ACT 329A: MASONRY FUNDAMENTALS LAB

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

329A

Full Course Title

Masonry Fundamentals Lab

Short Title

MASONRY FUNDAMENTALS LAB

Discipline

Disciplines List
Construction Technology

Modality

Face-to-Face

Catalog Description

This course provides lab practice for the use of masonry as a method of construction. Basic materials, tools, and techniques used by masons are discussed and demonstrated along with safety precautions exercised around a jobsite. The many types of masonry units are covered as well as the important role of mortar, and the concept of modularity and layout of masonry units. Students participate in a practical lab or an actual project site under close supervision of trade professionals.

Schedule Description

Lab practice for masonry as a construction method. Basic materials, tools, and techniques used by masons are discussed and demonstrated along with safety precautions exercised around a jobsite. Prerequisite: ACT 329 or concurrent enrollment

Non-credit Hours

36

In-class Hours
36

Out-of-class Hours
0

Total Semester Hours
36

Override Description
Noncredit override.

Prerequisite Course(s)
ACT 329 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

Class Size Maximum
20

Entrance Skills
Explain safety precautions that must be practiced at a work site.

Requisite Course Objectives
ACT 329-Explain the safety precautions that must be practiced at a work site.

Entrance Skills
Describe proper procedures for tools involved in masonry construction.

Requisite Course Objectives

ACT 329-Describe the proper procedure for the use of gasoline-powered tool.

Entrance Skills

Explain the process of setting up a wall, laying out a dry bond and furrowing a bed joint.

Requisite Course Objectives

ACT 329-Describe the proper procedure for setting up a wall.
ACT 329-Explain the process of laying out a dry bond.
ACT 329-Explain the process of spreading and furrowing a bed joint, and buttering masonry units.
ACT 329-Describe the different types of masonry bonds.

Entrance Skills

Describe the process for laying out masonry units in a true course.

Requisite Course Objectives

ACT 329-Describe the procedure for laying out masonry units in a true course.

Course Content

1. Modern day masonry.
2. Stone.
3. Mortars and grouts.
4. Modern construction techniques.
5. Masonry as a career.
6. Knowledge, skills, and ability.
7. Basic bricklaying.
8. Safety practices.
9. Fall protection.
10. Concrete masonry materials.
11. Clay and other masonry materials.
12. Setting up and laying out.
13. Block head joints.
14. Bonding masonry units.
15. Cutting masonry units.
16. Laying masonry units.
17. Mortar joints.
18. Patching mortar.
19. Cleaning masonry units.

Course Objectives

	Objectives
Objective 1	Describe modern masonry materials and methods.
Objective 2	Describe the skills, attitudes, and abilities needed to work as a mason.
Objective 3	Demonstrate the use of safety precautions that must be practiced at a work site.
Objective 4	Demonstrate the proper procedure for the use of gasoline-powered tool.
Objective 5	Describe the most common types of masonry units.
Objective 6	Demonstrate the proper procedure for setting up a wall.
Objective 7	Demonstrate the process of laying out a dry bond.
Objective 8	Demonstrate the process of spreading and furrowing a bed joint, and buttering masonry units.
Objective 9	Demonstrate understanding of the different types of masonry bonds.

Objective 10	Demonstrate the procedure for cutting brick and block accurately.
Objective 11	Demonstrate the procedure for laying out masonry units in a true course.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Demonstrate the use of appropriate safety procedures for hand and power tools used in masonry application.
Outcome 2	Demonstrate the procedure for laying out masonry units in a true course.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Demonstration, Repetition/Practice	Individual and group participation in installation of concrete and masonry construction options.
Participation	Individual and group participation in installation of concrete and masonry construction options.
Discussion	Individual and group participation in evaluation of concrete and masonry construction options.
Activity	Develop procedures for estimating materials for concrete and masonry services in residential construction.
Other (Specify)	Install concrete and masonry projects at a residential site or lab.

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	Field notes on appropriate materials, methods and safety procedures for installing concrete and masonry in a residential structure.	In Class Only
Other	Participation during site visits and installation projects.	In Class Only
Student participation/contribution	Individual and group participation installation of concrete and masonry projects.	In Class Only
Group activity participation/observation	Participation in discussion of material estimates, procedures and safety issues.	In Class Only

Assignments

Other In-class Assignments

1. Individual projects installing a variety of masonry and concrete projects on sample residential sites.
2. Small group projects to safely install concrete and masonry in a residence or outdoor structure.
3. Small group projects to evaluate installations.

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 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
CCC000611531

Programs referencing this course
Construction Technology Concrete and Masonry Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=283/)