AEC 444 – STRUCTURAL DESIGN
Fall 2014

Course Description
- AEC 444. STRUCTURAL DESIGN. 3 hrs. Prerequisite: AEC 270. Design of structural members and building structures using steel, wood, and concrete.

Instructor
- Desmond Fletcher, M. Arch.
- TEC 250B
- 601-266-5185
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Office Hours
- See door schedule

Prerequisites
- AEC 270 Statics & Strength of Materials

Credit Hours
- 3 credit hours.

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: 15%
  - Exam 3 – Chapters 8-12: 20%
  - Exam 4 – Chapters 13-16: 20%
  - Final Exam: 35%

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
- Students on disciplinary suspension may not enroll in any courses offered by The University of Southern Mississippi.

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
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001

Voice Telephone:
(601) 266-5024 or (228) 214-3232
Fax: (601) 266-6035
• Individuals with hearing impairments can contact ODA using the Mississippi Relay Service at 1-800-582-2233 (TTY) or email Suzy Hebert at Suzanne.Hebert@usm.edu.

Drop Date & Financial Deadlines
The last day to drop a course without receiving a grade on the transcript and without permission from an instructor is now the same day that you must drop the course to avoid being charged tuition by the drop without permission deadline. Courses dropped after this date will result in a W on your transcript.

Timeline for Fall 2014 (regular-session classes):

August 27, 2014
• Last day to drop a course without special permission from instructor and chair
• Last day to drop without receiving a grade on transcript
• Last day to drop without financial penalty

August 28, 2014
• Dropping a course requires special permission from instructor and chair
• Dropped courses will receive a grade of W through October 31, 2014
• Student is charged for dropped classes and is responsible for any other expenses incurred on the student account

November 1, 2014
• Student will receive a letter grade (A-F) for the course