

# ACT 324A: ROOFING APPLICATIONS LAB

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## New Course Proposal

Date Submitted: Fri, 13 Sep 2019 22:01:24 GMT

### Originator

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### Co-Contributor(s)

#### Name(s)

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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

324A

### Full Course Title

Roofing Applications Lab

### Short Title

ROOFING APPLICATIONS LAB

### Discipline

#### Disciplines List

Construction Technology

### Modality

Face-to-Face

### Catalog Description

Practical lab to demonstrate 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 a practical lab or an actual project site under close supervision of trade professionals.

### Schedule Description

Practical lab to demonstrate 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 324 or concurrent enrollment

### Non-credit Hours

54

**In-class Hours**

54

**Out-of-class Hours**

0

**Total Semester Hours**

54

**Override Description**

Noncredit override.

**Prerequisite Course(s)**

ACT 324 or concurrent enrollment

**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

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**Class Size Maximum**

20

**Entrance Skills**

Identify the materials and methods used in roofing.

**Requisite Course Objectives**

ACT 324-Identify the materials and methods used in roofing.

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**Entrance Skills**

Safety requirements for roofing projects.

**Requisite Course Objectives**

 ACT 324-Explain the safety requirements for roofing projects.
 

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**Entrance Skills**

Describe procedures for installing shingles on roofs.

**Requisite Course Objectives**

 ACT 324-Describe the procedure for installing fiberglass shingles on gable and hip roofs.
 

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**Entrance Skills**

Explain procedures for installing a cricket or saddle.

**Requisite Course Objectives**

 ACT 324-Explain the procedure for installing a cricket or saddle.
 

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**Course Content**

1. Review of typical roofing materials
2. Review Safety on the roof
3. Review Roofing tools
4. Preparation for roofing application
5. Composition shingle installation
6. Roll roofing installation
7. Shake shingle installation
8. Common metal roofing
9. Slate and tile roofing
10. Single-ply roofing application
11. Torch-down roofing application
12. Roof ventilation

**Course Objectives**

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

**Student Learning Outcomes**

	<b>Upon satisfactory completion of this course, students will be able to:</b>
Outcome 1	Demonstrate the safety requirements for roofing projects.
Outcome 2	Identify the materials and methods used in roofing.
Outcome 3	Install traditional and alternative types of roofing material.

**Methods of Instruction**

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

Discussion In-class and online evaluation of roofing construction methods and safety issues.

Activity Install a variety of roofing materials on job site or lab projects.

### Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Other	Field notes from site visits and lab projects.	In Class Only
Presentations/student demonstration observations	Presentation of roofing solutions and options in a variety of residential settings.	In Class Only
Tests/Quizzes/Examinations	Timed quizzes to demonstrate knowledge from the text readings.	In Class Only
Laboratory projects	Effectiveness of Installation of roofing materials on job sites or lab projects.	In 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.
4. Group projects to install a variety of different roof materials and structures in a laboratory environment.

#### Grade Methods

Pass/No Pass Only

### 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**

CCC000611522

**Programs referencing this course**

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