CE 465 – Construction Cost Analysis

Code and Name: CE 465 – Construction Cost Analysis

Credit Hours: 3 (Lecture: 2, Tutorial: 1)

Textbook:

- Estimating in Building Construction, Steven J. Peterson and Frank R. Dagostino, 8th Edition, Pearson, 2014

Other References:

- Fundamentals of Construction Estimating, David Pratt, 4th Edition, Cengage Learning, 2018.

Course Description:

Introduction to the application of scientific principles to costs and estimates of costs in construction engineering; concepts and statistical measurements of the factors involved in direct costs, general overhead costs, cost mark-ups and profits; and the fundamentals of cost recording for construction cost accounts and cost. Construction Cost analysis.

Pre-requisites: CE461 Construction Engineering and Management

Co-requisites: None

Course Learning Outcomes:

With relation to ABET Student Outcomes (From Fall 2019-SOs: 1-7)

1. To recognize ethical and professional responsibilities in construction cost analysis situations related to engineering codes and standards, the semester project, and response to issues in the course. (4)
2. To identify, formulate, and solve complex engineering problems in construction cost analysis related to overheads, labor, equipment, excavation, concrete, masonry and associated project items. (1)
3. To analyze and apply construction costs to meet specified needs with consideration to civil engineering project from inception to design and construction. (2)
4. Demonstrate communication skills in both oral and written during the semester project presentation (3)
5. To acquire and apply new knowledge with emphasis on construction cost analysis using appropriate learning strategies. (7)

Topics to be covered:

- Introduction to role of cost analysis and estimation for construction projects.
- Labor Productivity and Analysis, Labor Costs
- Productivity, Wages and Benefits
- Material Resources Analysis
- Accounting Analysis & Forecasting.
- Estimating Methods
- Work Estimating.
- Project Estimating.
- Bid Assurance.
- Cost Analysis for overheads, labor, equipment, excavation, concrete, masonry and associated project items.

Grading Policy:

The grading for the course is: 60% coursework and 40% Final Exam. The course work consists of two Midterm Exams, where each midterm exam is worth 20%. The remaining 20% includes quizzes, and projects that the course instructor can modify.