

Course Outline of Record

1. Course Code: ACT-029
2.
  - a. Long Course Title: Masonry Fundamentals
  - b. Short Course Title: MASONRY FUNDAMENTALS
3.
  - a. Catalog Course Description:
 

This course explores masonry and its history as one of the oldest trades and method of construction. In addition, 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 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 explores masonry and its history as one of the oldest trades and method of construction. In addition, basic materials, tools, and techniques used by masons are discussed and demonstrated along with safety precautions exercised around a jobsite.
  - c. Semester Cycle (*if applicable*): Fall
  - d. Name of Approved Program(s):
    - CONSTRUCTION MANAGEMENT Certificate of Achievement
4. Total Units: 2.00      Total Semester Hrs: 72.00  
 Lecture Units: 1      Semester Lecture Hrs: 18.00  
 Lab Units: 1      Semester Lab Hrs: 54.00  
 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 (CCForm1-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 (2016). *Construction Technology-Trainee Guide* (4th/e). Gainesville, FL Pearson . ISBN: 0134130391  
 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.
    - CM 020 - Identify various hand tools used in the construction industry
  - d. Identify various power tools used in the construction industry.
    - ACT 020 - Identify various power tools used in the construction industry.
  - e. Understand the impact of construction to the environment.
    - CM 020 - Understand the impact of construction to the environment

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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.

- CM 020 - Demonstrate the ability to interpret information and instructions presented in both written and verbal form

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

- ACT 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.

- ACT 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:

- History of masonry
- Overview of the masonry trade
- Modern day masonry
- Stone
- Mortars and grouts
- Modern construction techniques
- Masonry as a career
- Knowledge, skills, and ability
- Basic bricklaying
- Safety practices
- Fall protection
- Concrete masonry materials
- Clay and other masonry materials
- Setting up and laying out
- Block head joints
- Bonding masonry units
- Cutting masonry units
- Laying masonry units
- Mortar joints
- Patching mortar
- Cleaning masonry units

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

- Mix mortar
- Lay a mortar bed
- Lay bricks
- Lay a dry bond
- Spread and furrow a bed joint, and butter masonry units
- Cut brick and block accurately
- Lay masonry units in a true course

## 9. Course Student Learning Outcomes:

- Outline the safety procedures for hand and power tools used in masonry application. (Cognitive)
- Describe modern masonry materials and methods of applications. (Cognitive)
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Demonstrate the procedure for laying out masonry units. (Psychomotor)

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

- a. Discuss the history of masonry.
- b. Describe modern masonry materials and methods.
- c. Explain career advancement possibilities in masonry work.
- d. Describe the skills, attitudes, and abilities needed to work as a mason.
- e. Explain the safety precautions that must be practiced at a work site.
- f. Describe the proper procedure for the use of gasoline-powered tool.
- g. Describe the most common types of masonry units.
- h. Describe the proper procedure for setting up a wall.
- i. Explain the process of laying out a dry bond.
- j. Explain the process of spreading and furrowing a bed joint, and buttering masonry units.
- k. Describe the different types of masonry bonds.
- l. Explain the procedure for cutting brick and block accurately.
- m. Describe the procedure for laying out masonry units in a true course.

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

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

Other Methods:

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: 72.00

Outside Class Hours: 36.00

a. In-class Assignments

1. Individual projects
2. Small group projects

b. Out-of-class Assignments

1. Review questions
2. Vocabulary terms
3. Short response papers

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

- Written homework
- Student participation/contribution
- Other

Quizzes In-class exercises 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.

IO - Personal and Professional Development

Develop realistic goals.

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

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18. Materials Fees:  Required Material?

Material or Item	Cost Per Unit	Total Cost
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## 19. Provide Reasons for the Substantial Modifications or New Course:

### Periodic Course Review

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]: CCC000513182  
b. T.O.P. Code [CB03]: 95700.00 - Civil and Construction Ma  
c. Credit Status [CB04]: D - Credit - Degree Applicable  
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*): CONSTRUCTION MANAGEMENT

*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

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28. Originator Donbert M. Bitanga Origination Date 04/22/18

