

ACT 321: SITE PREPARATION & LAYOUT ESSENTIALS

New Course Proposal

Date Submitted: Thu, 12 Sep 2019 20:44:08 GMT

Originator

zbecker

Co-Contributor(s)

Name(s)

Bitanga, Bert

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 321A. 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

321

Full Course Title

Site Preparation & Layout Essentials

Short Title

SITE PREP/LAYOUT

Discipline

Disciplines List

Architecture

Construction Technology

Construction Management

Modality

Face-to-Face

Hybrid

Catalog Description

This course 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.

Schedule Description

This course provides the understanding and skills necessary to complete the initial stages of building construction. Prerequisite: ACT 320A and ACT 320B

Non-credit Hours

27

Lecture Units

0

Lecture Semester Hours

0

Lab Units

0

Lab Semester Hours

0

In-class Hours

9

Out-of-class Hours

18

Total Course Units

0

Total Semester Hours

27

Override Description

Noncredit courses do 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 320A & ACT 320B

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

2009

College Level

Yes

Flesch-Kincaid Level

12

ISBN #

9780134130392

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

40

Entrance Skills

Awareness of safety requirements on construction sites

Requisite Course Objectives

ACT 320A-Discuss common safety hazards on construction sites.

Entrance Skills

Understand the Occupational Safety and Health Administration (OSHA) purpose and regulations for the construction industry.

Requisite Course Objectives

ACT 320A-Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.

Entrance Skills

Understand the impact of construction on environment.

Requisite Course Objectives

ACT 320A-Understand the impact of construction to the environment.

Entrance Skills

Arithmetic and geometry skills required for the construction industry.

Requisite Course Objectives

ACT 320B-Solve simple arithmetic functions including addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals.

ACT 320B-Recognize and measure basic geometric shapes commonly used in the construction industry.

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

Course Content

1. Overview of site layout procedures.
2. Review Precise Grading Plan.
3. Communication with hand signals.
4. Learning distance measurement tools and equipment.
5. Measuring distances by taping.
6. Estimating distances by pacing.
7. Use of electronic distance measuring tool.
8. Learn to use differential leveling tools and equipment.
9. Field notes.
10. Leveling applications.
11. 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	Discuss the use and maintenance of tools and equipment associated with taping.
Objective 4	Discuss 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	Explain 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	Explain 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	Outline the major responsibilities of the carpenter relative to site layout.
Outcome 2	Describe the manual and electronic tools and equipment commonly associated with distance measurements and site layout.
Outcome 3	Record site layout data and information in field notes.

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.
Lecture	Presentation of the topic in context.
Discussion	Class discussion of site layouts and associated environmental issues.

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	Written evaluations of site layouts using appropriate field notes format.	In and Out of Class
Student participation/contribution	Participation in classroom or online discussion evaluating site layouts.	In Class Only
Mid-term and final evaluations	Quizzes. In-class exercises.	In 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 evaluating a variety of site layouts as presented in the text and related materials.
2. Small group projects evaluating actual job sites with respect to environmental impact, green rating, efficiency and effectiveness.

Other Out-of-class Assignments

1. Vocabulary terms.
2. Written evaluations of environmental impact.
3. Written evaluations of green ratings.
4. Written evaluations of job sites with suggestions for improvement.

Grade Methods

Pass/No Pass Only

Distance Education Checklist

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

Online %

100

On-campus %

0

Instructional Materials and Resources**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
Weekly announcements

External to Course Management System:

Direct e-mail

For hybrid courses:

Scheduled Face-to-Face group or individual meetings
Field trips

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

Instructors will return assignments on a timely basis and quiz results will be provided and discussed.

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 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

01/10/2020

Course Control Number

CCC000611518

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/>)

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