

## COURSE SYLLABUS (2 Page)

**Course Number:** CEGR 2104  
**Course Name:** Surveying and Site Design

**Credits and Contact Hours:** 3

**Instructor:** Venkata Duddu and Rajaram Janardhanam

**Textbook:** *Title:* Elementary Surveying, An Introduction to Geomatics, 14th Edition  
*Authors:* Wolf and Ghilani  
*Year:* 2015

**Other Supplemental Materials:** Handouts  
Software: Autodesk Civil 3D 2012  
Microsoft Excel

**Catalog Description:** Elements of plane surveying, including taping, use of level, total station, and GPS; topographical surveying and mapping; error adjustment; area and volume computations; site development; computer applications. One hour of lecture and 3 hours of field work for four weeks: three hours of lecture.  
*Most Recently Offered (Day):* Spring 2016, Fall 2015, Spring 2015  
*Most Recently Offered (Evening):* Course has not been offered in 3 years

**Pre-Requisites/Co-Requisites:** ENGR 1202

**Course is: Required (R)**

**Goals:** The objectives of this course are to provide students with an understanding of plane surveying as it relates to civil engineering. Students will be able to collect, analyze, and utilize surveying data.

### **Student Outcomes Addressed:**

In this course, students will develop the following Student Outcomes:

- E. an ability to identify, formulate, and solve engineering problems
- K. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

### **Course Topics:**

Units of measure; error theory and application to measurements; angles, azimuths, bearings; distance measurement; angular measurement; total station surveying; global positioning systems; leveling; traversing; area calculations; volume calculations; mapping horizontal curves; vertical curves; geographic information systems.