Syllabus for **MAE 5310: Finite Element Methods**
Fall 2015

Instructor(s): Rob Taylor
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Office Hours: 11:00-12:00 MW
Section Information: ME 5310—001, 002 (online)
Time and Place of Class Meetings: 221 Woolf Hall, TuTh 9:30-10:50 a.m.

Description of Course Content: Finite element method in the study of the static response of structures and of continua; applications to field problems; analytical methods emphasized, and digital computer application undertaken.

Student Learning Outcomes: After completing the course, the student should be able to
- Use the finite element method to analyze simple elastic structures using appropriate model idealization, discretization techniques, and element selection criteria
- Assess the quality of a finite element numerical solution and improve accuracy

Prerequisites: Graduate standing and knowledge of linear algebra

Required Textbooks and Other Course Materials: *A First Course in the Finite Element Method*, 5th ed., 2011, by Daryl Logan (must be U.S. edition—mixed English and S.I. units)

Descriptions of major assignments and examinations: A class schedule will be provided. *Tentative* Exam Schedule is as follows:
- Midterm Exam: Oct 8
- Final Exam: Thursday, Dec 17, 8 - 10:30 a.m.

Grading Policy:

Midterm Exam:	35%	A ≥ 90% of full credit
Final:	35%	B ≥ 80%
Homework:	30%	C ≥ 70%
		D ≥ 60%

Attendance Policy: Lecture attendance will not be recorded but you are expected to attend every class and are responsible for information communicated during class times, including lecture material, assignments, and class schedule changes. Students who fail to attend class can expect an impact on their grade. Quizzes may be given during class time.

Homework: Weekly homework will be assigned. Homework submission deadlines and policies will be strictly enforced as follows:
- All homework assignments are due at the beginning of class
- All homework assignments must be clearly written on engineering paper using only one side of the paper
- Late homework will be accepted for 50% credit with the approval of the instructor (do not submit late assignments to the TA).
- No homework submission will be accepted beyond 72 hours after the deadline.
- Homework will not be accepted by email.

Make-up Exam Policy: There will be NO make-up exams except in extraordinary circumstances. Missed exams will receive a grade of zero unless the student has an excused absence.

Grade Grievance Policy: Please refer to catalog.

Classroom Etiquette: In the classroom, all phones and computers must be silenced. Please refrain from all forms of electronic communication when class is in session. If electronics are creating too much distraction, even when silenced, the instructor may request that they be turned off.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information.

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA).* All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity: Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services Available: The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit www.uta.edu/resources for more information.

Electronic Communication Policy: The University of Texas at Arlington has adopted the University "MavMail" address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. ***Students are responsible for checking their MavMail regularly.*** Information about activating and using MavMail is available at http://www.uta.edu/oit/email/. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.
To obtain your NetID or for logon assistance, visit https://webapps.uta.edu/oit/selfservice/. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate,