ACT 321A: SITE PREPARATION & LAYOUT 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 two modules of a non-credit overlay version of CM 021 Site Preparation and Layout. Module 1 covers the lecture topics and provides the understanding and skills necessary to complete the initial stages of building construction. General topics include project site clearance, reading and implementing the information from the Precise Grading Plan, concept of cutting and filling, and site layout. Module 2 is a hands-on lab to demonstrate mastery of the skills learned in ACT 321. 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

321A

Full Course Title

Site Preparation & Layout Lab

Short Title

SITE PREP/LAYOUT LAB

Discipline

Disciplines List
Architecture
Construction Technology
Construction Management

Modality

Face-to-Face

Catalog Description

This course provides a practical lab or an actual project site where students apply the building construction site planning knowledge learned in ACT 321. General topics include project site clearance, reading and implementing the information from the Precise Grading Plan, concept of cutting and filling, and site layout.

Schedule Description

Lab or onsite project to apply the construction site planning knowledge learned in ACT 321. Prerequisite: ACT 321 or concurrent enrollment

Non-credit Hours

27

Lecture Units
0
Lecture Semester Hours
0

Lab Units
0
Lab Semester Hours
0

In-class Hours
27

Out-of-class Hours
0

Total Course Units
0
Total Semester Hours
27

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

Prerequisite Course(s)
ACT 321 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 #
978-0134130392

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
Describe the major responsibilities of the carpenter relative to site layout.

Requisite Course Objectives
ACT 321A-Describe the major responsibilities of the carpenter relative to site layout.

Entrance Skills
Convert measurements stated in feet and inches to equivalent measurements stated in decimal feet.

Requisite Course Objectives
ACT 321A-Convert measurements stated in feet and inches to equivalent measurements stated in decimal feet, and vice versa.

Entrance Skills
Discuss the use of manual and electronic equipment and procedures to make distance measurements and perform site layout tasks.

Requisite Course Objectives
ACT 321A-Discuss the use of manual and electronic equipment and procedures to make distance measurements and perform site layout tasks.

Entrance Skills
Record site layout data and information in field notes using accepted practices.

Requisite Course Objectives
ACT 321A-Record site layout data and information in field notes using accepted practices.

Entrance Skills
Explain the use of a builder's level and differential leveling procedures.

Requisite Course Objectives
ACT 321A-Explain the use of a builder's level and differential leveling procedures.

Entrance Skills
Explain the check procedure of establishing 90-degree angles using the 3-4-5 rule.

Requisite Course Objectives

ACT 321A-Explain the check procedure of establishing 90-degree angles using the 3-4-5 rule.

Course Content

1. Review of site layout procedures.
2. Communication with hand signals.
3. Learning distance measurement tools and equipment.
4. Measuring distances by taping.
5. Estimating distances by pacing.
6. Use of electronic distance measuring tool.
7. Learn to use differential leveling tools and equipment.
8. Field notes.
9. Leveling applications.
10. Overview of the 3-4-5 rule.

Course Objectives

	Objectives
Objective 1	Describe the major responsibilities of the carpenter relative to site layout.
Objective 2	Convert measurements stated in feet and inches to equivalent measurements stated in decimal feet, and vice versa.
Objective 3	Demonstrate the use and maintenance of tools and equipment associated with taping.
Objective 4	Demonstrate the use of manual and electronic equipment and procedures to make distance measurements and perform site layout tasks.
Objective 5	Determine approximate distances by pacing.
Objective 6	Demonstrate the use of a builder's level and differential leveling procedures.
Objective 7	Record site layout data and information in field notes using accepted practices.
Objective 8	Demonstrate the check procedure of establishing 90-degree angles using the 3-4-5 rule.

Student Learning Outcomes

	Upon satisfactory completion of this course, students will be able to:
Outcome 1	Demonstrate appropriate and safe use of manual and electronic tools and equipment commonly associated with distance measurements and site layout.
Outcome 2	Complete a site layout and record site layout data and information in field notes using industry accepted format.

Methods of Instruction

Method	Please provide a description or examples of how each instructional method will be used in this course.
Demonstration, Repetition/Practice	Evaluate a variety of site layouts to show the benefits and costs.
Participation	Class discussion and evaluation of site layouts.
Discussion	Class discussion of site layouts and associated environmental issues.
Laboratory	Participation in lab or onsite project performing site layout.

Methods of Evaluation

Method	Please provide a description or examples of how each evaluation method will be used in this course.	Type of Assignment
Student participation/contribution	Participation during lab and/or site visits.	In Class Only
Mid-term and final evaluations	Quizzes. In-class exercises.	In Class Only
Computational/problem-solving evaluations	Evaluation of site layout.	In Class Only
Portfolios	Site field notes using appropriate format accepted in the construction field.	In Class Only

Assignments

Other In-class Assignments

1. Individual projects evaluating a variety of site layouts as presented in the text and related materials.
2. Small group projects laying out actual job sites with respect to environmental impact, green rating, efficiency and effectiveness.

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 have achieved 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
10/17/2019

Academic Senate Approval Date
10/24/2019

Board of Trustees Approval Date
11/13/2019

Chancellor's Office Approval Date
12/22/2019

Course Control Number
CCC000610829

Programs referencing this course
Construction Technology Site Preparation and Layout Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=281/)
Construction Technology Plumbing Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=282/)
Construction Technology Concrete and Masonry Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=283/)
Construction Technology Electrical Certificate of Completion (http://catalog.collegeofthedesert.eduundefined?key=286/)