Georgia Institute of Technology
Fall 2014
MATH 1502 – Calculus III
Course Syllabus

Instructor: Darío Mena.
Office: Skiles 139, (404) 385-2468.
Office hours: M, W: 2:00 p.m - 3:00 p.m., T, Th: 11:00 a.m. - 12:00 p.m., and by appointment.
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Course meeting times: Lecture meets Mondays, Wednesdays and Fridays from 1:05 to 1:55 in the Instructional Center 103. Recitation meet on Tuesday and Thursdays from 2:05 to 2:55 (see locations below)

Teaching assistants

TA	email	Office/phone	Recitation	Office hours
Rohan Ghanta	rghanta3@math.gatech.edu	Skiles 146A, 404-385-7496	Skiles 246	T: 1-2 p.m.
Tim Kierzkowski	tkierzkowski3@gatech.edu	Skiles 230	Skiles 249	T,R: 11-12 p.m.
Pouria Hosseini	phosseini3@gatech.edu	Skiles 230, 404-661-3488	Skiles 268	T: 1-2 p.m.

COURSE DETAILS

Prerequisite: Prerequisite for the course is MATH 1501 (Calculus I) with a minimum grade of D.

Description: MATH 1502 concludes the treatment of single variable calculus, and begins linear algebra; the linear basis of the multivariable theory. The topics covered during the semester are given in the following tentative schedule (the order and dates may vary slightly during the semester):

Week and Dates	Section Coverage	Topics
Week 1, Aug 18-22	(T) 7.2, 9.2	Ordinary Differential Equations.
Week 2, Aug 25-29	(T) 4.5, 8.8	L'Hôpital's Rule, Improper Integrals.
Week 3, Sep 1-5	(T) 10.2-10.4	Infinite Series, Integral and Comparison Tests.
Week 4, Sep 8-12	(T) 10.5-10.6	Ratio and Root tests, Alternating Series.
Week 5, Sep 15-19	(T) 10.7-10.10	Power Series, Taylor Series.
Week 6, Sep 22-26	(L) 1.3, 2.1, 3.1, 3.2	Matrices and Vectors, Determinants.
Week 7, Sep 29-Oct 3	(L) 6.1-6.2; (T) 12.3-12.5	Dot Products, Projections, Cross Products, Lines, Planes.
Week 8, Oct 6-10	(L) 1.1,1.2, 1.4,1.5	Gauss-Jordan Elimination.
Week 9, Oct 13-17	(L) 1.3, 1.7	Linear Independence.
Week 10, Oct 20-24	(L) 1.8-1.9	Linear Transformations.
Week 11, Oct 27-31	(L) 2.2, 2.3,2.5	Inverses, LU Factorization.
Week 12, Nov 3-7	(L) 2.8, 2.9	Determinants, Vector Spaces.
Week 13, Nov 10-14	(L) 4.3, 5.1, 5.2	Basis, Eigenvalues and Eigenvectors.
Week 14, Nov 17-21	(L) 5.3, 7.1, 7.2	Diagonalization, Symmetric Matrices.
Week 15, Nov 24-28	(L) 6.3, 6.4	Gram-Schmidt and QR Factorization.
Week 16, Dec 1-5	(L) 6.5	Least-Squares, Review.

RESOURCES

Textbooks:

1. Thomas, Calculus: Early Transcendentals, 13th ed, Pearson. Chapters 8, 9, and 10.
2. Lay, Algebra and Its Applications, 4th ed, Pearson. Chapters 1-6.

MyMathLab Course Information: We will be utilizing MyMathLab (MML) for homework through a joint code for the Thomas Calculus text and the Lay Linear Algebra text. In order to register, you will need our course id listed below.

MyMathLab Course ID: menaarias43881

Important notes on MML:

- If you already have an account on MyMathLab using this combined textbook within the past 18 months, then you do not need to purchase a new code. Login to your account on MyMathLab, select the option to add a new course, and enter our course ID.
- If you already have a MyMathLab account that used either the Thomas or the Lay texbook in the past 18 months, but you were unable to add our course using the previous step, please send an email to gatechmath@yahoo.com and include the following information:
    - Your First and Last Name
    - The email address used to register for MML
    - Your Login ID for MML
    - Our course ID (listed above)

  You should receive a reply within 36 business hours from the Pearson support team regarding your account status. In the meantime, you can access our course using the "temporary access" option when registering. Please do not pay for a new code until you receive a reply from Pearson.
- If you do not have a MyMathLab account using the Thomas or Lay textbooks, or if your account is over 18 months old, you will need to purchase a new code for our course. Please refer to the registration document, located in the "Resources" section on t-square, to create your new account.

When signing up for MyMathLab, it will be immensely helpful to me (for grading purposes) if you will set your STUDENT ID to your USERID for the GT system (i.e., your T-square USERID, as in "gburdell3", etc).

MyMathLab comes with an entire electronic version of the textbook; it is your choice if you would also like to own the textbook in print. You may purchase a MyMathLab code either from the bookstore or on-line while registering at http://www.mymathlab.com. If you prefer to own a hardcopy of the text, the bookstore offers packages of MyMathLab combined with a loose-leaf or hardcover version of the Thomas textbook that is less expensive than purchasing the text and code separately.

PLEASE NOTE: GEORGIA TECH HAS A SPECIAL CODE PACKAGE THAT INCLUDES BOTH

TEXTBOOKS. THIS CODE CAN ONLY BE PURCHASED THROUGH THE CAMPUS BOOKSTORES OR DIRECTLY FROM PEARSON. CODES PURCHASED BY OTHER VENDORS WILL NOT WORK! Possible ISBNs for this text are: 1269861298, 1269891596, 1256954721, 1269861328, 1269936069.

Additional Resources: In addition to the textbook, lectures, and office hours there are other resources available that might be of use for you during the course. All Georgia Tech students are eligible for 1-on-1 tutoring, see the website associated with the Office of Success Programs. There is also the Math Lab in the School of Mathematics where tutoring services are provided.

EVALUATION

Attendance: Attendance is required for all lectures. The student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class. However, questions to better understand the course are always welcome.

Homework: This course will have daily homework assignments which will be administered through MyMathLab (MML). Please see the information about MML provided above. You are expected to understand all homework problems for the tests and quizzes. In order to increase the effectiveness of recitation, you should attempt the problems before the weekly recitation sections. Exercises on MyMathLab will be due every Monday and Thursday at 11:59 PM (except during class recesses or as announced in class). The lowest homework grade will be dropped. **No late homework will be accepted**.

Quizzes: We will have six quizzes (between 15 and 20 minutes each) given during the recitation. The dates for the quizzes are as follow:

- Quiz 1: August 28
- Quiz 2: September 11
- Quiz 3: September 30
- Quiz 4: October 23
- Quiz 5: November 6
- Quiz 6: November 25

Exams: This course will have three midterm exams (given during recitation) and a comprehensive final exam that will cover all course materials. The exams for the course will take place on the following dates:

- Midterm 1: Tuesday, September 16.
- Midterm 2: Thursday, October 9.
- Midterm 3: Thursday, November 13.
- Final test: Friday, December 12, 2:50 - 5:40 p.m.

Grades: Grades will be based upon quizzes, midterm exams, the final exam, and homework. Course grades will be assigned from the maximum of the following formulas:

	Method 1	**Method 2**	**Method 3**
Homework	10%	10%	10%
Quizzes	20%	15%	10%
Midterm Exams	40%	35%	35%
Final Exam	30%	40%	45%

There will be extra 3 points for the attendance which is measured by a sign-up sheet randomly given in some lectures and recitations. One quiz grade will be dropped when computing your grade.

The usual ten-point scale will be used: A: [90,100], B: [80-90), C: [70,80), D: [60,70), F: [0-60). Do not expect any deviation from this scale, however, if strictly necessary, adjustments will be made to arrive at a standard grade distribution for the course.

CLASS POLICIES

You are expected to come prepared and actively participate in every lecture and recitation session. Class disruptions of ANY kind will NOT be tolerated and may result in your removal from the classroom and/or loss of participation points for that day. Please show courtesy to your fellow classmates and instructor by adhering to the following class rules:

- Turn off all laptops, cellular phones, i-pods and other electronic devices, unless you have a documented need to use such devices for note-taking, during class.
- Come to class on time and stay for the entire class period.
- Refrain from conversing with your fellow students.
- Put away any reading materials unrelated to the course.

Academic Honesty: It is expected that all students are aware of their individual responsibilities under the Georgia Tech Academic Honor Code, which will be strictly adhered to in this class. Any violations must be reported directly to the Dean of Students.

Make-Ups: In an emergency situation, I may allow a make-up test if I am notified prior to the exam and provided with a reasonable, written confirmation of your absence. Any make-ups must be completed before the corresponding test has been graded and returned to other students. If you will miss a test due to a university-sponsored event or athletics, please provide me with the official documentation in advance.

Regrading: The exams will be returned in recitation. Solutions to the exam along with the rubric used to assign points will be posted a couple of days before the exams are returned. It is your responsibility to look over the solutions and grading scheme before the exams are returned by your TA. The TA will return your exam and give you an opportunity to look over it for inconsistencies in grading. If you feel a problem was graded inconsistently according to the rubric, at the end of recitation, you should inform your TA of this precise issue related to your exam. Should you feel that an issue exists with the grading, the TA will keep your exam and it will be re-evaluated by the TA and I based on the issue raised and the rubric used. If you keep the exam and fail to alert your TA of the potential grading issue on that day, your score will be set at that point and no substantial regrading will be considered.

Calculators: The use of calculators is **NOT** allowed on in-class assessments, with the exception of devices provided by the instructor.

Students with Disabilities or in need of Special Accommodations: Georgia Tech complies with the regulations of the Americans with Disabilities Act of 1990 and offers accommodations to students with disabilities. If you are in need of classroom or testing accommodations, please make an appointment with the ADAPTS office to discuss the appropriate procedures. More information is available on http://www.adapts.gatech.edu. Please make an appointment with me to discuss your accommodation, if necessary.

Announcements: I will frequently update the class pages with class information and materials. You are responsible for obtaining any announcements or materials placed on MyMathLab or T-square. I will keep on T-square and updated list of the topics covered and suggested problems for each topic, according to the advance in the lectures.

Please note: *items on the syllabus and course schedule are subject to change. Any changes to the syllabus and/or course schedule will be relayed to the students in class and through e-mail.*

Important dates for Fall 2014

August 18	First day of classes
September 1	Labor Day (No class)
October 11 - 14	Fall Recess (No class)
October 10	Last day to withdraw with a grade of "W"
October 26	Last day to withdraw from school with a grade of "W"
November 27 - 28	Thanksgiving Break (No class)
December 5	Last day of classes