholders, harnessing leadership, generating useful knowledge, fostering enduring values, and projecting sustainable technologies and practices.

**Mission of the School**

The mission of the School is to provide the best leadership in the fields of the built environment; particularly in the development, management and innovation in the fields of architecture, urban planning and related specializations and sub-specializations

**Mission of the Department**

At the Department of Architecture our mission is to challenge the participants to develop their abilities in solving complex problems by thinking creatively & informed decision making as a core of their professional schooling. Offering them a diverse interdisciplinary and meticulous program of studies led by an adroit faculty in a comprehensive studios or class environment and preparing them for leadership roles in the field of Architecture, Construction, Landscape, Built Environment and community development.

**Course Code: Course Title: Interior Illumination Techniques**

|  |  |
| --- | --- |
| Program | Bachelor of Interior Architecture |
| Credit hours | 3+0 |
| Duration | 16 Weeks |
| Prerequisites | None |
| Resource Person |  |
| Counseling Timing | As per time table |
| Contact | https://mail.google.com/mail/u/0/images/cleardot.gif |

**Chairman/Director Program signature………………. Dean’s signature…………**

**Date………………………………….**

**Program Educational Objectives (PEOs):**

**PEO-1**: Able to interpret and elaborate on design knowledge effectively utilizing communication, graphical, and computer skills to convey design content comprehensively.

**PEO-2**: Possess strong analytical skills and ability to evaluate design challenges critically, proposing innovative solutions that address functional, aesthetic, and contextual considerations.

**PEO-3**: Able to apply principles of interior architecture in professional settings, showcasing creativity, technical proficiency, and adherence to ethical standards.

**Program Learning outcomes (PLOs)**

**PLO 1: Design Fundamentals:** Develop the ability to conceive and execute innovative and aesthetically pleasing interior spaces that meet both functional requirements and artistic standards.

**PLO 2: Design Development and Analysis:** Integrate knowledge from various disciplines to analyze complex design problems and demonstrate proficiency in conceptualizing and developing design solutions through various stages.

**PLO 3: Technical and Technological Competence:** Acquire a comprehensive understanding of construction methods, materials, and building systems coupled with expertise in utilizing industry-standard software and tools for design, drafting, modeling, and rendering, to produce precise and detailed technical drawings and specifications.

**PLO 4: Effective Communication and Visual Representation:** Enhance ability in expressing design concepts and solutions through verbal and written communication, while adeptly employing visual representation tools like sketches, renderings, and digital models.

**PLO 5: Sustainability and Environmental Responsibility:** Demonstrate a commitment to sustainable design practices by understanding and applying principles of environmental stewardship, energy efficiency, and resource conservation in interior architecture projects.

**PLO 6: Professional Readiness:** Prepare for professional practice in interior architecture by imparting knowledge of ethical, legal, and business aspects, while fostering skills in project management, client communication, collaboration with other design professionals, and adherence to industry standards.

**Course Overview:**

This course, "Interior Illumination Techniques," provides a comprehensive exploration of lighting principles and their application in interior architecture. Students will learn to design and implement lighting solutions that enhance the aesthetic and functional qualities of interior spaces. The course covers natural and artificial lighting, lighting technologies, and the psychological and environmental impacts of illumination. By the end of the course, students will be equipped with the knowledge and skills to create innovative lighting designs that comply with international standards and regulations.

**Course Learning outcomes (CLO’s)**

1. Understand Lighting Fundamentals: Demonstrate a comprehensive understanding of the principles of natural and artificial lighting and their application in interior spaces.
2. Design Lighting Solutions: Develop and implement creative and effective lighting designs that enhance the functionality and aesthetics of interior environments.
3. Evaluate Lighting Technologies: Analyze and compare various lighting technologies and their suitability for different interior applications.
4. Integrate Environmental and Psychological Aspects: Incorporate environmental sustainability and psychological impacts into lighting design practices.

**Mapping of CLOs to Program’s Learning outcomes (PLO’S)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Semester** | **Course Code** | **Title** | **Course Learning outcomes** | **PLO-1 Design Fundamentals** | **PLO-2 Design Development and Analysis** | **PLO-3 Technical and Technological Competence** | **PLO-4 Effective Communication and Visual Representation** | **PLO 5: Sustainability and Environmental Responsibility** | **PLO6: Professional Readiness** |
| **SEMESTER** |  | **Interior Illumination TechniquesMETHODOLOGY** | Understand Lighting Fundamentals: Demonstrate a comprehensive understanding of the principles of natural and artificial lighting and their application in interior spaces. | √ |  |  |  |  |  |
| Design Lighting Solutions: Develop and implement creative and effective lighting designs that enhance the functionality and aesthetics of interior environments. |  |  | √ |  |  |  |
| Evaluate Lighting Technologies: Analyze and compare various lighting technologies and their suitability for different interior applications. |  | √ |  |  |  |  |
| Integrate Environmental and Psychological Aspects: Incorporate environmental sustainability and psychological impacts into lighting design practices. |  |  |  |  | √ |  |

**Grade Evaluation Criteria**

Following is the criteria for the distribution of marks to evaluate final grade in a semester.

**Marks Evaluation Marks in percentage**

Assignments 10%

Quiz 15%

Mid Term 25%

Final exam 50%

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Total 100%

**Learning Methodology:**

* Lectures: Interactive lectures to explain theoretical concepts and principles of interior illumination.
* Workshops: Hands-on sessions to practice lighting design techniques and experiment with different lighting technologies.
* Case Studies: Analysis of real-world lighting projects to understand best practices and innovative solutions.
* Assignments and Projects: Practical assignments and a final project to apply learned concepts to real-world scenarios.
* Guest Lectures: Insights from industry experts to provide contemporary perspectives on lighting design.

**Recommended Books:**

* "Lighting Design Basics" by Mark Karlen and James Benya
* "The Architecture of Light: Architectural Lighting Design Concepts and Techniques" by Sage Russell
* "Interior Lighting for Designers" by Gary Gordon

**Reference Books:**

* "Daylighting Handbook I: Fundamentals and Designing with the Sun" by Christoph Reinhart
* "Lighting: Interior and Exterior" by Robert Bean
* "Lighting Design: A Perception-Based Approach" by Christopher Cuttle

**Calendar of Course contents to be covered during semester**

**Course code Course title:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Course Contents** | **CLO** | **Reference Chapter(s)** |
| 1 | Introduction to Interior Illumination  Overview of the course, importance of lighting in interior architecture, basic concepts. |  |  |
| 2 | Principles of Light and Color  Understanding light properties, color theory, and their impact on interior spaces. |  |  |
| 3 | Natural Lighting  Techniques for maximizing natural light, designing with daylight, and energy efficiency. |  |  |
| 4 | Artificial Lighting Technologies  Overview of different lighting technologies, including LED, fluorescent, and incandescent. |  |  |
| 5 | Lighting Design Process  Steps in the lighting design process, from concept to implementation. |  |  |
| 6 | Psychological and Physiological Impacts of Lighting  How lighting affects mood, productivity, and well-being. |  |  |
| 7 | Environmental and Sustainable Lighting Practices  Sustainable lighting solutions, energy-efficient designs, and environmental impact. |  |  |
| 8 | Case Studies in Lighting Design  Analysis of successful lighting projects, discussing challenges and solutions. |  |  |
| 9 | **Mid Term Exam** |  |  |
| 10 | Advanced Lighting Design Techniques  Exploring advanced techniques, including accent lighting, task lighting, and ambient lighting. |  |  |
| 11 | lighting Control Systems  Introduction to lighting control systems, automation, and smart lighting solutions. |  |  |
| 12 | Lighting for Specific Spaces:  Residential  Designing lighting solutions for residential spaces, including kitchens, living rooms, and bedrooms. |  |  |
| 13 | Lighting for Specific Spaces:  Commercial lighting design for commercial spaces, such as offices, retail stores, and hospitality. |  |  |
| 14 | Lighting for Specific Spaces:  Institutional Solutions for educational institutions, healthcare facilities, and public buildings. |  |  |
| 15 | Final Project Work  Students work on final projects, applying all learned concepts to a comprehensive lighting design. |  |  |
| 16 | Project Presentations and Review  Presentation of final projects, peer reviews, and instructor feedback. |  |  |

This course outline aims to provide a comprehensive framework for understanding and applying Illumination techniques in interior architecture, ensuring students are well-prepared for the evolving demands of the industry.