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HEO 140T.01: Basic Surveying

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**THE UNIVERSITY OF MONTANA-MISSOULA
COLLEGE OF TECHNOLOGY
INDUSTRIAL TECHNOLOGY DEPARTMENT**

COURSE SYLLABUS

COURSE NUMBER AND TITLE: HEO140T BASIC SURVEYING

DATE REVISED: Fall 2003

CONTACT HOURS PER SEMESTER: 75

Lecture hours per week: 3

Lab hours per week: 2

PREREQUISITES: None

INSTRUCTOR NAME: Tim Lytle

E-MAIL ADDRESS: Tim.Lytle@mso.umt.edu

PHONE NUMBER: 406-243-7643

OFFICE LOCATION : West Campus 3639 South Avenue West

OFFICE HOURS: Regular Hours

RELATIONSHIP TO PROGRAM:

In developing basic understanding and calculation of elevations, distances, angles, and bearings the student comprehends the final results required in completing the spring project.

COURSE DESCRIPTION:

Basic principles of surveying and the use of surveying equipment such as level rods, engineer's levels, transits, and steel tapes. Calculation of angles and distances will be employed to determine slope ratios, grade elevations, etc.

STUDENT PERFORMANCE OUTCOMES:

Occupational Performance Objectives

Upon completion of this course, the student will be able to:

Life-Long Learning Skill Codes
[Include Code and Number]

- | | |
|---|------------------|
| 1. Read and understand maps. | BSKL 1 |
| 2. Identify and determine area of townships and sections | BSKL 1,5 THINK 6 |
| 3. Calculate bearing, azimuths, and declinations. | BSKL 3 |
| 4. Calculate average pace (step). | BSKL 3 |
| 5. Demonstrate effective use of a Abney level, engineer's | THINK 1,2 BSKL 5 |
| 6. Keep correct surveying field notebook records. | BSKL 2 |
| 7. Demonstrate effective use of a Abney level, engineer's level, and transit. | BSKL 5 THINK 1,2 |
| 8. Determine elevations through the use of a rod and level | THINK 1,2 BSKL 5 |
| 9. Demonstrate through the use of trig functions the calculations in determining distances, angles, slopes. | |