CET 105 Introduction to Surveying

Course Description: A course on foundation concepts of land surveying and site planning. Topics include: angle, distance, and elevation measurement; contours; and mapping and site planning fundamentals. Students complete outdoor field exercises and manual drafting lab exercises.

Prerequisites(s): MAT 120, or appropriate placement test scores

Corequisite(s): No corequisite

Lecture Hours: 2	Lab Hours: 3	Credit Hours: 3
Lab Fee: $105	Supplemental Fee: $0	Purpose:
☒ Transfer Assurance Guide Course (TAG)	☐ Transfer Module Course (TM)	
Course Format: Lec/Lab	Grading: A/B/C/D/F/I	
Delivery Method: □ Web	□ Hybrid	☒ Classroom
Semesters Offered: ☒ Fall	☒ Spring	☒ Summer

Course Primary Text:

Title: Elementary Surveying an Introduction to Geomatics	Edition: 13th
Author(s): Charles D. Ghilani and Paul R. Wolf	
Publisher: Prentice Hall	

Supplemental Materials:

Instructor created Lab Manual
Engineering Scale, protractor, and basic drafting supplies

Course Outcomes:

1	ABET (A), Introduced- an ability to apply knowledge, techniques, skills and modern tools of the discipline to narrowly defined engineering technology activities.
2	ABET (B), Introduced- an ability to apply knowledge of mathematics, science, engineering and technology problems that require limited application of principals but extensive practical knowledge.
3	ABET (D), Introduced- the student is introduced to the ability to function effectively as a member of a technical team.
4	ABET (E), Introduced- an ability to identify, analyze, and solve narrowly defined engineering technology problems.
5	ACCE 7, Introduced and Reinforced - Use basic surveying techniques used in building layout.

Course Topics:

Week 1	Linear Measurements and Note-Keeping
Week 2	Horizontal Angles and Control Traverse
Week 3	Elevation Measurement- Differential Leveling
Week 4	Elevation Measurement- Profiles
Week 5	Topography Mapping- Field work
Week 6	Topographic Mapping Office
Week 7	Testing- Class room and Lab Test
Week 8	Boundary Surveying fundamentals Bearings
Week 9	Contours and Interpolation
Week 10	Residential Site Planning
Week 11	Construction Stakeout exercise
Week 12	Volume earthwork estimation
Week 13	Commercial Site Planning
Week 14	Commercial Site Planning
Week 15	GPS Demo

Methods of Evaluation/Assessment

X Formative: □ Summative

List assessment activities (e.g. quizzes, discussions, essays, research papers, debates, oral presentations, exams):

3 Tests @ 10% each = 30%
6 Graded Lab Assignments @ 10 % each = 60%
Lab Test (Skills assessment of setting up and using a level and digit transit) =10%

Course Keeper: George Armstrong

Date Completed: 9-11-2013
Updated: 10-9-2015
Updated: September 16, 2016
Updated: February 17, 2018
Updated: March 15, 2019, Carol Morman