



**Division of Construction Engineering Technology, HVAC, Industrial Electrical
Construction Industry Department**

[https://www.hccs.edu/programs/areas-of-study/construction-industry--
manufacturing/](https://www.hccs.edu/programs/areas-of-study/construction-industry--manufacturing/)

CNTB 2337: Advanced Estimating | Lecture-Lab

Class No.: 11114 / Class section: 0001 / Course ID: 10383
Spring 2024 | 16 Weeks Every Thursday (01.18.24 – 05.09.24)
In-Person | Location & Time - TBD
4 Credit Hours | Lecture-Lab

Instructor Contact Information

Instructor:	Don B. Kerl, RA	Cell Phone:	832-335-4570
Office:	N/A	Office Hours:	N/A
HCC Email:	don.kerl@hccs.edu	Office Location:	N/A

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear your concerns and just to discuss course topics.

Instructor's Preferred Method of Contact

My preferred method of contact is via e-mail as shown above. However, if an emergency, please call me at the cell number above.

ALTERNATE CONTACT: Julann Sams; phone: 713-718-6869; e-mail: julann.sams@hccs.edu .
I will respond to emails within 48 hours Monday through Friday; I will reply to weekend messages on Monday.

What's Exciting About This Course

The information in this course will enable you to understand how buildings are built and the cost of buildings and systems that are the components of buildings.

My Personal Welcome

Welcome to Estimating Fundamentals—I'm delighted that you have chosen this course. My goal is for you to walk out of the course with a better understanding of how to estimate buildings and construction in general. So please visit me or contact me whenever you have a question.

Prerequisites and/or Co-Requisites

None

Eagle Online Canvas Learning Management System

This section of **CNTB 2337** may use [Eagle Online Canvas \(https://eagleonline.hccs.edu\)](https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities.

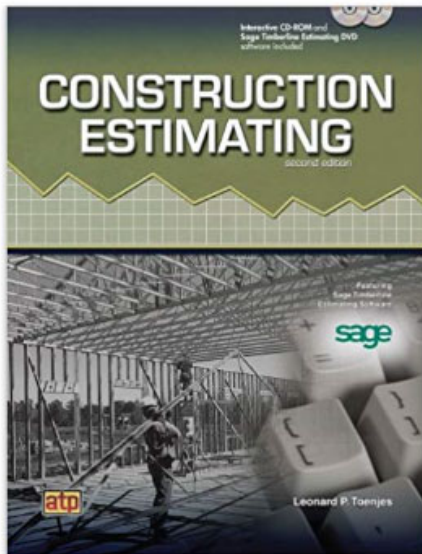
HCCS Open Lab locations may be used to access the Internet and Eagle Online Canvas. It is recommended that you **USE FIREFOX OR CHROME AS YOUR BROWSER.**

HCC Online Information and Policies

Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: <http://www.hccs.edu/online/>

Instructional Materials

Textbook Information



The textbook listed below is **optional** for this course. "**Construction Estimating**" (3rd edition) by Leonard Toenjes, PUBLISHER: ATP. ISBN: 9780826905628

It is included in a package that contains the text as well as an access code and are found at the [HCC Bookstore](#). You may either use a hard copy of the book, or rent the e-book from Pearson. Order your book here: [HCC Bookstore](#)

Temporary Free Access to E-Book

Please check with the publisher to see there is link to get temporary free access to a digital version of the text for fourteen days

Other Instructional Resources

Any additional information will be on the Eagle On-Line website.

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC

personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

Course Overview

CNTB 2337 is the course that is for Advanced Commercial Estimating. It explains how to

Core Curriculum Objectives (CCOs)

CNTB 2337 satisfies the requirement in the HCCS core curriculum. This course addresses the following core objectives:

- **Advanced Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by being able to:
 - Think through a project
 - More detailed take-off and project set up
 - Identify the CSI Divisions and the individual work tasks that will need to be covered in their estimates
- **Enhanced Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing a written assignments that includes but not limited to: report or presentations.
- **Exhibit Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the unit costs and quantities using observation, experiment, and/or numerical skills by completing homework assignments, and answering questions on quizzes and exams to:
 - Quantify the number of units required for each work task identified
 - Determine sub-total costs of line items as well as estimate summaries.
 - Understand how costs are determined and what factors affect such items as : unit cost, material availability, equipment costs, etc..

Course Student Learning Outcomes (CSLOs)

Upon completion of **CNTB 2337**, the student will be able to:

1. Define and identify the CSI divisions needed for a construction project along with the associated quantities and cost of labor, materials, equipment and other associated cost components of construction.
2. Understand, define & calculate the other components of management cost for construction –i.e., Division 1-General Requirements, Project Overhead, General Conditions, Profit/Fee, Insurance and Bonds.
3. Understand other factors and considerations affecting costs – i.e., quality, overtime, productivity, size/scope and type of construction, location and other issues.
4. Be able to estimate small projects in their entirety
5. Minimally equipped to set up a small bid for a project
6. How to set up EXCEL bid sheets for all CSI categories
7. How to perform detail breakdown estimates & take-offs on HVAC, Electrical, Plumbing, Telecommunications, Security, Fire Suppression and other CSI Division Categories.
8. Understanding and utilizing Value Engineering, Ethics in bidding/sub-contracting
9. Comparing and analyzing sub-bids
10. Understanding Addendums/ Bid Changes/ Post-Construction Modifications & Change Proposals

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as your guide.

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and make up
- Provide the course outline and class calendar which will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online

- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Attain a raw score of at least 50% on the departmental final exam
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

Assignments, Exams, and Activities

Written Assignment

Written assignment(s) will count at least 15% of students' course grades or a minimum of 15 points on a 100-point scale.

Exams

Exams will not be on Eagle Online Canvas, and will only be administered in class. Exam questions range from: yes/no , multiple-choice, fill in the blanks, problems, etc,.

In-Class Activities

Will begin homework Take-Offs in class also will have Final Project Bid Presentations.

Final Project/Exam

All students will be required to take a comprehensive departmental final exam or turn in a project (either group or individual).

Students who are absent from the final exam without discussing their absence with the instructor in advance or within 24 hours afterward will receive a O grade for that exam. No make-ups are given and if at the discretion of the professor the excuse is legitimate, the student will receive the grade from their last test to make-up the missed final exam.

Grading Formula

Scoring Rubrics, Sample Assignments, etc.

Your grade will depend on averages as follows:

1. Test grades = 20 %
2. Quizzes/Class Assignments/Homework = 20%
3. Attendance = 20 %
4. Final project (or Test) = 40 %

Grade	Total Points
A	90+
B	80-89
C	70-79
D	60-69

F	<600
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HCC Grading Scale can be found on this site under Academic Information:
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

Course Calendar

WEEK	LECTURE	HOMEWORK
1	Syllabus, Introduction, Skills Test	TBD
2	Creating excel Calculation Sheets	TBD
3	HVAC Take-Offs	TBD
4	Plumbing Take-Offs	TBD
5	Electrical Take-Offs	TBD
6	Specifications take-off and Setting up scope Sheets on Excel	TBD
7	Equipment Cost and pricing	TBD
8	Crane Cost, Personnel Hoist, Scaffolding Cost	TBD
9	Safety Considerations Shoring, Handrails,	TBD
10	Bidding procedures and Proposal writing	TBD
11	Value Engineering, Ethics in bidding and sub contracting	TBD
12	HVAC, Plumbing, Electrical, Fire Protection	TBD
13	General Conditions / OH / Fee / Insurance / Bonds determination & Project Scheduling	TBD
14	Parametric estimate technics	TBD
15	Comparing and Analyzing Bids,	TBD
16	Addendums and Bid Changes	TBD

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

There are "no makeups" for exams because I drop the drop the lowest exam. I will allow make-up work accompanied by a late-work penalty.

Academic Integrity

Scholastic Dishonesty will result in a referral to the Dean of Student Services. See the link below for details.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

Attendance in class is expected and a part of your grade.

Student Conduct

Disruptive behavior - i.e., Loud talking, music, telephone conversations, etc. - will not be allowed in class. You are allowed to leave the classroom and partake in these activities outside the classroom and re-enter the classroom.

Instructor's Course-Specific Information (As Needed)

Students can expect grades and feedback after they submit coursework or tests maximum two weeks after work submitted..

Required Supplies & Electronic Devices

1. Thumb drive
2. Engineers Scale
3. Architects Scale
4. Calculator hand held basic

Construction Technology Management Program Information

HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

Academic Information	Incomplete Grades
Academic Support	International Student Services
Attendance, Repeating Courses, and Withdrawal	Health Awareness
Career Planning and Job Search	Libraries/Bookstore
Childcare	Police Services & Campus Safety
disAbility Support Services	Student Life at HCC
Electronic Devices	Student Rights and Responsibilities
Equal Educational Opportunity	Student Services
Financial Aid TV (FATV)	Testing
General Student Complaints	Transfer Planning
Grade of FX	Veteran Services

EGLS³

The EGLS³ ([Evaluation for Greater Learning Student Survey System](#)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance

is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair Contact Information

Armando R. Villanueva Department Chair
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1301 Alabama Suite 201A
Houston, Texas 77004
713.718.5284

Signature of Instructor:

Date: