ACT 325: THERMAL & MOISTURE PROTECTION

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

325

Full Course Title

Thermal & Moisture Protection

Short Title

THERML/MOIST PROTECT

Discipline

Disciplines List
Construction Technology

Modality

Face-to-Face
100% Online
Hybrid

Catalog Description

This course covers the fundamentals of thermal insulation and vapor barriers for building structures, including topics such as requirements and characteristics of certain insulation and waterproofing. Hands-on application and proper installation of these materials are demonstrated by certified installers.

Schedule Description

This course covers the fundamentals of thermal insulation and vapor barriers for building structures. Prerequisite: ACT 320 or concurrent enrollment

Non-credit Hours

54

Lecture Units
0
Lecture Semester Hours
0

Lab Units
0
Lab Semester Hours
0

In-class Hours
36

Out-of-class Hours
18

Total Course Units
0
Total Semester Hours
54

Override Description
Noncredit override.

Prerequisite Course(s)
ACT 320 or concurrent enrollment

Required Text and Other Instructional Materials

Resource Type
Book

Author
National Center for Construction Education and Research

Title
Carpentry Framing and Finishing, Level Two Trainee Guide

Edition
5th

City
Gainesville, FL

Publisher
Pearson Prentice Hall

Year
2014

College Level
Yes

Flesch-Kincaid Level
12

ISBN #
9780133404302

Resource Type
Instructional Materials

Title
Career Connections Project Book 3

Edition
Most Recent

Publisher
Carpenters International Training Fund

Year
2018

Description
CC0003RG

Class Size Maximum
20

Entrance Skills
Demonstrate awareness of safety procedures on construction sites.

Requisite Course Objectives
ACT 320-Discuss common safety hazards on construction sites.

Entrance Skills
Ability to 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 sole problems using those skills.

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

Entrance Skills
Proper use 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 industry
2. Thermal insulation
3. Insulation installation guidelines
4. Moisture control
5. Waterproofing
6. Air infiltration control

Course Objectives

	Objectives
Objective 1	Describe requirements for thermal insulation.
Objective 2	Describe the characteristics of various types of insulation material.
Objective 3	Determine the required amounts of insulation for a structure.
Objective 4	Explain the proper procedure for installing selected insulation materials.
Objective 5	Describe the requirements for moisture control and ventilation.
Objective 6	Explain the proper procedure for installing selected vapor barriers.
Objective 7	Describe air infiltration control requirements.
Objective 8	Explain the proper procedure for installing selected building wraps.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Outline the characteristics and requirements of various types of insulation material.
Outcome 2	Explain the procedure for installing selected thermal insulation and vapor barrier on a simple structure.
Outcome 3	Summarize air infiltration control requirements.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Participation	Individual and group participation in evaluation of thermal and moisture protection options.
Activity	Develop procedures for estimating materials required for thermal and moisture protection.
Lecture	Presentation of topic in context.
Discussion	In class and online evaluation of thermal and moisture protection options.
Other (Specify)	Site visits.

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 thermal and moisture protection options.	Out of Class Only
Other	Quizzes. In-class exercises. Participation during office and 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
Group activity participation/observation	Participation in discussion of material estimates, procedures and safety issues.	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 develop recommendations and material estimates.
2. Small group projects to evaluate recommendations.
3. Individual projects to develop safe and effective procedures for installing thermal and moisture protection.

Other Out-of-class Assignments

1. Review questions to determine knowledge of material presented in class.
2. Prepare material recommendations and estimates.
3. Short response papers to evaluate estimates and methods.
4. Vocabulary terms.
5. Textbook readings.

Grade Methods

Pass/No Pass Only

Distance Education Checklist

Include the percentage of online and on-campus instruction you anticipate.

Online %

70

On-campus %

30

What will you be doing in the face-to-face sections of your course that necessitates a hybrid delivery vs a fully online delivery?

Participation in actual installation of thermal and moisture protection at a job site or laboratory.

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, 3cmediasolutions, etc.)

For hybrid courses:

Scheduled Face-to-Face group or individual meetings

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.

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

Onsite lab activities to demonstrate knowledge and skills acquired during online portion of the class.

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 objectives and outcomes 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
CCC000611523

Programs referencing this course
Construction Technology Exterior Finishes Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=284/)