Department of City & Regional Planning,
School of Architecture & Planning,
University of Management and Technology
Course Outline – Computer Aided Design

UMT 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 unfolds 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.

Vision and Mission Statements of the City & Regional Planning Department

The vision statement of the Department of City & Regional Planning is:

- To be a leading City & Regional Planning Department aiming for excellence in learning, research and innovation with integrity and equity.

The mission of the Department of City & Regional Planning is:

- The mission is to establish a very important program concerning the development and management of the built environment. This is entitled as Bachelor of Science in City and Regional Planning. The studies will be focused on needs of the nation in the field of built environment of our regional, urban and rural settlements. The students are required to be equipped with knowledge of advanced skills, latest knowledge and technology used in the planning and management of various settlements. They need to be fully aware of the current world, new trends and direction of the developments in future.

Program Educational Objectives (PEOs)

Five years after graduating, the graduates of the program should be characterized by the following three features:

PEO-1:

The graduates will apply learnt knowledge and skills of spatial, temporal, and physical planning.

PEO- 2:

The graduates will propose and execute appropriate solutions to complex planning and urban issues and adapt recent developments in planning focusing on research, creativity, and

innovation.

PEO-3:

The graduates will reflect core ethical values in their professional conduct and become responsible members of society.

Program Learning Outcomes (PLOs) / Graduate Attributes

Graduates of the BS CRP program at UMT are expected to have acquired and developed the following set of knowledge, skills, and personality traits (these are also referred to as graduate attributes)

PLO 1: Planning Knowledge

An ability to demonstrate knowledge of contemporary planning theories and conceptual ideologies and models.

PLO 2: Designing Analysis

An ability to identify and investigate problems, construct theoretical framework through literature review and case studies and synthesize information.

PLO 3: Professional Skills

Apply planning knowledge in design/planning process to synthesize and articulate multi-faceted variables to generate an integrated solution based on societal and environmental considerations.

PLO 4: Usage of IT

An ability to select and apply appropriate techniques and resources, including prediction and modelling, to complex planning activities.

PLO 5: Communication

Convey ideas and solutions of planning/urban problems in verbal, written and graphical modes, effectively.

PLO 6: Leadership

Ability to opt a role for affective coordination within the team & collaboration with the community.

PLO 7: Professional Ethics

An ability to apply ethical principles and professional codes following the social norms to the best interest of the society.

PLO 8: Lifelong Learning

Capable of acquiring knowledge, skill, and information self-reliantly from diverse sources and appreciating new ideas and concepts.

Course Learning Outcomes:

After studying this course, the learners will be able to:

1. Draw basic 2D drawings in AutoCAD.
2. Develop 3D models using Google Sketch-Up.
3. Use digital tools in planning and designing houses and housing schemes.

CODE	NAME	CLO	CLO Type
103.1	103.C1	Draw basic 2D drawings in AutoCAD.	P2
103.2	103.C2	Develop 3D models using Google Sketch-Up.	P2
103.3	103.C3	Use digital tools in planning and designing houses and housing schemes.	P5

Tittle	Course Learning Outcomes	PLO 1: Planning Knowledge	PLO 2: Designing Analysis	PLO 3: Professional Skills	PLO 4: Usage of IT	PLO 5: Communication	PLO 6: Leadership	PLO 7: Professional Ethics	PLO 8: Lifelong Learning
CAD	Draw basic 2D drawings in AutoCAD.			✓					
	Develop 3D models using Google Sketch-Up.			✓					
	Use digital tools in planning and designing houses and housing schemes.			✓					

Proposed Teaching Methodology

- Demonstration
- Drawing and drafting Assignments
- Use of Software
- Assessment

Proposed Assessment (practical, 100%)

- Assignments, Project, viva voce, etc.

Recommended Text Book

- Omura. G., & Benton, B. (2017), *Mastering Auto CAD 2017*, John Willey & Sons Inc., Indiana.
- CADArtifex (2016), *Auto CAD 2017: A Power Guide for Beginners and Intermediate Users.*
- Stolins, F., Mardar, C., Marotti& Murphy, *Essentials of Computer Designs*, Labyrinth Publication, ISBN:1-59136-027-7

COURSE CALENDAR

Week	Theory	CLO
1	**Introduction to course** **Installation of software**	1
2	**Introduction to Drawing Tools** Line, Polyline, Circle etc. **Name writing exercises**	1
3	**Introduction to Modifying Tools** Copt, Move, Stretch, Scale etc. **Class exercises**	1
4	**Introduction to Layers and Annotation** Line weights, Dimensions etc. **Annotation exercises**	1
5	**Blocks and Group** Use of fixtures and editing of fixtures. **Class exercises**	1
6-7	**Project**	3
8	**Mid Term Exam**	
9	**Introduction to 3D Modelling.** Software installation. **Introduction to software interface.**	2
10	**Introduction to Drawing and Interaction Tools in Sketch Up** **Exercises**	2
11	**Use of Group and Component** **Exercises**	2
12	**Creation of Materials and use of warehouse** **Exercises**	2
13	**Model Export and Rendering Output**	2
14-15	**Project**	3
16	**End Term Exam**	