

ACT 324: ROOFING APPLICATIONS

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

324

Full Course Title

Roofing Applications

Short Title

ROOFING APPLICATIONS

Discipline

Disciplines List

Construction Technology

Modality

Face-to-Face
100% Online

Catalog Description

This course introduces the application of typical roof materials on different types of residential and light commercial structures. Safety procedures are emphasized as preparation for roofing application is demonstrated. Topics include roofing tools and proper roof ventilation. Some of the roof materials discussed include composite shingles, shakes, metal roofing, slate and tile, single ply roofing and foam application. Students participate in Service Learning by way of a practical lab or an actual project site under close supervision of trade professionals.

Schedule Description

This course introduces the application of typical roof materials on different types of residential and light commercial structures. Safety procedures are emphasized as preparation for roofing application is demonstrated. Prerequisite: ACT 320

Non-credit Hours

54

In-class Hours

18

Out-of-class Hours

36

Total Semester Hours

54

Override Description

Noncredit override.

Prerequisite Course(s)

ACT 320

Required Text and Other Instructional Materials**Resource Type**

Book

Author

National Center for Construction Education and Research

Title

Construction Technology: Trainee Guide

Edition

4th

City

Gainesville, FL

Publisher

Pearson Prentice Hall

Year

2016

College Level

Yes

Flesch-Kincaid Level

12

ISBN #

9780134130392

Class Size Maximum

20

Entrance Skills

Demonstrate understanding of common safety hazards on construction sites.

Requisite Course Objectives

ACT 320-Discuss common safety hazards on construction sites.

Entrance Skills

Interpret information and instructions presented in both written and verbal form.

Requisite Course Objectives

ACT 320-Demonstrate the ability to interpret information and instructions presented in both written and verbal form.

Entrance Skills

Critical thinking skills and the ability to solve problems using those skills.

Requisite Course Objectives

ACT 320-Demonstrate critical thinking skills and the ability to solve problems using those skills.

Entrance Skills

Knowledge of ANSI hand signals for the construction industry.

Requisite Course Objectives

ACT 320-Demonstrate proper use of American National Standards Institute (ANSI) hand signals.

Course Content

1. Overview of typical roofing materials.
2. Safety on the roof.
3. Roofing tools.
4. Preparation for roofing application.
5. Discussion of composition shingle installation.
6. Discussion of roll roofing installation.
7. Discussion of shake shingle installation.
8. Discussion of common metal roofing.
9. Discussion of slate and tile roofing.
10. Discussion of single-ply roofing application.
11. Discussion of Torch-down roofing application.
12. Discussion of roof ventilation.

Course Objectives

Objectives	
Objective 1	Identify the materials and methods used in roofing.
Objective 2	Explain the safety requirements for roofing projects.
Objective 3	Describe the procedure for installing fiberglass shingles on gable and hip roofs.
Objective 4	Explain the procedure for making various roof projections watertight when using fiberglass shingles.
Objective 5	Explain the procedure for installing a cricket or saddle.
Objective 6	Explain the procedure for installing shake material.
Objective 7	Explain the procedure for installing alternative types of roofing material.

Student Learning Outcomes

Upon satisfactory completion of this course, students will be able to:	
Outcome 1	Outline the safety requirements for roofing projects.
Outcome 2	Identify the materials and methods used in roofing.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Demonstration, Repetition/Practice	Develop procedures for estimating materials for roofing construction.
Participation	Individual and group participation in evaluation of roofing construction options.
Lecture	Presentation of topics in context.

Discussion	In class and online evaluation of roofing construction methods and safety issues.
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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	Determination of appropriate materials, methods and safety procedures for installing roofing to a residence.	Out of Class Only
Other	Field notes from site visits.	In and Out of Class
Student participation/contribution	Individual and group participation in evaluation of written homework proposals.	In and Out of Class
Presentations/student demonstration observations	Presentation of roofing solutions and options in a variety of residential settings.	In and Out of Class
Tests/Quizzes/Examinations	Timed quizzes to demonstrate knowledge from the text readings.	Out of Class Only
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 develop materials estimates and recommendations.
2. Small group projects to evaluate proposals.
3. Individual projects to develop safe and effective procedures for installing roofing to a residence or outdoor structure.

Other Out-of-class Assignments

1. Review questions to demonstrate understanding of assigned readings.
2. Assigned textbook readings.
3. Prepare recommendations on roofing materials and methods.
4. Vocabulary terms and description of materials and methods.
5. Short response papers to evaluate estimates and methods.

Grade Methods

Pass/No Pass Only

Distance Education Checklist

Instructional Materials and Resources

If you use any other technologies in addition to the college LMS, what other technologies will you use and how are you ensuring student data security?

Only the college LMS will be used.

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
 Regular virtual office hours
 Online quizzes and examinations
 Video or audio feedback
 Weekly announcements

External to Course Management System:

Direct e-mail

Posted audio/video (including YouTube, 3cm mediasolutions, etc.)

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

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

If interacting with students outside the LMS, explain how additional interactions with students outside the LMS will enhance student learning.

Direct e-mail to alert students to postings in the LMS and to notify students of grading comments.

Other Information

MIS Course Data

CIP Code

46.0412 - Building/Construction Site Management/Manager.

TOP Code

095700 - Civil and Construction Management Technology

SAM Code

C - Clearly Occupational

Basic Skills Status

Not Basic Skills

Prior College Level

Not applicable

Cooperative Work Experience

Not a Coop Course

Course Classification Status

Other Non-credit Enhanced Funding

Approved Special Class

Not special class

Noncredit Category

Short-Term Vocational

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 students achieve the skills and knowledge required to meet the outcomes and objectives of the course.

Materials Fee

No

Additional Fees?

No

Approvals**Curriculum Committee Approval Date**

11/05/2019

Academic Senate Approval Date

11/14/2019

Board of Trustees Approval Date

12/19/2019

Chancellor's Office Approval Date

01/10/2020

Course Control Number

CCC000611521

Programs referencing this course

Construction Technology Exterior Finishes Certificate of Completion (<http://catalog.collegeofthedesert.eduundefined?key=284/>)
Construction Technology Career Preparation Certificate of Completion (<http://catalog.collegeofthedesert.eduundefined?key=292/>)