

**Common Course Outline**  
**CONT 121**  
**Construction Estimating**  
**3 Credits**

**The Community College of Baltimore County**

**Description**

**CONT 121 – 3 credits - Construction Estimating** includes the study of preliminary, detailed and quantity estimates as currently practiced in the industry. The interrelationship of plans, specifications, and the contract are also covered.

**3 credits**

**Prerequisite:** CSIT 101 and CONT 106 or permission of the Construction Management Coordinator

**Overall Course Objectives**

Upon completion of this course students will be able to:

1. calculate math problems as required by the industry;
2. identify and use formulas for areas and volumes as required for estimating;
3. customize unit (database) cost to suit job conditions when given plans, specifications and a site visit;
4. identify the standard units of measurement for various building materials;
5. read and calculate measurements using an architectural and engineering scale;
6. verify, at a glance, that the numbers typed into a calculator or keyboard are correct;
7. illustrate the importance of an accurate estimate in the formulation of a good and profitable contract; and
8. document the take-off lines as to location and drawing reference.

**Major Topics**

- I. Estimating principals and procedures
- II. Estimating cycle
- III. Type of estimates
- IV. Errors in estimating
- V. Estimating mathematics
- VI. General conditions
- VII. Cost factors
- VIII. Site visit
- IX. Excavation
- X. Concrete work
- XI. Masonry
- XII. Metals

- XIII. Wood construction
- XIV. Thermal and moisture
- XV. Doors and windows
- XVI. Finishes
- XVII. Electrical
- XVIII. Plumbing and HVAC

### **Course Requirements**

Grading procedures will be determined by the individual faculty member but will include the following:

#### Grading/exams:

- Homework
- Projects
- Midterm exam
- Sample estimate
- Term paper or oral report
- Classwork
- Team projects
- Quizzes
- Final exam

There will be a minimum of 8 graded assignments

Writing: The individual faculty member will determine specific writing assignments. Students are required to utilize appropriate academic resources.

### **Other Course Information**

This course is a Construction Management required course

Portions of this course are taught in a computerized environment.

The course is only offered in the spring semester.

Individual faculty members may include additional course objectives, major topics, and other course requirements.