

# COLLEGE OF THE DESERT

Course Code ACT-021

## Course Outline of Record

1. Course Code: ACT-021
2.
  - a. Long Course Title: Site Preparation and Layout
  - b. Short Course Title: SITE PREP/LAYOUT
3.
  - a. Catalog Course 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. Students have the opportunity to apply Service Learning by way of a practical lab or an actual project site with close supervision of trade professionals.
  - b. Class Schedule Course Description:

This course provides the understanding and skills necessary to complete the initial stages of building construction.
  - c. Semester Cycle (*if applicable*): Fall
  - d. Name of Approved Program(s):
4. Total Units: 1.00      Total Semester Hrs: 36.00  
Lecture Units: 0.5      Semester Lecture Hrs: 9.00  
Lab Units: 0.5      Semester Lab Hrs: 27.00  
Class Size Maximum: 20      Allow Audit: No  
Repeatability No Repeats Allowed  
Justification 0
5. Prerequisite or Corequisite Courses or Advisories:

*Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm I-A)*

Prerequisite: CM 020 or  
Prerequisite: ACT 020
6. Textbooks, Required Reading or Software: (*List in APA or MLA format.*)
  - a. National Center for Construction Education and Research (2009). *Construction Technology-Trainee Guide* (4th/e). Gainesville, FL Pearson Prentice Hall. ISBN: -  
College Level: Yes  
Flesch-Kincaid reading level: 12
7. Entrance Skills: *Before entering the course students must be able:*
  - a. Discuss common safety hazards on construction sites.
    - ACT 020 - Discuss common safety hazards on construction sites.
  - b. Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.
    - CM 020 - Explain the purpose of Occupational Safety and Health Administration (OSHA) and their regulations for the construction industry.
  - c. Identify various hand tools used in the construction industry.
    - ACT 020 - Utilize various hand tools.
  - d. Identify various power tools used in the construction industry.
    - CM 020 - Identify various hand tools used in the construction industry
  - e. Understand the impact of construction to the environment.
    - ACT 020 - Understand the impact of construction to the environment.
  - f. Demonstrate fluency reading a tape measure.
    - ACT 020 - Demonstrate fluency reading a tape measure.
  - g. Demonstrate the ability to interpret information and instructions presented in both written and verbal form.
    - ACT 020 - Demonstrate the ability to interpret information and instructions presented in both written and verbal form.

# ACT 021-Site Preparation and Layout

## h. Demonstrate critical thinking skills and the ability to solve problems using those skills.

- CM 020 - Demonstrate critical thinking skills and the ability to solve problems using those skills

## i. Demonstrate effective relationship skills with teammates and supervisors, the ability to work on a team, and appropriate leadership skills.

- CM 020 - Demonstrate effective relationship skills with teammates and supervisors, the ability to work on a team, and appropriate leadership skills

## j. Understand workplace issues such as sexual harassment, stress, and substance abuse.

- CM 020 - Understand workplace issues such as sexual harassment, stress, and substance abuse.

### 8. Course Content and Scope:

#### Lecture:

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

#### Lab: *(if the "Lab Hours" is greater than zero this is required)*

- a. Communication with hand signals
- b. Measuring distances by taping and compare to estimate distance by pacing
- c. Measure a distance using the transit
- d. Write field notes
- e. Closing an area

### 9. Course Student Learning Outcomes:

1. Outline the major responsibilities of the carpenter relative to site layout.
2. Use manual and electronic tools and equipment commonly associated with distance measurements and site layout.
3. Record site layout data and information in field notes.

### 10. Course Objectives: *Upon completion of this course, students will be able to:*

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

### 11. Methods of Instruction: *(Integration: Elements should validate parallel course outline elements)*

- a. Demonstration, Repetition/Practice
- b. Discussion
- c. Laboratory
- d. Lecture
- e. Participation

#### Other Methods:

# ACT 021-Site Preparation and Layout

Office and site visits

12. Assignments: *(List samples of specific activities/assignments students are expected to complete both in and outside of class.)*

In Class Hours: 36.00

Outside Class Hours: 18.00

a. In-class Assignments

1. Individual projects
2. Small group projects

b. Out-of-class Assignments

1. Vocabulary terms
2. Short response papers

13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*

- Written homework
- Mid-term and final evaluations
- Quizzes In-class exercises
- Student participation/contribution
- Participation during office and site visits

14. Methods of Evaluating: Additional Assessment Information:

15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*

PO - Career and Technical Education

Apply critical thinking skills to execute daily duties in their area of employment.

Display the skills and aptitude necessary to pass certification exams in their field.

Exhibit effective written, oral communication and interpersonal skills.

IO - Personal and Professional Development

Develop realistic goals.

Demonstrate an understanding of ethical issues to make sound judgments and decisions.

16. Comparable Transfer Course

**University System**

**Campus**

**Course Number**

**Course Title**

**Catalog Year**

17. Special Materials and/or Equipment Required of Students:

18. Materials Fees: ☐ Required Material?

**Material or Item**

**Cost Per Unit**

**Total Cost**

19. Provide Reasons for the Substantial Modifications or New Course:

Periodic review (2-year)

20. a. Cross-Listed Course *(Enter Course Code):* N/A

b. Replacement Course *(Enter original Course Code):* N/A

21. Grading Method *(choose one):* Letter Grade Only

22. MIS Course Data Elements

a. Course Control Number [CB00]: CCC000513174

b. T.O.P. Code [CB03]: 95700.00 - Civil and Construction Ma

c. Credit Status [CB04]: D - Credit - Degree Applicable

## ACT 021-Site Preparation and Layout

- d. Course Transfer Status [CB05]: C = Non-Transferable
- e. Basic Skills Status [CB08]: 2N = Not basic skills course
- f. Vocational Status [CB09]: Clearly Occupational
- g. Course Classification [CB11]: Y - Credit Course
- h. Special Class Status [CB13]: N - Not Special
- i. Course CAN Code [CB14]: N/A
- j. Course Prior to College Level [CB21]: Y = Not Applicable
- k. Course Noncredit Category [CB22]: Y - Not Applicable
- l. Funding Agency Category [CB23]: Y = Not Applicable
- m. Program Status [CB24]: 2 = Stand-alone

Name of Approved Program (if program-applicable): N/A

Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)

### 23. Enrollment - Estimate Enrollment

First Year: 20

Third Year: 32

### 24. Resources - Faculty - Discipline and Other Qualifications:

a. Sufficient Faculty Resources: Yes

b. If No, list number of FTE needed to offer this course: N/A

### 25. Additional Equipment and/or Supplies Needed and Source of Funding.

N/A

### 26. Additional Construction or Modification of Existing Classroom Space Needed. (Explain:)

N/A

### 27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES

Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Donbert M. Bitanga Origination Date 03/09/15