BCCM 1200

Division: Career and Technical Education
Department: Building Construction and Construction Management
Course: BCCM 1200
Title: Building Science Fundamentals
Catalog Description:

This course will cover essential building science principles that enable students to construct buildings that are s afe, comfortable to live in, energy efficient, and functional for many years. Students will learn how to apply th ese principles to new construction and how to apply the same principles to remodeling existing homes.

This is a half semester course and will be taught the first half of spring semester.

General Education Requirements: N/A
Semesters Offered: Spring
Credit/Time Requirement: Credit: 2; Lecture: 2; Lab: 0
Clock/Hour Requirements: 30
Offered for Non-Credit: Yes
Prerequisites: N/A

Corequisites: N/A

Justification:

Building construction students must understand basic building science principles so that they will have the ability to construct buildings that are energy efficient, healthy to live in, not harmful to the environment, and use building materials wisely.

Green building jobs are an important and growing part of our economy and building science principles are an important aspect of green building.

The principles students learn in this class will be reinforced through hands-on experience in many of their other BCCM classes.

Student Learning Outcomes:

Upon successful completion of this course students will:

- Be able to explain and give examples of how a house performs as a system.
- Be able to identify the effects of air flow principles on a building and discuss ways to minimize the negative effects of air flow.

- Be able to apply basic heat flow principles and be able to identify proper and improper methods of insulating a space.
- Apply the principles of moisture flow in the design of building elements.
- Be able to identify and discuss how the elements of building design affect indoor environmental quality.

Content:

The principles covered will include the following topics:

- The house as a system
- Air flow
- Heat flow
- Moisture flow
- Indoor Environmental Quality
- How these principles apply to remodeling existing homes

General Education Outcomes:

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Students are required to complete written assignments, design assignments, and complete exams that will demonstrate their ability to implement the principles of air flow, heat flow, moisture flow, and indoor environmental quality. The instructor will evaluate the submitted assignments and make sugestions for improvement.

Key Performance Indicators:

Student Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- Exams
- Written Assignments
- Design Assignments
- Observations (one minute papers)

Representative Text and/or Supplies:

Current instructional materials will be used at the instructor's discretion.

Optimum Class Size: 20
Maximum Class Size: 25

Signatures:

I hereby submit this course syllabus:

Don Saltzman, BA, Licensed Contractor, Instructor

I hereby find this course consistent with the goals and resources of the Building Construction and Construction Management Department:

Marlin Christensen, M. Ed., Instructor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)