Department of City & Regional Planning
School of Architecture & Planning
University of Management and Technology

Course Outline – Mapping & Remote Sensing

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 the 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 Bachelor of Science in City and Regional Planning. The studies will be focused on the 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 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 for 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 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 (CLOs)

- Understand the theoretical aspect of mapping and remote sensing.
- Explore how the mapping methods are useful in urban planning profession.
- Learn mapping software's.

Course learning outcomes (CLO's)

CODE	NAME	CLO	CLO Type
111.1	111.C1	Understand the theoretical aspect of mapping and remote sensing.	C3
111.2	111.C2	Explore how the mapping methods are useful in urban planning profession	C3
111.3	111.C3	Learn mapping software's.	A4

Tittle	Course Learning Outcomes	PLO 1: Planning Knowledge	PLO 2: Professional Skills	PLO 3: Usage of IT	PLO 4: Communication	PLO 5: Critical Thinking	PLO 6: Leadership and Professional Ethics	PLO 7: Lifelong Learning
Mapping & Remote Sensing	1. Understand the theoretical aspect of mapping and remote sensing	✓						
	2. Explore how the mapping methods are useful in urban planning profession.		✓	✓				
	3. Learn mapping software's.			✓				

PROGRAM	Bachelor of City & Regional Planning
COURSE	CRP-111- MAPPING & REMOTE SENSING
CREDIT HOURS	2 + 1
LECTURE SCHEDULE	**Tuesday** 01:30 pm -5:00 pm **Friday** **9:30 – 11:45**
PREREQUISITES	None
RESOURCE PERSON	
COUNSELING TIMING	
CONTACT	

Course Outline Mapping & Remote Sensing

LECTURE WEEKS	CLO	TOPICS TO BE COVERED
WEEK 1	1	INTRODUCTION TO MAPPING +TYPES Practical: Types of Maps, its Advantages and Disadvantages describe in the bullets
WEEK 2	1	ESSENTIALS OF MAPPING (LAYOUT DESIGNING)
WEEK 3	3	COORDINATE SYSTEM (PROJECTED + GEOGRAPHIC)
WEEK 4	2,3	SCALING PRACTICAL: MAP ENLARGEMENT + MAP REDUCTION BY HAND
WEEK 5	3	GOOGLE EARTH: LATITUDE AND LONGITUDE PRACTICAL: MARK POINTS ON GOOGLE EARTH
WEEK 6	1,3	CONCEPT OF CONTOURS, ITS CHARACTERISTICS PRACTICAL: GUEST SPEAKER
WEEK 7	1	UTM PROJECTION PRACTICAL: QUIZ + ASSIGNMENT SUBMISSION
WEEK 8		**MID TERM EXAMINATION**
WEEK 9	1	INTRODUCTION TO REMOTE SENING, ITS HISTORY, PURPOSE PRACTICAL: WRITE DOWN THE SUMMARY OF AN ARTICLE UPON REMOTE SENSING
WEEK 10	1	TYPES OF REMOTE SENSING (ACTIVE + PASSIVE) PRACTICAL: ACCOUNT FORMATION ON THE USGS WEBSITE, INSTALLATION OF ERDAS IMAGINE

WEEK 11	2,3	IMAGE CLASSIFICATION PRACTICAL: SUPERVISED CLASSIFICATION + CHANGE ANALYSIS MAJOR PROJECT
WEEK 12	1,3	MOSAICKING PRACTICAL: UNSUPERVISED CLASSIFICATION + MOSAICKING
WEEK 13	3	GPS COORDINATES, FUNCTION, ITS CHARACTERISTICS PRACTICAL: MARK POINTS ON THE GOOGLE EARTH OF ALL THE MAJOR BANKS CAME ON YOUR WAY TO YOUR HOME
WEEK 14	1	SATELLITES TYPES PRACTICAL: PRESENTATION ON THE TWO SATELLITES, DEFINE ITS WORKING, CHARCTERISTICS
WEEK 15		ASSESSMENT + VIVA Practical: SUBMISSION OF PORTFOLIO
WEEK 16		FINAL EXAMS

Evaluation Criteria

Marks Evaluation	Marks in percentage
Projects + Assignments	30%
Mid Term	25%
Attendance & Quiz	10%
Final exam	35%
Total	**100%**