FORWARD

This module book for CNBT 1446 (Construction Estimating I) contains a course syllabus, a laboratory learning activities (lab sheet) for recording performance exam results, and a competency profile which is designed to inform the student of exactly where he/she would be rated when compared to industry standards in all areas relative to the course.

The instructor will post performance exam completions to the lab sheet as the student satisfactorily completes the exercise.

Have your instructor complete the heading on the competency profile during your first class meeting. Have him complete the competency rating as the competency is completed. He will make a copy of your completed competency profile when you finish the course. This copy will become a part of your permanent record.

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INTRODUCTION

Fundamentals of estimating materials and labor costs in construction.

Construction Estimating I (CNBT 1446) is a required course for the completion of a two-year Associate of Applied Science Degree in Maintenance Technology or a Level I or Level II Certificate of Completion in the Building Trades Program.

This course is occupationally related and serves as a preparation for a career in the Building Trades career field.

Prerequisites: This course has a prerequisite of all other courses in the program except CBFM 2487 or consent of the Department Chair.

Alphanumeric coding used throughout this module book denotes integration of SCANS occupational competencies (C1, etc.) and Foundation skills (F1, etc.).

LEARNING OUTCOMES

Upon successful completion of this course, Construction Estimating I, the student will:

Identify estimating procedures.  (C5, 6, 7)  (F1, 8, 9, 10)
Estimate materials from blueprints.  (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Calculate labor units and costs.  (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Prepare a construction bid for a house.  (C2, 3, 4, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Estimate the cost of a remodeling job.  (C2, 3, 4, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)

INSTRUCTIONAL MATERIALS

Instructional materials for this course can be found at www.ctcd.edu/books

Supplemental Reading: As assigned by the instructor.

Audio-Visual Aids: See resource list at end of this module book.

Other instructional material: as selected by the instructor.
COURSE REQUIREMENTS

This course is being taught in a self-paced mode. It differs from the traditional college course in that you are allowed to work on your own and at your own speed within limitation.

This course is 96 clock hours in length. The student may set his/her own schedule within the time frame the course is offered. You must attend class on the days and at the times you selected when you enrolled in the course.

You will have an assigned instructor. If at any time you do not understand a reading assignment, audio visual presentation or lab work, ask your instructor for assistance. He is there for you!

This module book is designed to inform you of the sequence in which this course will be presented. You must follow this sequence and you must do what the module book says. It contains reading assignments, written assignments, audio visual presentations and lab assignments that you must complete or watch. Written assignments will be turned in as directed by the instructor. Late assignments will not be accepted. You must let your instructor know when you are ready to do a learning activity, performance exam or take a scheduled exam.

The student must take notes when viewing filmstrips, slides, or videos. Exams may be taken from audio visual aids, reading and lab assignments. If instructor notes or handouts are given to you, you must study them, exams may be taken from these notes also.

The instructor may give written assignments or pop quizzes as he deems necessary.

Performance Exams: Each student will clean all tools and equipment that they use and properly store them and clean their work area after the completion of each task.

GRADING

Certificate Students: Students will be graded using the standard Skills Center "Pass-Fail" system used for self-paced programs. To satisfactorily complete the written exams, the student must score 80% on tests (except the exit exam, 70%). Students who fail to make the 80% on any exam (except the exit exam) must retake the exam. The current test re-take policy will apply to all certificate students. The student must satisfactory complete all written and performance exams to receive a passing grade ("P").

Degree Students: Students will be graded using an "alpha-numeric" system as outlined below. Grades made on performance and written exams will be the grade received, including the exit exam. Students will not be allowed to retake written exams or redo
performance exams.

Written exams: Average of written exams will count 40% of the final grade.

Completion of written assignments/activities will count 10% of the students final grade.

Performance Exams (Lab work) will count 50% of the final grade.

Grade Computations: (Example)

Written Exam Scores: (There will be 11 written exams)
Exam 1  90  
Exam 2  80  
Exam 3  70  

\[ \text{Average Written Exams} = \frac{240}{3} = 80 \] (Average Written Exams)

Written Exam Score Average  80 x 40% = 32 points
Written Assignments        100 x 10% = 10 points
Performance Exam Score   80 x 50% = 40 points

Total = 82 points = B

NOTES AND ADDITIONAL INSTRUCTIONS FROM THE COURSE INSTRUCTOR

Course Withdrawal: It is the student’s responsibility to officially withdraw from a course if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College Application for Withdrawal (CTC Form 59). The withdrawal form must be signed by the student.

CTC Form 59 will be accepted at any time prior to Friday of the 12th week of classes during the 16-week fall and spring semesters. The deadline for sessions of other lengths is:

- 10-week session: Friday of the 8th week
- 8-week session: Friday of the 6th week
- 5-week session: Friday of the 4th week

The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

A student who officially withdraws will be awarded the grade of “W” provided the student’s attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the College before they may be considered for withdrawal.
A student may not withdraw from a class for which the instructor has previously issued the student a grade of “F”, “N”, “FN”, or “XN” for nonattendance. **Administrative Withdrawal:** An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on CTC Form 59 for submission to the registrar.

**Incomplete Grade:** The College catalog states, “An incomplete grade (“IP”) may be given in those cases where the student has completed the majority of the coursework but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course.” Prior approval from the instructor is required before the grade of “IP” for Incomplete is recorded. A student who merely fails to show for the final or exit examination will receive a zero for the final and an “F” or “N” for the course.

**Cellular Phones and Beepers:** Cellular phones and beepers will be turned off while the student is in the classroom or laboratory.

**American’s With Disabilities Act (ADA):** Disability Support Services provide services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at [www.cted.edu/disability-support](http://www.cted.edu/disability-support) for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

**Instructor Discretion:** The instructor reserves the right of final decision in course requirements.

**Civility:** Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

Absence from the class may be unavoidable in some situations. These include illness, military/civilian job requirements, or a death in the immediate family. Documentation is required in the case of excused absences for job requirements. Excuses will be on company letterhead stationary signed by the immediate supervisor stating the reason for the absence for civilian jobs. Excuses for military personnel must be signed by the 1st Sergeant or the Company Commander. **NOTE: This does not apply to VA, VA/Voc, or Financial Aid students. There are no excused absences for these students.** Talk to your
funding agency if you have questions.

Disability Support Services provides services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Review the website at www.ctcd.edu/disability-support for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.
FIRST CLASS MEETING

The instructor will introduce the course and show the student the textbook.

The instructor will verify the class roster/enrollment form:
- Call roll
  - Have each student verify the spelling of his/her name and the social security number by initialing the class roster/enrollment form.
  - **NOTE:** When a student’s name does not appear on the degree program class roster, they must bring it to the attention of the instructor and must present the instructor with CTC Form 29 (Add/Drop Slip) reflecting that he/she has properly registered for the course.

The instructor will have the student read and sign the course requirements sheet.

The instructor will discuss the following topics with the student:
- Course requirements, objectives and how the course works
- Policy letters
- Student handouts
- Lab sheet and lab work (Enabling tasks, Performance exams, competency profile)
- Exam, grading, reading and written assignments.
- Absences
- Shop/classroom cleanup tools
- Dress code
- Parking
- Sign-in computer
- Course outline/fact sheets/student handouts
- Hazardous communications/MSDS information
- Shop safety
COURSE OUTLINE OR SEQUENCE:
Module 1446-01: Introduction to Estimating

Module Learning Outcomes: Upon satisfactory completion of this module the student will:
   Identify estimating procedures. (C5, 6, 7) (F1, 8, 9, 10)

Read Chapters 1, 2, 3, 4, and 21 in your Estimating in Building Construction text book. You will be tested on this material.

To learn more about estimating read Fact Sheets 1446-01-01, 1446-01-02.

View Audio Visuals: (See your instructor) Student must take notes.
   “Estimating for Home Construction,” (DVD)

See your instructor and ask him if there is any other information that you should view or read that pertains to this module.

Review for Module 1446-01 Written Exam: Study all previous assignments in this module. See your instructor and ask him to explain any area that you do not understand.

Module 1446-01 Written Exam: (See your instructor)
Module 1446-02: Estimating Considerations

Module Learning Outcomes: Upon satisfactory completion of this module the student will:
   Identify estimating procedures. (C5, 6, 7) (F1, 8, 9, 10)

Read Chapters 5, 6, 7, and 20 in your Estimating in Building Construction text book. You will be tested on this material.

See your instructor and ask him to explain any part of the reading assignment that you do not understand.

View Audio Visuals: There are no audio visuals for this module.

See your instructor and ask him if there is any other information that you should view or read that pertains to this module.

Review for Module 1446-02 Written Exam: Study all previous assignments in this module. See your instructor and ask him to explain any area that you do not understand.

Module 1446-02 Written Exam: (See your instructor)
Module 1446-03: Concrete and Masonry Estimating

Module Learning Outcomes: Upon satisfactory completion of this module the student will:

Estimate materials from blueprints. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Calculate labor units and costs. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Prepare a construction bid for a house. (C2, 3, 4, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
Estimate the cost of a remodeling job. (C2, 3, 4, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)

Read Chapters 8, 9, 10 and 11 in your Estimating in Building Construction text book. You will be tested on this material.

See your instructor and ask him to explain any part of the reading assignment that you do not understand.

View Audio Visuals: There are no audio visuals for this module.

See your instructor and ask him if there is any other information that you should view or read that pertains to this module.

Review for Module 1446-03 Written Exam: Study all previous assignments in this module. See your instructor and ask him to explain any area that you do not understand.

Module 1446-03 Written Exam: (See your instructor)
Module 1446-04: Wood, Metal, and Finish Estimating

Module Learning Outcomes: Upon satisfactory completion of this module the student will:

- Estimate materials from blueprints. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Calculate labor units and costs. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Prepare a construction bid for a house. (C2, 3, 4, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Estimate the cost of a remodeling job. (C2, 3, 4, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)

Read Chapters 12, 13, 14, 15, and 16 in your Estimating in Building Construction text book. You will be tested on this material.

See your instructor and ask him to explain any part of the reading assignment that you do not understand.

View Audio Visuals: There are no audio visuals for this module.

See your instructor and ask him if there is any other information that you should view or read that pertains to this module.

Review for Module 1446-04 Written Exam: Study all previous assignments in this module. See your instructor and ask him to explain any area that you do not understand.

Module 1446-04 Written Exam: (See your instructor)
Module 1446-05: Electrical, Plumbing and HVAC Estimating

Module Learning Outcomes: Upon satisfactory completion of this module the student will:

- Estimate materials from blueprints. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Calculate labor units and costs. (C2, 3, 5, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Prepare a construction bid for a house. (C2, 3, 4, 6, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)
- Estimate the cost of a remodeling job. (C2, 3, 4, 7, 15, 18, 19, 20)(F1, 2, 3, 8, 9, 10)

Read Chapters 17, 18, and 19 in your Estimating in Building Construction text book. You will be tested on this material.

See your instructor and ask him to explain any part of the reading assignment that you do not understand.

View Audio Visuals: There are currently no audio visuals for this module.

See your instructor and ask him if there is any other information that you should view or read that pertains to this module.

Review for Module 1446-05 Written Exam: Study all previous assignments in this module. See your instructor and ask him to explain any area that you do not understand.

Module 1446-05 Written Exam: (See your instructor)
Module 1446-06: Exit Exam

Module Learning Outcomes: Upon completion of this module the student will:
  Use basic thinking skills and demonstrate personal qualities and work practices used in the work place.
  Complete the Exit Exam.

Review for Exit Exam: Review all previous assignments.

See your instructor and ask him to explain anything that you do not understand about masonry fundamentals.

Module 1446-06 Written (Exit) Exam: (See your instructor.)