

*Appalachian State University*  
*Department of Technology*

---

**Course Syllabus -- TEC 3718**

---

**Course Number and Title: TEC 3718, Construction Estimating, Spring, 2001**

**Course Description:** This course will train students to estimate the costs of various construction activities. Students will learn how to prepare take-offs of construction jobs, solicit bids, and prepare estimated labor and materials costs. They will also see how overhead rates and billing rates are determined. The class will spend considerable time on computer estimating procedures. Prerequisite: TEC 2708 or permission of instructor, and TEC 2803 or equivalent.

**Credits: 3**

**Meeting Times and Place:** MWF 9-9:50 am/ Room 167 Kerr-Scott Building  
On Fridays, we will usually meet in Room 205b for computer work

**Instructor:** Jeff Tiller, PE

**Office Hours:** posted on office door

**Phone Number:** 262-6355 (campus)/ 264-9542 (home)

**Course Goals:** As a result of successfully completing this course, students will be able to:

1. Describe and effectively use procedures to estimate the cost of a construction project
2. Devise take-offs for a variety of components of building construction
3. Use Rules of Thumb for construction cost estimating
4. Develop "custom" estimating programs using computer spreadsheet programs
5. Obtain estimates from vendors and subcontractors that will stand up during construction
6. Prepare basic estimates using commercial cost estimating software programs
7. Know which computer-aided drafting software packages include cost estimating modules
8. Estimate cost per unit for equipment and other capital-intensive resources
9. Approximate overhead and profit
10. Avoid many of the problems that can occur during the estimating process, which can affect the profitability of the project

---

## ***Course Syllabus -- TEC 3718 (continued)***

---

### **Topical Content Outline:**

1. Basic procedures for cost estimating
2. Rule of thumb estimating procedures
3. Preparing take-offs
4. Obtaining bids for materials and subcontracting work
5. Book-type cost estimating procedures and companies (e.g. Means)
6. Preparing cost estimates using spreadsheets
7. Cost estimating software, such as National Cost Estimator
8. Integrated drafting and estimating packages
9. Estimating overhead and profit
10. Preparing and submitting final cost estimates
11. Problems when cost estimates are incorrect
12. Liability of the cost estimator
13. Project presentations

**Methods of Teaching:** Lectures, discussions, in-class problem solving, computer lab, visits to construction sites, guest lecturers

**Textbooks:** *Fundamentals of Construction Estimating* by David Pratt, Delmar Publishers, Albany, NY, 1995. Other in-class handout material.

### **Requirements:**

- ◆ Attend class -- 3 unexcused absences reduce participation score 20%
- ◆ Complete class readings
- ◆ Submit frequent homework assignments
- ◆ Turn in class project -- Cost estimate of a complete building
- ◆ Perform well on 2 to 3 tests and final exam

### **Basis of class grade:**

Classroom participation -- ... 10 points  
(based on attendance and participation  
in classroom discussions)

Homework --	15 to 20 points
Estimating Projects --	15 to 25 points
Tests --	25 to 35 points
<u>Final Exam -- Comprehensive</u>	<u>15 to 25 points</u>

**TOTAL BASIS -- 100 points**

(extra credit available on some tests)