**University of Management and Technology**

**Course Outline**

Course code: 29 Course title: INTRODUCTION TO PHOTOGRAMMETRY

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| --- | --- |
| Program | BS Remote Sensing and GIS |
| Credit Hours | 3 |
| Duration | 15 |
| Prerequisites | None |
| Resource Person |  |
| Counseling Timing(Room# ) |  |
| Contact |  |

**Chairman/Director signature………………………………….**

**Dean’s signature…………………………… Date………………………………………….**

**Learning Objective:**

This course attempts to provide basic knowledge about the key elements of photogrammetry such as cameras, aerial photographs, techniques of measuring 2 D and 3 D objects, stereophotogrammetry and its applications.

**Learning Methodology:**

* Lecturing
* Practical Assignments
* Guest Speaker
* Case Studies

**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

Assignments

Mid Term 20

Attendance & Class Participation

Term Project

Presentations

Final exam 80

Total 100

**Recommended Text Books:**

**Recommended Books**

* Sabins S.F (2000). Remote Sensing: Principles and Interpretation, Third Edition. Freeman and Company, New York. ISBN: 0 - 7167-2442-1.
* Lo, C.P (1986). Applied Remote Sensing (Longman).

**Reference Books:**

* Philipson, W.R (1997) Manual of Photographic Interpretation (2nd edition) (American Society for Photogrammetry and Remote Sensing).
* Colwell, R.N (ed.) (1983) Manual of Remote Sensing Second Edition in 2 volumes (American Society of Photogrammetry)

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

Course code: 29 Course title: INTRODUCTION TO PHOTOGRAMMETRY

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| --- | --- | --- |
|  **Week** |  **Course Contents**  | **Reference Chapter(s)** |
|  1 | * Introduction, history and Overview,
 |  |
|   2 | * Analog, analytical, and digital photogrammetry,
 |  |
|  3 | * Photogrammetric cameras, ,
 |  |
|  4 | * Review of data acquisition and single photograph properties
 |  |
|  5 | * Spatial measurement and scale calculation,
 |  |
|  6 | * Problems with aerial photograph and rectification of a single aerial photograph,
 |  |
|   7 | * Aerial Photograph Interpretation,
 |  |
|  8 | * Types of Aerial Photograph and mosaics,
 |  |
|  9 | * Stereoscopic Analysis
 |  |

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| --- | --- | --- |
|  10 | * DEM generation,
 |  |
|  11 | * Orthophotography/Orthoimage, applications.
 |  |
|   12 | * Introduction, Comparison of formats,
 |  |
|  13 | * Sensor, films and filters,
 |  |
|  14 | * Data acquisition methods,
* Visual interpretation of aerial photographs, vertical airphotos,
* Mirror stereoscopic interpretation, Ortho-rectification, case studies.
 |  |
|  15 | * Area and scale measurement,
* Parallax and radial displacement,
 |  |