Math 171:504 Course Syllabus

Instructor: David J. Manuel
Office Hours: M 2-3pm; T 3-3:45pm; R 3-4:30pm; F 10:30-11:30am OBA
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Course Name: Analytic Geometry and Calculus
Course Description: Vectors, functions, limits, derivatives, Mean Value Theorem, applications of derivatives, integrals, Fundamental Theorem of Calculus. Designed to be more demanding than MATH 151.
Required Text: Stewart, Calculus: Early Vectors, Preliminary Edition
Meeting Times/Locations: The lecture and lab meeting times and locations are posted at www.math.tamu.edu/courses/math171/
Prerequisites: MATH 150 or equivalent or acceptable score on TAMU Math Placement Exam
Calculator Policy: Only scientific (i.e., non-graphing) calculators will be allowed on exams or quizzes.
Course Objectives: MATH 171 is the first of a 3-semester beginning calculus sequence taken, for the most part, by math, chemistry, and physics majors. At the conclusion of this course, students should be able to:

I. Evaluate routine computations, including but not limited to: limits, derivatives, max-min problems, and definite and indefinite integrals.
II. State (write) and apply basic definitions and major theorems, including but not limited to: definitions of limit, continuous function, derivative, definite and indefinite integrals, the Intermediate Value Theorem, the Mean Value Theorem, and the Fundamental Theorem of Calculus (both parts).
III. Supply simple proofs, including but not limited to: limit theorems, rules of differentiation, and applications of the Intermediate and Mean Value Theorems.

Grading Policy:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three exams</td>
<td>500</td>
<td>A = 900-1000</td>
</tr>
<tr>
<td>Homework</td>
<td>90</td>
<td>B = 800-899</td>
</tr>
<tr>
<td>Class Participation</td>
<td>60</td>
<td>C = 700-799</td>
</tr>
<tr>
<td>Quizzes</td>
<td>100</td>
<td>D = 600-699</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250</td>
<td>F = 0-599</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
<td></td>
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Attendance: Attendance of both lectures and labs is important; further, attendance of lectures is required to earn Class Participation Points. If you must miss class on days assignments are due, please contact me as soon as you know (preferably in advance and definitely with a University-authorized reason). I suggest you find a study partner or two to get notes on days you have to miss. Please refer to Rule 7 of the Student Rules for more details regarding excused absences (http://student-rules.tamu.edu/rule07)
Make-up Policy: If you miss an exam you must notify me in advance (preferably) or no later than the end of the second business day after the exam (said notification should then include why you were unable to notify me in advance). Exams must be made up within 30 days of the date of the exam and require appropriate documentation of a University-excused absence. Make-up policy for other assignments are discussed on the following pages.
Scholastic Dishonesty: Remember the Aggie Code of Honor: *An Aggie does not lie, cheat, or steal, or tolerate those who do!* There will be many opportunities for you to work together appropriately on homework assignments. However, each student is responsible for turning in their own unique work. During exams and quizzes, you are not allowed to receive any kind of assistance from anyone. Any instance of scholastic dishonesty will be handled according to the processes outlined on the Honor Code website at [http://aggiehonor.tamu.edu/Faculty/WhatToDo.aspx](http://aggiehonor.tamu.edu/Faculty/WhatToDo.aspx).

Expectations: I expect you to have read the material and stepped through the examples in the posted notes before class, and I expect you to treat me with respect. You can expect me to be prompt and fair in grading and treat you with respect.

Weekly Schedule (tentative): The following is a tentative schedule.

- Week 1: 1.1, 1.2, 1.3
- Week 2: 1.3, 2.2, 2.4
- Week 3: 2.3, 2.6, 2.5
- Week 4: 2.7, 3.1, 3.2
- Week 5: 3.4, Rev, Exam I
- Week 6: 3.5, 3.6, 3.7
- Week 7: 3.8, 3.9, 3.10, 3.11
- Week 8: 4.1, 4.2, 4.3, 4.4
- Week 9: 4.6, Rev, Exam II
- Week 10: 4.8, 5.1, 5.2
- Week 11: 5.3, 5.5, 5.7
- Week 12: 6.1, 6.2, 6.3
- Week 13: 6.4 (NOTE: Thursday and Friday are Thanksgiving Holidays)
- Week 14: 6.5, Rev, Exam III
- Week 15: Review for Final (class meets Monday)

Exams: Dates for the exams are Friday, Oct 3, Friday, Oct 31 (sorry-couldn't be helped!), and Friday, Dec 5 in BLOC 164 (the MWF classroom).

Final Exam: A comprehensive final exam will be given Monday Dec 15 at 10:30am. For a full schedule, see [http://registrar.tamu.edu/general/finalschedule.aspx#_Fall_2014](http://registrar.tamu.edu/general/finalschedule.aspx#_Fall_2014)

Homework: Supplemental homework assignments will be assigned most Tuesdays during the semester and due one week later. There will be 12 assignments; I will drop the lowest three grades and divide the sum of the grades by 10 (90 points total). I will also assign additional textbook problems for your practice only. For a list of practice problems, see the notes or [http://www.math.tamu.edu/~dmanuel/math171/assign.html](http://www.math.tamu.edu/~dmanuel/math171/assign.html).

Homework assignments may be turned in up to two weeks late (no penalty) with an official, university-excused absence or up to 48 hours late (30% penalty) with no questions asked.

Class Participation Points: Every MWF lecture beginning Wednesday, Sept 10, you will be required to participate in discussion and answer questions related to the material in the notes (posted on eCampus). Students who respond to questions with accurate, prepared answers will receive one point for each answer. Students who are prepared, but inaccurate will receive zero points. Students who are unprepared when I ask them a question will LOSE one point. Near the end of the semester, I will convert these points (method to be determined) into a grade out of 60. Obviously, to do well, you must download the notes, work through them beforehand, and attend class every day. These will NOT be “gimme” points!
Quizzes: Each Tuesday (except for exam weeks), you will have a quiz over the material covered on the homework due the previous day. There will be 10 quizzes; I will drop the lowest grade and calculate the average percentage on the rest (100 points total). Students who miss a quiz due to a university-excused absence must make up the quiz before the next exam. **NOTE: students absent through illness should follow the procedures outlined at [http://attendance.tamu.edu](http://attendance.tamu.edu).** Doctor-verified illness will be counted as excused; any other illness will count as your dropped lowest grade (first absence only) before make-ups are authorized.

Maplets: While not graded, there are some very useful Java Applets written in MAPLE which help illustrate and/or drill the (non-theoretical) concepts of this course. These are available at [http://m4c.math.tamu.edu](http://m4c.math.tamu.edu). Note that you must be using a machine with Maple installed, such as those in the Open Access Labs. Knowledge of MAPLE is NOT required to run these applets. Questions on homework, quizzes, and possibly even exams, will come from these Maplets.

**Copyright Statement:** All printed handouts and web-materials are protected by US Copyright Laws. No multiple copies may be made without written permission by the instructor.

**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](http://disability.tamu.edu).

**Important Dates:**

- **Thurs, Sept 4:** Last day to drop classes with no record
- **Fri, Sept 5:** Last day to add classes
- **Fri, Oct 3:** Exam I
- **Fri, Oct 31:** Exam II
- **Fri, Nov 21:** Last day to Q-drop classes
- **Fri, Dec 5:** Exam III
- **Mon, Dec 8:** Redefined as FRIDAY: attend your Friday classes this day
- **Tues, Dec 9:** Redefined as THURSDAY: attend your Thursday classes this day
- **Mon, Dec 15:** Final Exam 8:00am in BLOC 164
Course Emphasis:

The priorities of this course are:

1. Ability to correctly solve problems, and write the solutions in a coherent fashion.
2. Conceptual understanding of material
3. Ability to state and apply definitions and theorems and provide simple proofs

Because of this, each exam will consist of computational problems, applications, concept questions, statement of definitions and theorems, and simple proofs using definitions and theorems. On all assignments, emphasis will be placed on how a problem is solved and how a solution is written up. Bottom line: “getting the right answer” is not nearly as important as providing a clear detailed explanation of the reasoning behind your answer.

You will be required to provide a blue book (at least 8 x 10 and 16 pages) for each exam. These must be given to me at least one day in advance of the exam. You may bring all 4 of them at once or each one separately. Failure to give me a blue book at least one day in advance will result in a deduction of points from your exam score (2 points the first time, penalty doubles each time thereafter).