

**Tompkins Cortland Community College**  
**Master Course Syllabus**

**Course Discipline and Number: CONT 115**  
**Course Title: Construction Estimating and Planning**

**Year: 2024-2025**  
**Credit Hours: 2**

**Attendance Policy:** *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

**Services for Students with Disabilities:** *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

### **Course Description**

This is a study of construction cost estimating and planning, consisting of quantity take-off, material and labor costs and project planning. Emphasis is placed on interpreting architectural and engineering plans and specifications. Prerequisites: CONT 107; DRAF 117; MATH 095 if required by placement testing; ENGL 099 or prior completion or concurrent enrollment in ESL 120, 121, and 122 (or prior completion of ESL 103) if required by placement testing; prior completion or concurrent enrollment in RDNG 116 if required by placement testing. 2 Cr. (1 Lec., 2 Lab.) Spring semester.

### **Course Context/Audience**

This is a required course in the Construction Technology degree and certificate programs. Numerous individuals employed by area firms have taken it to enhance their job performance or for career advancement.

### **Basic Skills/Entry Level Expectations**

**Writing:** W2 Student should have completed ENGL 099 (if needed). The course requires short written responses and/or short papers without documentation, particularly personal reflection or narrative.

**Math:** M4 Completed MATH 095(if needed) - Course requires the use of basic mathematical skills plus basic algebra skills.

**Reading:** R3 Course may be taken concurrently with RDNG 116.

### **Course Goals**

1. Material take-off: The student will become proficient in the interpretation of construction drawings as necessary to determine material quantities.
2. Labor: The student will apply labor time factors to each building component.
3. Cost estimates: Costs for each element of the project will be applied to arrive at a total cost estimate.
4. Overhead / profit: Overhead and profit factors will be computed and added to the direct costs to arrive at a total bid value.

## Course Objectives/Topics

Objective/Topic	% Course
General Requirements: The student will be able to describe the general requirements for the construction of a formal bid.	7%
Material estimates: The student will be able to accurately determine the material quantities and costs for each of the following building elements: Formwork, Concrete, Rebar, Metals, Masonry, Wood framing, Doors and windows, Interior finish work, Fasteners, Site work and Mechanical systems.	93%

## General Education Goals - Critical Thinking & Social/Global Awareness

CRITICAL THINKING OUTCOMES	HOW DOES THE COURSE ADDRESS THE OUTCOMES (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<p>Students will be able to</p> <ul style="list-style-type: none"><li>➤ develop meaningful questions to address problems or issues.</li><li>➤ gather, interpret, and evaluate relevant sources of information.</li><li>➤ reach informed conclusions and solutions.</li><li>➤ consider analytically the viewpoints of self and others.</li></ul>	<p>Students prepare complete estimates for each construction division discussed. Students work alone or in teams and open discussion is encouraged during the lab.</p>
SOCIAL/GLOBAL AWARENESS OUTCOMES	HOW DOES THE COURSE ADDRESS THE OUTCOMES (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
<ul style="list-style-type: none"><li>➤ Students will begin to understand how their lives are shaped by the complex world in which they live.</li><li>➤ Students will understand that their actions have social, economic and environmental consequences.</li></ul>	<p>Where appropriate discussion of various divisions in the construction process include evaluation of sustainability and application of environmental regulations.</p>

## Instructional Methods

Lecture: lecture should be used sparingly to introduce topics.

Group: Being a laboratory course only, all but a minimum of time should be spent in groups solving estimating problems with individual assistance from the instructor.

**Methods of Assessment/Evaluation**

Method	% Course Grade
Estimate reports: All estimates should be collected and evaluated	50%
Preliminary exams: a minimum of three preliminary exams should be administered	30%
Final exam: a comprehensive final should be administered	20%

**Text(s)**

Estimating in Building Construction, Dagostino and Feigenbaum, Latest Edition, Prentice-Hall.

**Bibliography**

Waier, Phillip, Ed. Building Construction Cost Data, RS Means Co., Inc. Kingston, MA.

Means Construction Cost 2006 Architectural Graphic Standards ENR(Periodical) McGraw-Hill.

**Other Learning Resources**

<b>Audiovisual</b> No resources specified
<b>Electronic</b> NYS Building Code; CD ROM
<b>Other</b> No resources specified