INTRODUCTION

This course is an introduction to the carpentry trade including safety, tools, equipment, terminology, and methods.

Introduction to Carpentry (CRPT 1429) required course for the completion of a two year Associates 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: None.

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

LEARNING OUTCOMES

Upon successful completion of this course, Introduction to Carpentry, the student will:

List and follow established safety practices. (C5, 6, 7, 15, 19, 20)(F1, 2, 6, 8, 9, 10)
Recognize and explain the use of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F1, 5, 6, 10, 12)
Identify and describe fasteners and adhesives. (C3, 5, 6, 7, 18, 19, 20)(F1, 5, 6, 10, 12)
Define terms associated with building materials and utilized by carpenters. (C5, 6, 7)(F1, 6)
Describe handling and storage procedures. (C5, 6, 7)(F1, 6)
Demonstrate the use and care of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F8, 9)
Perform mathematical computations used by the carpenter. (C5)(F1, 2, 3)
Name the classes of fires. (C5, 6, 7)(F1, 2, 3, 8, 9)
Demonstrate knowledge of OSHA and the Hazardous Communications Act. (C5, 6, 7)(F1, 2, 3, 8, 9)
Use an MSDS. (C5, 6, 7)(F1, 6, 10)
Demonstrate knowledge of proper lifting techniques. (C5, 6, 7)(F1, 2, 3, 8, 9)
Demonstrate knowledge of basic first aid procedures. (C5, 6, 7)(F1, 2, 3, 8, 9)
Demonstrate knowledge of basic blueprint reading. (C3, 5, 6, 7)(F1, 2, 3, 8, 9, 10)

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INSTUCTIONAL MATERIALS

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

Supplemental Reading: As assigned by the instructor.

Audio – Visual Aids: See resource list at end to 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 with limitation. This course is 96 clock hours in length. The student may set his/her own schedule within the time frame the course if 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. You must let your instructor know when you are ready to do a learning activity, performance exam or take a scheduled exam.

The student should take notes when viewing DVD’s. Exams will be taken from reading assignments. If instructor handouts are given to you, you must study them; exams may be taken from these handouts also.

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.

Certificate Students: All lab work will be completed on an individual basis. The student will receive a “pass” or “fail” on the task. Students who fail to complete a task correctly to industry standards must repeat the task. The instructor will date and initial each performance exam task as it is satisfactorily completed. NOTE: Students who have selected the alpha-numeric grading system will be graded as outlined for degree students (see below).

Degree Students: Laboratory tasks (performance exam) will be completed on an individual basis except when limited by tools and/or materials. Each performance exam is worth a maximum of 3.3 points. The maximum lab grade is 100 points. The instructor will deduct points from each lab task score for failure to follow safety precautions and/or a failure to complete the project.
to industry standards. The instructor will date, initial, and post the points earned for each performance exam as it is completed.

The following is part of the course requirements: Each student will assist in lab cleanup at the close of the evening classes and will assist in unloading and storing supply shipments. Failure to do so will result in a failure to complete all course requirements and the student could receive an “F” or “N” for the course.

There will be nine (7) written examinations in this course (6 module/unit exams and an exit exam). **All written exams must be completed before taking the performance exam for each module.** The exit exam is a comprehensive exam that covers the entire course. Certificate students must score 70% on the exit exam. Certificate students will be allowed to take the exit exam a maximum of three (3) times. Failure to achieve a 70% score on the exit exam in three (3) tries will result in an “N” for the course and the student must retake the course. **Degree students should refer to the “grading” section of this outline for guidance.**

The student must complete written assignments to receive a grade. Written assignments for each unit will be turned into the instructor prior to starting performance exams for that module. **Degree students must complete reading and written assignments at home.**

If you have special needs because of learning disabilities or other kinds of disabilities, please feel free to discuss this with the instructor. The instructor will attempt to meet your needs with the assistance of counselors, tutors, and the Disabilities Services Office. Program/course integrity will not be sacrificed. Students must meet all course requirements.

**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 students 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 satisfactorily 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 9 written exams)

| Exam 1 | 90 |

CRPT1429 3
Exam 2 80
Exam 3 70
\[ \frac{240}{3} = 80 \text{ (Average Written Exams)} \]

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 sessions : Friday of the 8th week
- 8-week sessions : Friday of the 6th week
- 5-week sessions : 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 may be given in those cases where the student has completed the majority of the course work 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
“I” for Incomplete is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an “F” for the course.

**Cellular Phones:** The use of a cell phone or any cellular option to include but not limited to text messaging, gaming, or photographing during class periods is prohibited. Cell phones will be turned off prior to entering the Building Trades Lab’s or Testing Area. Exceptions must be approved by the Building Trades Instructor.

**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.ctcd.edu/disability-support](http://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.

**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.

**FIRST CLASS MEETING**

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

The instructor will verify the class enrollment form:

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

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/MSDA information
Shop safety

COURSE OUTLINE OR SEQUENCE

Module 1429-01    Safety

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

The student will list and follow established safety practices. (C5, 6, 7, 15, 19, 20)(F1, 2, 6, 8, 9, 10)
Define terms associated with building materials utilized by carpenters. (C5, 6, 7)(F1, 6)
Describe handling and storage procedures. (C5, 6, 7)(F1, 6)
Perform mathematical computations used by the carpenter. (C5)(F1, 2, 3)
Name the classes of fires. (C5, 6, 7)(F1, 2, 3, 8, 9)
Demonstrate knowledge of OSHA and the Hazardous Communication Act. (C5, 6, 7)(F1, 2, 3, 8, 9)
Use an MSDA. (C5, 6, 7)(F1, 6, 10)
Demonstrate knowledge of proper lifting techniques. (C5, 6, 7)(F1, 2, 3, 8, 9)
Demonstrate knowledge of basic first aid procedures. (C5, 6, 7)(F1, 2, 3, 8, 9)

NOTE: The overriding consideration in performance of any job should always be safety. As you begin your work in the Building Trades program you will learn some to the basic safety rules. As you continue in the program you will be constantly reminded of safety rules and procedures.

Read Chapter 20, 21, and 22 in your Carpentry textbook to learn about “Safety and Accident Prevention.” You will be tested on this material.

Read Fact Sheet 1429-01-01 to learn more about “Safety and First Aid.” You will be tested on this material.

See your instructor and ask him to explain any area of safety that you don’t understand.

View Audio Visuals:
“Power Tool Safety,” (DVD)
“Woodworking Shop Safety,” (DVD)
“Entering the World of Work,” Part 1, (CD)
“Entering the World of Work,” Part 2, (CD)
“Multimedia Woodshop Safety,” (CD)

Review for Module 1429-01 Written Exam. Study all previous assignments in this module. See your instructor and ask him to explain any area of safety that you do not understand.

Module 1429-01 Written Exam: See your instructor

Module 1429-02 Hand and Measuring Tools

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

- List and follow established safety practices. (C5, 6, 7, 15, 19, 20)(F1, 2, 6, 8, 9, 10)
- Recognize and explain the use of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F1, 5, 6, 10, 12)
- Demonstrate the use and care of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F8, 9)
- Perform mathematical computations used by the carpenter. (C5)(F1, 2, 3)

NOTE: Hand tools are basic to a lot of the work that is done in the shop. This module will introduce you to various hand tools. You will also learn how to use each of them. Your knowledge and skill in the use of hand tools will contribute greatly to the prevention of an accident and success in the shop area.

Read Chapters 9, 10, 11, 12, 13 in your Carpentry textbook and learn about and measuring tools. You will be tested on this material.

View Audio Visuals:
- “Math for Construction Trades – Part 1,” (DVD)
- “Math for Construction Trades – Part 2,” (DVD)
- “Reading a Ruler”, (CD)
- “Basic Methods of Measuring and Cutting”, (DVD)

See your instructor and ask him to demonstrate the proper use of the different hand and measuring tools that you will use in this course.

See your instructor and ask him if there is any additional information that you should read or see that pertains to hand and measuring tools.

Review for Module 1429-02 Written Exam. Study all previous assignments in this module. See your instructor and ask him to explain any area of hand and measuring that you do not understand.

Module 1429-02 Written Exam: See your instructor.

Module 1429-03 Portable Power Tools

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

- List and follow established safety practices. (C5, 6, 7, 15, 19, 20)(F1, 2, 6, 8, 9, 10)
- Recognize and explain the use of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F1, 5, 6, 10, 12)
- Demonstrate the use and care of tools and equipment. (C3, 5, 6, 7, 18, 19, 20)(F8, 9)
- Perform mathematical computations used by the carpenter. (C5)(F1, 2, 3)

NOTE: In this module you will be introduced to basic power tools. In keeping pace with advancing technology, these tools have been developed to improve speed and efficiency of the basic hand tool operation. Used correctly, they will make your job much easier to perform. The information in this module will become the basis for much of your future work in the carpentry field.

Read Chapter 14, 16, 17, 18, and 19 in your Carpentry textbook and learn about portable power tools. You will be tested on this material.

View Audio Visuals:
- “The Ins and Outs of using your Scroll Saw”, (DVD)
- “Router”, (DVD)
- “Jointer,” (DVD)
- “Planer,” (DVD)
- “Sanders,” (DVD)
- “Circular Saw,” (DVD)
- “Drills,” (DVD)
- “Jigsaws,” (DVD)
- “Cutoff Saws,” (DVD)
- “Biscuit Jointer,” (DVD)

See your instructor and ask him to demonstrate the proper use of the portable power tools that you will use in this course.

See your instructor and ask him if there is any other information that you should see or read that pertains to portable power tools.

Review for Module 1429-03 Written Exam. Study all previous assignments in this module. See your instructor and ask him to explain any area of portable power tools that you do not understand.

Module 1429-03 Written Exam: See your instructor.

Module 1429-04 Stationary Power Tools

Module Learning Outcomes: Upon satisfactory completion of this module the student will:
List and follow established safety practices.  (C5, 6, 7, 15, 19, 20)(F1, 2, 6, 8, 9, 10)
Recognize and explain the use of tools and equipment.  (C3, 5, 6, 7, 18, 19, 20)(F1, 5, 6, 10, 12)
Demonstrate the use and care of tools and equipment.  (C3, 5, 6, 7, 18, 19, 20)(F8, 9)
Perform mathematical computations used by the carpenter.  (C5)(F1, 2, 3)

NOTE: In the previous module you learned about the basic power tools. In this module you will
learn about stationary power tools. In using these larger machines your cuts will be smoother,
more accurate, and a perfect fit. To do this you should know all of the adjustments, know how
and when to change a blade. When you learn about these machines, you will understand what
these machines can do for you. In short, if you have a special job to do, you will know which
machine will do the best job for you.

Read Chapter 15 in your Carpentry textbook and learn about stationary power tools. You will be
tested on this material.

Read Fact Sheet 1429-04-01 to learn about drill presses. You will be tested on this material.
Read Fact Sheet 1429-04-02 to learn about stationary power tools. You will be tested on this
material.

See your instructor and ask him for a handout on stationary power tools. Read the handout to
learn more about stationary power tools. You will be tested on this material.

View Audio Visuals:
“Jointer/Surface & Accessories,” (DVD)
“Band Saw,” (DVD)
“Band Saw: Operation and Safety,” (DVD)
“Radial Arm Saw,” (DVD)
“Table Saw,” (DVD)
“Shaper,” (DVD)
“Drill Press,” (DVD)

See your instructor and ask him to demonstrate the proper use of various stationary power tools.

See your instructor and ask him if there is any other information that you should see or read that
pertains to stationary power tools that you will use in this course.

Review for Module 1429-04 Written Exam. Study all previous assignments in this module. See
your instructor and ask him to explain any area of stationary power tools that you do not
understand.

Module 1429-04 Written Exam: See your instructor.
Module 1429-05 Common Fasteners and Glues

Module Learning Outcomes: Upon satisfactory completion of this module the student will:
List and follow established safety practices.  
Identify and describe fasteners and adhesives.  

**NOTE:** It is highly unlikely that you will be able to get by for very long in the Building Trades Field without using at least one kind of fastener. You have already learned how to use many of the tools that you will need when you install various types of fasteners. In this module you will learn to identify fasteners by their type, size, and use. Additionally you will be able to select the fastener that will be necessary for specific jobs and determine their methods of installation.

Read Chapter 8 in your Carpentry textbook and learn about common fasteners and glues. You will be tested on this material.

See your instructor and ask him to demonstrate the proper use of the various fasteners and glues that you will use in this course.

View Audio Visuals:
“Wall Fasteners,” (DVD)

See your instructor and ask him if there is any other information that you should see or read that pertains to common fasteners and glues.

Review for Module 1429-05 Written Exam. Study all previous assignments in this module. See your instructor and ask him to explain any area of common fasteners and glues that you do not understand.

Module 1429-05 Written Exam: See your instructor.

Module 1429-06   Reading Blueprints

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

Perform mathematical computations used by the carpenter.  

Demonstrate knowledge of basic blueprint reading.  

**NOTE:** Buildings are designed by architects who put their ideas on paper in the form of a drawing. These drawings are duplicated by means of blueprints. Blueprints provide information to the various tradesmen as to how and where they will perform their work. In order to do his work correctly, each tradesman must understand how to read blueprints.

Read Chapter 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 in your Carpentry textbook and learn about blueprint reading. You will be tested on this material.

View Audio Visuals:
“Elevations, Sections,” (DVD)  
“Wall Sections and Details, Interiors,” (DVD)  
“Lines, Dimensions, Floor Plans,” (DVD)
Complete self-assessments 1429-06-01 and 1429-06-02

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

See your instructor and ask him if there is any additional information that you should see or read that pertains to blueprint reading.

Review for Module 1429-06 Written Exam. Study all previous assignments in this module. See your instructor and ask him to explain any area of blueprint reading that you do not understand.

Module 1429-06 Written Exam: See your instructor.

Module 1429-07 Exit Exam

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

Use basic thinking skills and demonstrate personal qualities and work practices used in the workplace.
Complete the exit exam.

Review for the Exit Exam: Review all previous assignments.

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

Module 1429-07 Written (Exit) Exam: See your instructor.