**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:  **Computer Applications in Interior Architecture**

|  |  |
| --- | --- |
| Program | BS. INTERIOR ARCHITECTURE |
| Credit Hours | 0+2 |
| Duration | 16 Weeks |
| Prerequisites | ----- |
| Resource Person |  |
| Counseling Timing |  |  |
| Contact |  |  |

**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 Description**:

Drawing Techniques-I is an introductory course designed to develop fundamental drawing skills and techniques. Students will explore various drawing materials and methods, focusing on observation, representation, and expression. The course aims to build a strong foundation in drawing that will be essential for further study in visual arts.

**Course learning outcomes (CLO’s)**

After studying this course, the students will be able to better understand:

1. Demonstrate fundamental principles and concepts of computer applications in design, including terminology, software functionality, and industry standards. (C2)
2. Show proficiency in using software, for drafting skills through drawing and modifying commands. (P1)
3. Display Software presentation skills to generate visual presentations for projects through rendering Techniques (P4).
4. Build 3D Models using tools, commands, surfaces and objects in software proficiently (P-3).

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Title** | **Course Learning outcomes** | **PLO 1: Design knowledge** | **PLO 2: Design Analysis and development** | **PLO3: : Digital Tools and technologies** | **PLO 4: Communication skill** | **PLO 5:** E**thical, cultural, and sustainable principles** | **PLO 6: Project Management:** |
|  |  | Demonstrate fundamental principles and concepts of computer applications in design, including terminology, software functionality, and industry standards. (C2) |  |  | √ |  |  |  |
| Show proficiency in using software, for drafting skills through drawing and modifying commands. (P1) |  |  | √ |  |  |  |
| Display Software presentation skills to generate visual presentations for projects through rendering Techniques (P4). |  |  |  | √ |  |  |
| Build 3D Models using tools, commands, surfaces and objects in software proficiently (P-3). |  |  | √ |  |  |  |

**Learning Methodology:**

Lectures as provided in the schedule of the semester activities, along with practical demonstration in computer lab would done. New techniques would be incorporated along with the Moodle. Presentations and demonstrations will be given.

**Grade Evaluation Criteria**

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

|  |  |
| --- | --- |
| **Marks Evaluation** |  **Marks in percentage** |
| Quizzes | 10% |
| Assignments | 50% |
| Mid Term | 15% |
| Final Term | 25% |
| Total | **100%** |

 **Recommended Text Books:**

**Autodesk AutoCAD 2020 Fundamentals**

* Publisher: SDC Publications (April 24, 2019)
* Language: English
* ISBN-10: 1630572594
* ISBN-13: 978-1630572594

**SketchUP for Interior Design: 3D Visualizing, Designing, and Space Planning**

* Page Numbers Source ISBN: 1118627695
* Publisher: Wiley; 1 edition (February 12, 2014)
* Publication Date: February 12, 2014
* Language: English
* ASIN: B00IG6M2ZQ

**Reference Books:**

**The SketchUP® Book, Version 5**

By Bonnie Roskes, P.E. with Bob deWitt, MFA, MA

Third Edition. Copyright 2005, Bonnie Roskes

|  |  |  |
| --- | --- | --- |
|  **Week** |  **Course Contents**  | **CLO’s** |
| 1 | Quick introduction to auto cad interface. User interface. Toolbars, status bars, quick settings and options.Select and delete objects, use dynamic input to enter commands, zooming and panning. | C1 |
| 2 | Use precision drawing tools such as grid. Object snap, and polar tracking to create measurements in drawings.Introduction to drawing toolbars, line, circle, poly line cloud and ellipse tool etc. | C2 |
| 3 | Modifying object properties, copy tool, mirror, offset tool, move tool, rotate tool, scale tool, chamfer tool, fillet tool. Stretch break tool. | C2 |
| 4 | Learn how to organize drawings with layers. | C2 |
| 5 | The dimensioning tools. Adding dimensions using tools from the command line, linear, aligned, circle, arc length, dimension style, dimension style, tolerances, and properties. | C2 |
| 6 | Inserting blocks into a drawing.Introduction to Explode tool, Purge tool, converting and generating blocks. | C2 |
| 7 | Introduction to Photoshop. Open save import export auto cad drawings.Introduction to toolbars and different commands to create various effects. | C1 |
|  8 | Draw a poster using all those commands. **Tools and Options Panel****Marquee Tool, Crop, Lasso, Magic Wand, the Move Tool, Text, Line Tool****Layers/ Resolution / Dimensions of Image / Size of File, Tonal Adjustment.** | C3 |
| **9** | **MID TERM** |  |
| 10 | Rendering a plan in Photoshop using different techniques. | C3 |
| 11 | Introduction to 3d drawings on AutoCAD | C4 |
| 12 | Introduction to SketchUPDrawing and using the pencil toolDrawing basic geometric shapesDrawing with measurementsDrawing circles and arcsUnderstanding the benefits of sticky GeometryDiscovering layersMeasuring items inside SketchUPInformation database | C4 |
| 13 | Modelling techniquesUsing Push PullUsing Follow MeIntersecting GeometryCopy and Offset Faces, edges and polygonsHow to use polygons in 2D drawings | C4 |
| 14 | Paint bucketMaterials EditorTextures and bitmapsGetting to understand the Materials EditorPositioning texturesLimits to graphics and bitmaps | C4 |
| 15 | Create new scenesIntroduction to animationPrinting from SketchUPExporting 2D images or PDF | C4 |
| 16 | **END TERM EXAM** |  |