

METROPOLITAN STATE UNIVERSITY OF DENVER  
Office of Academic and Student Affairs

**REGULAR COURSE SYLLABUS**

School of: Professional Studies

Department: Engineering Technology

Prefix & Course Number: ARCH 2003 Crosslisted With\*: \_\_\_\_\_

Course Title: Building Structures

Banner course title (30 characters): Building Structures

Check All That Apply: Required for Major: \_\_\_\_\_ Required for Minor: X Specified Elective: \_\_\_\_\_  
Required for Concentration: \_\_\_\_\_ Elective: \_\_\_\_\_ Service Course: \_\_\_\_\_

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

**Federal Credit Hour Definition:** A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:  
(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward to the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3 (2+2)

Face-to-Face or Equivalent Hours per course:

Lecture 30 Lab 30 Internship \_\_\_\_\_ Practicum \_\_\_\_\_ Other (please specify type and hours): \_\_\_\_\_

Additional Student Work Hours per course: 90

Schedule Type: B Grade Mode: L

Variable topics umbrella course: No X Yes \_\_\_\_\_ If Yes, number of credit hours allowed \_\_\_\_\_

Specified repeatable course: No X Yes \_\_\_\_\_

APPROVED:

Azzia Balogh  
Department Chair OR Program Director \_\_\_\_\_ Date Jan. 28, 2014

\_\_\_\_\_  
Dean OR Associate Dean \_\_\_\_\_ Date 1-30-14

Rae Shevalier  
Associate VP, Academic and Student Affairs \_\_\_\_\_ Date 03/13/14

\*If crosslisted, attach completed Course Crosslisting Agreement Form

Prefix and Course Number: ARCH 2003

**Prerequisite(s):** CET 1215 with grade "C" or better

**Corequisite(s):**

**Prerequisite(s) or Corequisite(s):**

**Banner Enforced:**

**Prerequisite(s):** CET 1215 with grade "C" or better

**Corequisite(s):**

**Prerequisite(s) or Corequisite(s):**

**Registration restrictions:** Level \_\_\_\_\_ Class \_\_\_\_\_ Program/Major \_\_\_\_\_ Student attribute \_\_\_\_\_

**Catalog Course Description:**

The focus of this course will be on the importance of collaboration between related fields in the building industry, development of the architectural and building structural knowledge of students and encouraging creative design integration through class projects.

**Specific Variable Topics Course Description (if applicable, umbrella course description included above):**

**Required Reading and Other Materials will be equivalent to:**

Deplazes, Andrea (2005). *Constructing Architecture*. Hoboken, New Jersey: John Wiley & Sons, Inc.

**Recommended Readings:**

1. Banz, Hans (1979). *Building Construction Details*. New York: Van Nostrand Reinhold Company Inc.
2. Boschetti, Joseph (2006). *Details in design*. Australia: The Images Publishing Group Pty Ltd.

**Specific, Measurable Student Behavioral Learning Objectives:**

Upon completion of this course the student should be able to :

1. Interpret the similarities and differences of architectural and civil engineering terminology in structural drawing.
2. Comprehend the structural construction of buildings and their architectural point of view.
3. Gain a general overview of the collaboration between architects and civil/structural engineers.
4. Develop a basic knowledge about different structure types and their historical evolution.

**Detailed Outline of Course Content:**

- I. Foundations
  - A. Foundations
  - B. Footings
  - C. Waterproofing
- II. Wall systems
  - A. Brick
  - B. Stone
  - C. Timber

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- III. Openings
  - A. Doors
  - B. Windows
- IV. Curtain wall systems
  - A. Curtain walls
  - B. Glass roofs
- V. Slabs
  - A. Domes
  - B. Arches
  - C. Slabs
- VI. Roofs
  - A. Pitched Roofs
  - B. Flat roofs
- VII. Stairs
- VIII. Drawings
  - A. Materials
  - B. Drawing rules
  - C. Building Information Modeling (BIM)
- IX. Relationship/collaboration between
  - A. Architects
  - B. Civil/Structural Engineers

**Evaluation of Student Performance:**

1. Architectural drawing
2. Class participation
3. Team work
4. Physical model