

# ***COCONINO COMMUNITY COLLEGE***

## ***COURSE OUTLINE***

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Status: Permanent

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A. Identification:

1. Subject Area: Construction Technology Management
2. Course Number: CTM 253
3. Course Title: PLANE SURVEYING AND BUILDING LAYOUT
4. Credit Hrs: 3
5. Catalog Description:  
Building layout and surveying to establish building location for excavation and for the accurate placement of the building foundation, including finish floor elevation. Three lecture.

B. Course Goals:

To provide the students with the necessary skills to understand the instruments used and processes for building layout and surveying and to prepare the apprentice with knowledge and experience in building layout and surveying skills for establishing building location for excavation and accurate placement of the building foundation.

C. Course Outcomes:

Students will:

1. Identify all basic instruments and measuring devices used in layout procedures.
2. Demonstrate the use and care of layout instruments.
3. Describe layout materials and terminology.
4. Demonstrate the ability to perform basic surveying.
5. Determine the size and location of a building with offset from a set of drawings.
6. Demonstrate the ability to layout a building from offset lines and set batterboards to finish floor elevation.
7. Demonstrate the ability to turn an angle in a horizontal plane using a transit level.

D. Course Content:

Will include:

1. Part 1: Introduction and overview of layout and surveying instruments, their use and care of these instruments.
2. Part 2: Determination of building location.
3. Part 3: Determination of cut and fill for excavation.
4. Part 4: Supervising the excavation and construction of the building.