Course Number and Name: CET 317, Construction Computing

Credits and Contact Hours: Credits - 3; Contact Hours – 1.5 Hour Lectures, twice a week

Course Coordinator's Name: John A. Wiggins, P.E., Senior University Lecturer & Program Coordinator

Text Book and Supplemental Materials:
1. Construction Project Scheduling and Control, 2nd edition", S. Mubarak, John Wiley & Sons, 2010,
2. "Autodesk Revit 2022 Structure Fundamentals", SDC Publications, 2021,

Specific Course Information
a. Brief Description of the content of the course:
Application of available software to construction-related computing problems, including: strength of materials, structural analysis, fluids/ hydraulics, surveying, scheduling, cost estimating, and computerized drafting (CAD).
b. Prerequisites or Co-requisites: CS 106, Roadmap to Computing for Engineers
c. Course Status: Required Course

Specific Goals for the Course
a. Specific Outcomes of Instruction
Application of available software to construction-related computing problems, including: strength of materials, structural analysis, fluids/ hydraulics, surveying, scheduling, cost estimating, and computerized drafting (CAD).
b. Relation to Student Outcomes

Student Outcome (1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline;

Program Criteria a. utilization of techniques that are appropriate to administer and evaluate construction contracts, documents, and codes;

Program Criteria b. estimation of costs, estimation of quantities, and evaluation of materials for construction projects;

Program Criteria c. utilization of measuring methods, hardware, and software that are appropriate for field, laboratory, and office processes related to construction;

Program Criteria e. production and utilization of documents related to design, construction, and operations;

Brief list of topics covered

The topics to be covered are Construction planning and scheduling using Gantt Charts as well as precedence diagrams and Critical Path Method (CPM); Use of software in preparation of reports and presentation; use of Autodesk Revit and introduction to Building Information Modeling (BIM)