**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, |  |