

Math 171 (Analytic Geometry and Calculus), Section 502, Spring 2012

Instructor: Dr. Mariya Vorobets

Class hours: MWF 9:10–10:00, BLOC 117

Recitations: T 8:00–8:45, BLOC 161

Web page: <http://math.tamu.edu/~mvorobet/Math171>

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Office hours: MW 10:30–12:00, or by appointment

Course Description.

Analytic Geometry and Calculus: Vectors, functions, limits, derivatives, Mean Value Theorem, applications of derivatives, integrals, Fundamental Theorem of Calculus.

Prerequisite: MATH 150 or equivalent or acceptable score on TAMU Math Placement Exam. Credit will not be given for more than one of MATH 131, 142, 147, 151 and 171.

Learning Outcomes. Students should be able to demonstrate an understanding of the material as covered during lectures and demonstrate ability to use these concepts on exams, quizzes and homeworks. Specifically, students should:

- understand vectors and vector functions, both graphically and analytically, and apply the dot product to the concept of work;
- understand the concept of a limit, both graphically and algebraically for specific functions, and apply to the concept of continuity;
- perform basic proofs using the precise definition of a limit;
- understand the limit definition of the derivative and calculate derivatives using the limit definition, differentiation formulas, the chain rule, and implicit differentiation;
- identify exponential, logarithmic, and inverse trigonometric functions and calculate derivatives of these classes of functions;
- apply the derivative to related rate problems, differentials and linear approximations, and the calculation of limits using L'Hospital's Rule;
- apply differentiation techniques to sketch curves and to calculate extreme values of functions including optimization applications;
- compute antiderivatives and understand the concept of integration as it relates to area and Riemann Sums;
- use the Fundamental Theorem of Calculus to calculate derivatives of and to evaluate definite integrals;
- state precisely and apply various definitions and theorems, and perform basic proofs.

Texts. J. Stewart, CALCULUS. Early Vectors, Aggie Edition, Thompson Publishing, Brooks/Cole, ISBN 0534493483

Course Web Page. The course web page will be my main source of communication to you aside from class and office hours. Check the course page regularly for announcements, exam information and the course schedule.

The Mathematics Department has a web-page for Math 171

<http://www.math.tamu.edu/courses/math171/>

Here you can find a description of the course, approximate weekly schedule, suggested homeworks and other information.

Email Policy. Check your official TAMU email account EVERY day. You are responsible for any information I send via email. Because of the privacy rights, I cannot discuss grades via email or over the phone. Please include your name and the section number in the subject line.

Homework. Written homework will be assigned and collected each week throughout the semester. You are expected to do all the assigned homework problems. **Late homework will not be accepted.** If for some reason you can not be in class and turn in your HW in due day, you may drop it off before the class on due day in my mailbox in Milner 130 (please, do not slide them under the door of my office). Collaboration on homework is allowed, but you have to write your ENTIRE solution by yourself. Similarly written homeworks will receive no credit. **When you turn in your homework do not forget to put your name on it, homework number and staple all the sheets.** All work must be shown. No credit would be given for the answer that is not supported by any work.

It is very important for your success in class that you do your homework regularly, completing all of the suggested problems. Visit me to discuss these problems and seek my help if needed.

Quizzes. Quizzes will be given regularly, almost every week (except for the first week and exam weeks) during the recitation meeting on Tuesdays. All of them are mandatory, although, a couple of worst grades will be dropped at the end of the semester. That is why, NO MAKE UP QUIZZES.

Examinations. Your grade will be determined by homework, quizzes, three midterms, and a cumulative final exam.

The *tentative* midterms dates are: Exam I – Feb. 17, Exam II – March 23, Exam III – April 25.

No collaboration on the midterms is allowed. The use of books, cell phones, calculators or notes of any sort during exams is not permitted.

A two-hour comprehensive FINAL examination will be given on Friday, May 4, at 10:00 - 12:00 in the classroom.

Grading Policy.

EXAM I = 15%, EXAM II = 15%, EXAM III = 20%, QUIZZES = 15%, HW = 10%, FINAL EXAM = 25%.

I may curve any grade and will then compute the course grade by the following rule: A for 90 – 100%, B for 80 – 89%, C for 70 – 79%, D for 60 – 69%, and F for 0 – 59%.

TENTATIVE WEEKLY SCHEDULE:

Week 1: 1.1, 1.2	Week 6: 3.6, 3.7, 3.8, 3.9	Week 11: 5.5, 5.7
Week 2: 1.3, 2.1, 2.2, 2.4	Week 7: 3.9, 3.10, 3.11	Week 12: 6.1, 6.2, 6.3
Week 3: 2.3, 2.6, 2.5	Week 8: 4.1, 4.2, 4.3, 4.4	Week 13: 6.4, 6.5
Week 4: 2.7, 3.1, 3.2	Week 9: 4.6, 4.8	Week 14: Exam 3, Review
Week 5: 3.4, 3.5, Exam 1	Week 10: 5.2, 5.3, Exam 2	

Make-up Policy. No make-ups will be given without written evidence of an official University excused absence (see *University Student Rules*). In addition, you must notify me **NO LATER** than the end of the second working day after the missed assignment:

... the student must notify his or her instructor in writing (acknowledged e-mail message is acceptable) prior to the date of absence if such notification is feasible. In cases where advance notification is not feasible (e.g. accident or emergency) the student must provide notification by the end of the second working day after the absence. This notification should include an explanation of why notice could not be sent prior to the class. (Section 7.3 of the *University Student Rules*)

*****If no such notice is given, the rights to a make-up are forfeited.** Specifically, in the case of injury or illness, students are required to obtain a confirmation note from a health care professional affirming date and time of a medical office visit regarding the injury or illness. I will NOT accept the “Explanatory Statement for Absence from Class” form as sufficient written documentation of an excused absence.

Late Work Policy. Late work (for which you do not have a University approved excused absence) will NOT be accepted. This includes all written and online assignments.

Scholastic Dishonesty. Copying work done by others, either in-class or out-of-class, is an act of scholastic dishonesty and will be prosecuted to the full extent allowed by University policy. Collaboration on assignments, either in-class or out-of-class, is forbidden unless I grant permission. If you cheat on an assignment, you will receive a zero. Also, you will be reported to the University.

Remember the Aggie Code of Honor: **“An Aggie does not lie, cheat, or steal or tolerate those who do.”**

For more information about the Honor Council Rules and Procedures visit the web site: <http://www.tamu.edu/aggiehonor>

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Students with disabilities. 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 Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit <http://disability.tamu.edu>