AEC 344 – STRUCTURAL DESIGN
Spring 2017
Online and Face-to-face

Instructor
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Office Hours
- 8:00 AM – 11:00 AM Tuesdays & Thursdays, or, contact me by email for meeting time

Prerequisites
- AEC 270 Statics & Strength of Materials

Credit Hours
- 3 credit hours.

Course Description
- AEC 344. STRUCTURAL DESIGN. 3 hrs. Prerequisite: AEC 270. Design of structural members and building structures using steel, wood, and concrete.

Course Overview
- In this course, students will develop knowledge of the design and analysis of structural members and building structures using steel, wood, and concrete. The knowledge of structural design and analysis is essential for students of architecture and construction.

Course Objectives
- After completing this course the student should be able to:
  1. Calculate beam loads, shear, and moments
  2. Design concrete beams, slab, and columns for bending, shear, and deflection
  3. Design steel connections, columns, beams, and decking
  4. Design wood connections, columns, beams, and decking
  5. Calculate reinforcement in concrete footings, beams, columns and slabs

Course Communication
- The primary mode of communication will be via e-mail. The instructor will check email regularly, and you should receive a response within one business day of successfully sending the e-mail. Proper email etiquette is expected; if appropriate collegiate-level language is not used, you will not receive a response.

Required Text

Technology Requirements
- Hardware requirement:
Computer capable of running Windows XP, Windows Vista, or Windows 7 and access to a scanner to scan and upload homework assignments if required.

- **Software requirements:**
  - Internet Explorer or Mozilla (Freeware)
  - Microsoft Word (License Required)
  - Adobe Reader (Freeware)

### Class Procedures and Requirements

- There are regular homework and reading/study assignments (listed in the schedule) due the following class period; completion of reading and study assignments is mandatory to successfully complete the course.

### Evaluation Criteria

- There will be four exams and a final exam; See schedule for dates.
  - Exam 1 – Chapters 1–3: 10%
  - Exam 2 – Chapters 4–7: 20%
  - Exam 3 – Chapters 8–12: 15%
  - Exam 4 – Chapters 13–15: 15%
  - Exam 5 – Chapter 16, Foundations 20%
  - Pop quizzes and homework 20%

### Grading Scale

- **90 to 100 A – Excellent Work: Goes Beyond the requirements of the subject**
  Criteria: Advance understanding of the subject, thoughtful analysis of the problem, clear communication of ideas, depth of understanding in connecting theory to practice, provocative, scholarly treatment of the subject, and creative/imaginative connections or examples

- **80 to 89 B – Good Work: Fully achieves the requirements of the subject**
  Criteria: Knowledge and depth of understanding of the subject, clear communication of ideas, examines the implications of theory to practice, analysis of the problem, and implementation of solutions.

- **70 to 79 C – Average Work: Substantially completes the requirements of the subject**
  Criteria: Knowledge of the subject, adequately communicates ideas but lacks insight, implications drawn are limited in scope and not connected, not attempt to go beyond the minimum requirements of the subject

- **60 to 69 D – Inferior Work: Inadequate attempt in completing the requirements**
  Criteria: Limited knowledge of the subject, inadequate communication of ideas, completes less than minimum requirements of the subject.

- **0 to 59 F – Failure: Noncompliance with basic requirements of the class**
  Criteria: Blatant disregard for requirements.

### Academic Honesty

- “When cheating is discovered, the faculty member may give the student an F on the work involved or in the course. If further disciplinary action is deemed appropriate, the student should be reported to the Dean of Students. In addition to being a violation of academic honesty, cheating violates the Code of Student Conduct and may be grounds for probation, suspension, and/or expulsion.” *Source: USM Undergraduate Bulletin*

### ADA Syllabus Statement

- If a student has a disability that qualifies under the American with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.

Address:
The University of Southern Mississippi
Drop Date, Financial Deadlines, Other Dates of Interest

See the Academic Calendar for exact dates.

- January 24 -- Last day to drop w/ full $ credit
- February 27-28 Mardi Gras
- March 10 -- Interim grades
- March 13-17 spring break
- April 5 -- Last day to drop w/ "W"
- April 14 -- Good Friday
- May 5 -- Last day of regular classes

Absences (for face-to-face courses)

All absences will be considered unexcused until valid documentation is provided to the instructor from the Office of Student-Oriented Services (OSS). To obtain an excused absence, students should submit a “Request for Excused Absence Form” found on the following website: [http://www.usm.edu/student-affairs/office/student-oriented-services](http://www.usm.edu/student-affairs/office/student-oriented-services). Once validated, a letter of support from the OSS should be delivered to the instructor. The instructor should receive OSS excuses as soon as possible. You must submit the OSS excuse form within 1 week of the absence, otherwise the excuse will not be considered by the instructor.

I reserve the right to make fair and equitable adjustments to this syllabus by way of addendum.