

Welcome to Honors Math 152 Sections 201-202 – Fall 2013

Dr. Jean Marie Linhart

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| Office: | Blocker 636 | Email: | jmlinhart@math.tamu.edu |
| Office Hours: | MWF 1:45–2:45 pm and by appointment on MWF afternoons | | |
| Class time: | MWF 12:40 – 1:30 pm | Location: | BLOC 117 |
| Lab time: | Section 201: TTh 12:45 – 1:35 pm | Location: | Tu: HELD 118, Th BLOC 124 |
| | Section 202: TTh 2:20 – 3:10 pm | Location: | Tu: ENPH 216, Th BLOC 124 |
| Instructor: | http://www.math.tamu.edu/~jmlinhart | | |
| Course: | http://www.math.tamu.edu/~jmlinhart/m152H | | |
| eCampus: | http://ecampus.tamu.edu | | |
| Webassign: | https://www.webassign.net/tamu/login.html | | |
| Piazza: | https://piazza.com/tamu/math152/home | | |

Important announcements, updates and modifications to the course information are kept current on Piazza and the course website.

Required texts:

1. *Calculus: Early Vectors* by Stewart, Cengage Learning (Brooks/Cole). An e-book is provided through Webassign; purchasing the the paper copy is **optional** (ISBN 113344427x).
2. *MATLAB: An Introduction with Applications* by Amos Gilat, Wiley, ISBN 978-04070767856

Catalog Title and Description: (CREDIT 4.0) *Engineering Mathematics II* Differentiation and Integration techniques and their applications (areas, volumes, work), improper integrals, approximate integration, analytic geometry, vectors, infinite series, power series, Taylor series, computer algebra. MATH 172 is designed to be a more demanding version of this course. Prerequisite: MATH 151 or equivalent. Credit will not be given for more than one of MATH 148, 152 and 172.

Course Learning Outcomes:

1. Be fluent with basic integration techniques and their applications; these will be used throughout the rest of your mathematics and engineering courses. **The method of integration by parts is particularly important.** The method of **integration by substitution** which is essentially the reverse of the **chain rule** of differential calculus is also high on my list.
2. Be fluent with the rules for convergence of sequences and series, which form the foundation on which integration is built, the foundation for many numerical techniques for evaluating functions, and the foundation for Taylor Series.
3. Be able to calculate Taylor Series, which are approximations to functions, and to be able to calculate the error in truncating a Taylor Series. Taylor series are the foundation of much advanced mathematics and numerical approximations used to model advanced scientific and engineering problems. **Understanding Taylor Series is particularly important.**
4. Be able to understand and apply vectors in 2 and 3 dimensions including the dot and cross product.
5. Use MATLAB to be able to solve problems.

In my opinion, there are three things you should understand deeply from your calculus curriculum: 1) the chain rule (and its analog: integration by substitution), 2) integration by parts and 3) Taylor Series.

Grading policy: Grades for Honors MATH 152 sections are based on the following elements and grading scale. The scale indicates minimal grades that will be awarded. Attendance, homework and class participation will be taken into account for borderline grades.

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| Average of 3 common exams | 50% | A = 90-100% |
| Homework | 10% | B = 80-89% |
| Quizzes | 10% | C = 70-79% |
| Matlab | 10% | D = 60-69% |
| Final Exam | 20% | F = below 60% |
| Total | 100% | S = 70-100%, U = below 70% |

Because of privacy rights, I cannot discuss grades over email or telephone.

Common Exam Schedule

Exam 1: Thursday Sept 26; 7:30- 9:30 pm
Exam 2: Thursday Oct 24; 7:30 - 9:30 pm
Exam 3: Monday Nov 25; 7:30 - 9:30 pm

Final Exam

Monday, Dec 9: 10:30 am-12:30 , BLOC 117

If you forget to show up for an exam, you will receive a zero.

Course topics and schedule: The intended course schedule is posted on <http://www.math.tamu.edu/courses/math152/currentsched.html>.

The learning process: Mathematics is not a spectator sport. You learn through practice and participation. Plan on budgeting 7-9 hours a week for work outside of the classroom.

- Actively listen and participate in class, think, ask questions.
- Work homework problems, read the book, ask questions.
- Do MATLAB assignments, ask questions.
- Take a quiz, ask questions.
- Take an exam, reflect on what you were able to do or not, and why, ask questions.

Homework, Quizzes and MATLAB: A thorough understanding of the homework whether handed in or suggested is essential for doing well in the course.

Equivalent to one weekly Webassign homework, each Honors student is required to go to and report on at least two seminars over the course of the semester. The AMUSE (Applied Mathematics Undergraduate SEminar) is encouraged. Math Club meetings will often work. You may also go to other seminars or special events for credit with my approval. Seminar reports must be handed in within a week of attending the seminar. Seminar report assignment and form: <http://www.math.tamu.edu/~jmlinhart/m152H/AS.pdf>

Suggested homework problems can be found on my web page. Do them. Part of the homework done for a grade is done with Webassign, we will work on some in recitation, and some outside of class with regular pencil and paper. Take it seriously and do more than the minimum requirements. Late homework may be accepted at the discretion of the instructor, and possibly with a penalty; an early request is more likely to receive a positive response.

MATLAB and other programming skills are required in today's job market. What seems like busy work today will matter to your academic life and employability later – take these assignments seriously.

Working with others on the homework and MATLAB assignments is encouraged, as is looking things up when you are stuck, but make sure that you as an individual can perform the required tasks without another's help. Here are some guidelines on working together and using outside resources: <http://www.math.tamu.edu/~jmlinhart/groupwork.html>.

Quizzes will be given regularly in lecture on Fridays, and may also be unannounced in lecture or recitation. If you miss the first quiz because of registration issues, I will allow you to make it up under the regular make-up policy. After that, the two lowest quiz scores will be dropped, this is to account for excused and unexcused absences, and no make ups will be given.

Exams: There will be three common exams given from **7:30 - 9:30 pm** and a comprehensive final. The rooms where we take the common exams will be announced before the exam; it will not be our regular classroom.

I will fix my own addition errors on an exam at any time before the end of the term.

Any questions regarding grading/scoring of a question on an exam must be made in writing before the exam leaves the room or no change in grade will be made. Explain why you think what you did is correct. A carefully written explanation is most likely to result in additional points. If you need more time to look at an exam and write up your remarks, hand it back to me at the end of class, and arrange to come to office hours or make an appointment.

Communication:

Questions about course material and logistics should always be posted to Piazza. If you send them to my email, I will instruct you to post to Piazza instead.

If you need to contact me about a private matter, email is the preferred way to leave messages for me. I usually respond within 24-48 hours. When writing to me, please include your full name and course. There are some email writing tips here: <http://www.math.tamu.edu/~jmlinhart/email.html>.

Phone messages for me may be left with the main office number for the mathematics department in Blocker: (979) 845-3261; please keep in mind that I will probably get your message more quickly and respond more quickly by email.

Course information is posted on Piazza and sent out by email. Check Piazza and your university email daily.

Make-ups and Excused Absences: Please try to avoid putting yourself in a position of needing a make-up. Make-ups are inconvenient for everybody. Make-ups are only given if written evidence of an official University excused absence is provided in a timely manner. (See *University Student Rules.*, <http://student-rules.tamu.edu/>). Let me know what is going on in writing, in advance, if possible. If there is an accident or an emergency that precludes advance notice, call me immediately and get me documentation of the emergency in writing as soon as you can. If I don't hear from you within 2 working days of the absence, I will not allow a make-up. You need to take the make-up examination or assignment within three days of missing it (unless the excused absence is prolonged). It is your responsibility to schedule a make-up!

The **explanatory statement for absence from class** form is not sufficient written documentation for an excused absence. If you are ill or injured, you need to provide me with a note from a health care professional excusing you from work or school. You may go to your own doctor or to the Student Health Center in Beutel and obtain such a note.

The note should provide me with all information I need to confirm that your absence is excused, i.e., phone numbers and email addresses.

Scholastic Dishonesty: You are encouraged to work together on the suggested homework problems, but do not copy another student's work. If you are unsure of what this means with regards to scholastic dishonesty, guidelines for working together are available on my website, and I will be happy to answer questions about this.

Always abide by the Aggie Code of Honor.

AGGIE HONOR CODE:

“An Aggie does not lie, cheat, or steal or tolerate those who do”

When you accepted admission to Texas A&M University you assumed a commitment to uphold the Honor Code.

For additional information please visit <http://www.tamu.edu/aggiehonor/>.

Extra help:

1. Once a week, there is a Week in Review session, that will start in the second week of classes. Problems to be solved in the Week in Review are posted in advance. To make the most of it, attempt the problems on your own, then attend the Week in Review to go over the solutions. Solutions to these questions are also posted on the web.
2. The Mathematics Department offers help sessions, which will start during the second week of classes. The schedule will be on our course website. These are drop in hours where you can get help on your homework and other problems.
3. The Calclab offers computer help sessions in Blocker 128 from 7 pm - 10 pm Monday through Thursday and 1 pm - 10 pm on Sunday. This is for help with your MATLAB assignments. Help sessions start Monday, August 26 and end Monday, December 2.
4. Also please ask questions before, after and in class and come by my office hours.

Americans with Disabilities Act (ADA) Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities, in Cain Hall or call 845-1637.

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