ACT 320A: CONSTRUCTION TOOLS & EQUIPMENT

New Course Proposal

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Originator

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Justification / Rationale

Construction is one of the top employment opportunities in the Coachella Valley and with the new Title 24 requirements for Zero Net Energy construction, there is a need for a more educated construction workforce. This course is one of three modules of a non-credit overlay version of CM 020 Introduction to Construction Technology. Module 1 covers tools, equipment, safety and green concepts; Module 2 provides training and review of the basic math skills required for construction; Module 3 provides an awareness of career opportunities in the construction industry and the employability skills required to succeed in those careers. Providing this non-credit version allows those currently unemployed or underemployed to gain the skills and knowledge required to obtain and succeed in construction jobs; providing the modules as a credit overlay allows students to qualify for credit by exam and move into a credit pathway to continue education.

Effective Term

Fall 2020

Credit Status

Noncredit

Subject

ACT - Applied Construction Technolog

Course Number

320A

Full Course Title

Construction Tools & Equipment

Short Title

CONST TOOLS & EQUIPMENT

Discipline

Disciplines List
Construction Technology
Building Codes and Regulations (Inspecting of construction, building codes, contractor training)
Carpentry
Construction Management
Plumbing
Electricity (Electrical power distribution)

Modality

Face-to-Face
100% Online

Catalog Description

This course provides students with an overview of the construction industry; in-depth practical knowledge of tools and equipment used in the construction industry, basic rigging techniques, and communication. Guest speakers and site visits provide students a wide view of the expectations of entry-level work, wages, benefits, and work place culture.

Schedule Description
Practical knowledge of construction tools, equipment, basic rigging techniques and overall safety practices.

Non-credit Hours
45

Lecture Units
0

Lab Units
0

Lab Semester Hours
0

In-class Hours
27

Out-of-class Hours
18

Total Course Units
0

Total Semester Hours
45

Override Description
Noncredit courses do not have lecture and lab. The out-of-class hours were adjusted to provide the same total as the equivalent credit course.

Required Text and Other Instructional Materials

Resource Type
Book

Author
National Center for Construction Education and Research (NCCER)

Title
Core Curriculum: Introductory Craft Skills (Trainee Guide)

Edition
5th

Publisher
Pearson Education, Inc.

Year
2016

College Level
Yes

Flesch-Kincaid Level
11.8

ISBN #
9780134130989

Resource Type
Book

Author
Huth, Mark W.

Title
Residential Construction Academy: Basic Principles for Construction

Edition
4th

City
Clifton Park, NY

Publisher
CENGAGE Delmar Learning

Year
2016

College Level
Yes

Flesch-Kincaid Level
11.8

ISBN #
9781305088627

Resource Type
Instructional Materials

Title
Career Connections Project Book 1

Edition
Most Recent

Publisher
Carpenters International Training Fund

Year
2017

Description
CC0001G
www.carpenters.org

Resource Type
Instructional Materials

Title
Career Connections Project Book 2

Edition
Most Recent

Publisher
Carpenters International Training Fund

Year
2018

Description
cc0002G

Class Size Maximum
30

Course Content
1. Overview of construction industry and closer examinations of individual trade expectations.
2. Construction safety – hazard recognition and OSHA regulations.
3. Hand and power tool identification and proper use.
4. Overview of basic rigging.
5. Load handling safety.
6. Hand signals.

Course Objectives

	Objectives
Objective 1	Discuss the apprenticeship requirements and responsibilities for a variety of construction trades.
Objective 2	Discuss common safety hazards on construction sites.
Objective 3	Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.
Objective 4	Identify various hand tools used in the construction industry.
Objective 5	Utilize various hand tools.
Objective 6	Identify various power tools used in the construction industry.
Objective 7	Utilize various power tools.
Objective 8	Identify and describe the use of slings and common rigging hardware.
Objective 9	Describe basic inspection techniques and rejection criteria used for slings and hardware.
Objective 10	Describe basic hitch configurations and their proper connections.
Objective 11	Describe basic load-handling safety practices.
Objective 12	Demonstrate proper use of American National Standards Institute (ANSI) hand signals.
Objective 13	Demonstrate the ability to interpret information and instructions presented in both written and verbal form.
Objective 14	Demonstrate critical thinking skills and the ability to solve problems using those skills.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Safely and appropriately use hand and power tools commonly found in the construction workplace.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Lecture	Presentation of topic in context.
Laboratory	Analysis of job sites.
Discussion	Classroom and group discussions.
Participation	Class discussion and questions.
Other (Specify)	1. Guest lectures 2. Site visits
Activity	Hands on demonstrations of appropriate tool selection and safety procedures.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Written homework	Homework assigned from text and worksheets completed out-of-class and reviewed in-class.	Out of Class Only
Student participation/contribution	Participation in lab groups and classroom/online discussion.	In and Out of Class
Mid-term and final evaluations	Examinations covering key concepts introduced in the course.	In Class Only
Tests/Quizzes/Examinations	Weekly quizzes on topics covered in class and analysis of job sites. Quizzes completed out-of-class and discussed in-class.	In and Out of Class
Other	Out-of-class hours will be accounted for electronically through the learning management system.	Out of Class Only

Assignments

Other In-class Assignments

1. Individual projects to analyze and evaluate appropriate tools and equipment for a variety of construction tasks.
2. Small group projects to analyze, review, diagnose and evaluate team responsibilities when using tools and equipment on the construction job site.
3. Small group projects to identify and use hand signals.

Other Out-of-class Assignments

1. Review of construction industry vocabulary terms.
2. Complete daily assigned homework and complete pretests.
3. Reading textbook and supplementary assignments.
4. Written homework assignments identifying the appropriate use for a wide array of construction tools and equipment.
5. In person or virtual site visits.

Grade Methods

Pass/No Pass Only

Distance Education Checklist

Lab Courses

Instructional Materials and Resources

Effective Student/Faculty Contact

Which of the following methods of regular, timely, and effective student/faculty contact will be used in this course?

Within Course Management System:

Timely feedback and return of student work as specified in the syllabus
Discussion forums with substantive instructor participation
Chat room/instant messaging
Regular virtual office hours
Online quizzes and examinations
Weekly announcements

External to Course Management System:

Direct e-mail

Briefly discuss how the selected strategies above will be used to maintain Regular Effective Contact in the course.

Timely feedback and return of student work as specified in the syllabus.
Discussion forums with substantive instructor participation.
Online quizzes and examinations.
Weekly announcements.

Other Information

MIS Course Data

CIP Code
46.0412 - Building/Construction Site Management/Manager.

TOP Code
095700 - Civil and Construction Management Technology

SAM Code
D - Possibly Occupational

Basic Skills Status
Not Basic Skills

Prior College Level
Not applicable

Cooperative Work Experience
Not a Coop Course

Course Classification Status
Workforce Prep Enhanced Funding

Approved Special Class
Not special class

Noncredit Category
Workforce Preparation

Funding Agency Category
Not Applicable

Program Status
Program Applicable

Transfer Status
Not transferable

Allow Audit
No

Repeatability
Yes

Repeatability Limit
NC

Repeat Type
Noncredit

Justification
Noncredit courses are repeatable until the student has achieved the skills and knowledge required to meet the objectives and outcomes of the course.

Materials Fee
No

Additional Fees?
No

Approvals

Curriculum Committee Approval Date
10/17/2019

Academic Senate Approval Date
10/24/2019

Board of Trustees Approval Date
11/13/2019

Chancellor's Office Approval Date
01/10/2020

Course Control Number
CCC000611514

Programs referencing this course
Construction Technology Framing Carpentry Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=279/)
Construction Technology Introduction Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=280/)
Construction Technology Drywall Installation and Finish Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=285/)