CE 4348 COURSE SYLLABUS

1. **Course Title**
   
   Structural Design in Steel  
   Prerequisite: Structural Analysis CE 3341

2. **Instructor**
   
   Professor William A. Wallace, MS, P.E., SECB  
   Office Hours: Engineering Lab Building  Room 265  
   TTH 6:00 – 6:45 PM (By Appointment)  
   Phone: (817) 929-6281  
   email: serwwallace@aol.com and wwallace@uta.edu (send to both email addresses)

3. **Time and Location**
   
   TTH 7:00 – 8:20 PM  
   Nedderman Hall  Room 202

4. **Textbook**
   
   Structural Steel Design by McCormac, 4th Edition  
   AISC Steel Construction Manual 14th Edition

5. **Reference Suggested or Supplemental Reading**
   
   (a)  *Unified Design of Steel Structures* by Geschwindner, J. Wiley  
   (c)  *Basic Steel Design with LRFD* by Galambos & Johnston, Prentice Hall  
   (d)  *Design of Concrete Structures*, 13th Ed. By Wilson, McGraw-Hill  
   (e)  ASCE 7-05/10 Minimum Design Loads for Buildings and Other Structure

6. **Course Objective**
   
   To develop an understanding of performance and design methodology for Basic Structural Steel Elements. In addition this course will focus on the following:
   (a) Apply knowledge of mathematics, science and engineering  
   (b) Designing a component to meet desired needs  
   (c) Identify, formulate, and solve engineering problems  
   (d) Understanding professional & ethical responsibilities  
   (e) Understand the impact of an engineering solution in a global and societal context  
   (f) Recognize the need for engineering in life-long learning  
   (g) Knowledge of contemporary civil engineering issues  
   (h) Using technique, skills and modern engineering tools
7. **Course Policy Requirements**

(a) Attend class regularly  
(b) Conduct yourself in an orderly, ethical, professional manner  
(c) No make-up quizzes  
(d) Instructor will present course material. After sufficient quantity, students will be given opportunities to exhibit their understanding of that material.

8. **Homework**

Homework will be assigned and graded. Students are encouraged to work the homework and see the instructor/GTA during posted hours about those assigned problems the student is having trouble with.

9. **Grading & Assignment of Final Course Grade**

A numerical average for each student will be determined from the following grade items and percentages:

(a) Assigned Homework  10%  
(b) Quizzes  50%  
(c) Term Project  10%  
(c) Final exam - comprehensive  30%  

Final exams will not be returned, but may be reviewed by students.

The grade assigned to the student’s numerical average will be as follows:

(a) 90 to 100 average = A  
(b) 80 to 89.9 average = B  
(c) 70 to 79.9 average = C  
(d) 60 to 69.9 average = D  
(e) < 60 average = F

10. **Topics (Text)**

(a) Chapter 1 – Introduction to Steel Design  
(b) Chapter 2 – Specifications, Loads, and Methods of Design  
(c) Chapter 3 – Analysis of Tension Members  
(d) Chapter 4 – Design of Tension Members  
(e) Chapter 5 – Introduction to Axially Loaded Compression Members  
(f) Chapter 6 – Design of Axially Loaded Compression Members  
(g) Chapter 7 – Design of Axially Loaded Compression Members (continued)  
(h) Chapter 8 – Introduction to Beams  
(i) Chapter 9 – Design of Beams for Moment
11. **Course Description**: A design synthesis course for metal structures emphasizing elastic methods. Topics include tension members, compression members, flexural members and connections. The concept of plastic behavior is introduced. Building codes and related documents.

12. **Field Trips / Presentations**

13. **Graduate Classes**
   - Light Gage Steel, Advanced Steel I, Advanced Steel II

14. **Americans with Disabilities Act**: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *American with Disability Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As an instructor, I am required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability). Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272 -3364.If you require accommodation based on a disability, please call the instructor

15. **Academic Integrity**: It is the philosophy of the University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempted to commit such acts.” (Regents’ Rules and Regulations, Series 50101, Section 2.2)
16. **Student Support Services Available**: The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transmission, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

17. **Final Review Week**: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week.

18. **Librarian to Contact**: Barbara Howser, Science and Technology Library.

19. **E-Culture Policy**: The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

   All students are assigned an email account and information about activating and using it is available at [www.uta.edu/email](http://www.uta.edu/email). New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Student is responsible for checking their email regularly.

20. **Grade Grievance Policy**: Grade grievances will be handled according to the policy described in the College of Engineering portion of the Catalog.