### TALLAHASSEE COMMUNITY COLLEGE
### MAC 2313 — 64050
### SYLLABUS for FALL SEMESTER 2008

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**INSTRUCTOR:** Doug Jones  
**CLASSROOM:** AC 112  
**DAYS:** MTWRF  
**TIME:** 1:25 — 2:15 PM  
**CLASSES BEGIN:** Mon., Aug. 25  
**LAST DAY TO "W" or "AW":** Tue., Nov. 04  
**CLASSES END:** Fri., Dec. 05  
**FINAL EXAM:** Wed., Dec. 10, 2008  
~~ 12:30 – 2:30 pm

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|-------------|----------------|------------------------|----------------|------------------------|-------------------|---------------------------------|

**TEXTBOOK:** Thomas' Calculus w/MML, Study Cards & Maple 11.  
We will be using the MML (My Math Lab) and Maple.

**PREREQUISITE:** A grade of C or better in MAC 2312 (Calc2). [top]

**COURSE DESCRIPTION from CATALOG:** Prerequisite: MAC 2312 with a grade of C or better. Topics include vectors, equations of planes and lines in space, vector-valued functions (including unit tangent and unit normal vectors, velocity and acceleration of objects in space, and curvature), multivariable functions, the differential and integral calculus of multivariable functions, and line and surface integrals including Green's Theorem, the Divergence Theorem, and Stoke's Theorem. There is also use of the CAS (Computer Algebra System) MAPLE. This is a WEB assisted course. A graphing calculator is required. Check with your instructor for the most appropriate one. Lecture 5 hours. Speical fee. [top]

**GOALS OF THE COURSE:** This course is designed for mathematics, science, engineering, and mathematics education majors and for students interested in continuing a fairly rigorous introduction to calculus concepts. This course can be used to satisfy part of the General Education Mathematics Requirement or it can serve as an elective. You will find complete information on the Course listed in the Performance Objectives and in the Master Syllabus, which are on file in the Science / Math Department Office. [top]

**ORGANIZATION of the COURSE:** Since all students taking this course are pursuing scientific or technical professional careers, there is much to be gained, I believe, by structuring this class as if it were the technical department, call it LEVEL 3, of a large scientific organization, **CALC, INC.** I will play the role of your Technical Supervisor, and you...
(collectively) will function as my Technical Staff. Each one of you will have the job title Calculus Technician – III.

Thus, for example, you will not "do homework;" you will "keep and maintain a Journal" and periodically "submit technical memoranda" for my review and approval.

Additionally, just as in the "real world" you take tests in order to improve your work-product, your professional certifications, and/or your earning capacity, also in this class you must periodically be examined to establish and document your progress up the ladder or "rank" and "knowledge."

Finally, by way of further analogy, just as you neither show up late for your job nor leave early, you must neither report late to class nor leave early without prior notification to your supervisor (i.e, me). And by no means will you miss a class without prior notification — if at all possible — to your supervisor (i.e, also me). [ top ]

**ATTENDANCE and ADMINISTRATIVE WITHDRAWAL POLICY:** Attendance is required and roll will be checked daily. Coming in late or leaving early may be counted as an absence. If you accumulate more than four absences, you may be administratively withdrawn. However, do not assume that you will be withdrawn if you quit attending class. It is your responsibility to make sure you are withdrawn. The last day for you to withdraw or for me to administratively withdraw you is **Tuesday, November 04, 2008.**

However, if you miss more than **EIGHT (8)** consecutive class periods before Nov. 04, for any reason whatsoever, I will administratively withdraw you (AW).

If you are absent, it is your responsibility to contact me, check the class web page, or contact someone in the class to find out what was covered in class and what homework was assigned.

**The pacing schedule** may be changed as we go through the semester; therefore, you should be in class (each meeting) so that you are aware of any changes to the pacing. [ top ]

**WEB PAGE:** The **CALC3 WEB PAGE** is an important learning & teaching tool. But to use it as a substitute for attending class is a mis-use. However, this being said, I do expect you to check the web page at least once a day.

On the WEB PAGE I will post

- The Syllabus and Pacing Schedule,
- Daily Notes of what we did in class,
- Copies of "Old Tests" and/or "Study Guides" before Test Time,
- Announcements and Reminders, and
- Interesting Calculus-related "Hot-Links."
- My thoughts, insights, ideas, etc. about Math, Calculus, Learning, etc.

Here are some of the ways that you can effectively use the CALC3 WEB PAGE:

- If you must miss a class, you can find out what we did that day, read over the material on your own, try to make sense out of it, and prepare any assignments and/or reading for the next class.
- Even if you were in class, you can read the daily notes to see what I thought that I taught you that day! (I say this because it seems to happen often that what a teacher thinks (s)he taught and what a student learns are two different things!)

Regarding **COMMUNICATION:** Due to the way the "world works today," I must require that all email communication between us (student & teacher) be via our respective tcc email accounts, i.e, mine ending with "@tcc.fl.edu" and yours ending with "@mymail.tcc.fl.edu". Furthermore, it is imperative that you check your TCC email account **at least once a day** for messages, instructions, updates, ideas, etc., from me.

Also, Grades and other important material will be posted on BlackBoard. [ top ]

**ADA Statement:** Tallahassee Community College (TCC) is committed to making all programs, services and facilities accessible to and usable by persons with disabilities in order for students to obtain maximum benefit from the educational experience and to effectively transition to our college environment. Persons with disabilities are encouraged to register with the TCC Disability Support Services Office which is located on the first floor of the Student Union. [ top ]
ATTENTION: ENGINEERING STUDENTS! There are more stringent performance standards-and-requirements for engineering students than for the general university population. For example, the following information is taken from the FSU Undergraduate Academic Program Guide, requirements for Mechanical Engineering:

Admission Requirements to Major Program of Studies.

To be admitted, students must complete at least 52 hours of credit with an adjusted GPA of 2.0, including at least half the required hours in the Liberal Studies program, including all of Area I (English, Math). In addition, the student must meet the College of Engineering pre-engineering requirements before the student declares the intended engineering major:

- A grade of "C" or better in EGN 1004L (1) First Year Engineering Lab. One repeat attempt is permitted. Complete course in freshman year or first year at FSU;
- A grade of "C" or better, from any institution attended, in Calculus I (4), Calculus II (4), General Chemistry I with Lab (4), and General Physics I with Lab (5). A single repeated attempt in only one of these courses is allowed. (my underlining added for emphasis)

Visit the link above for more information.

CALCULATOR REQUIREMENT: You will need a graphing calculator in this class. Bring it to class with you every day. I don't care what kind of calculator(s) you have. However there are three different levels of allowable calculator use in this class:

1. **MAPLE** = MAPLE ALLOWED and/or Any Calculator may be used.
2. **CO** = CALCULATOR OPEN -- Any calculator may be used at this level. Complete calculator answer display must be written before rounding off.
3. **CR** = CALCULATOR RESTRICTED -- No calculator "above" a TI-84 Plus (Silver Edition) may be used. Complete calculator answer display must be written before rounding off.
4. **CX** = CALCULATOR NOT ALLOWED -- No calculator allowed. The problem(s) must be worked with pencil, paper, and "brainpower."

No specific brand or model of calculator is required.

Also, for several reasons, I suggest that you buy your own calculator(s) and not just borrow one from your friend —

1. You are entering the level of your education which is beyond the "general knowledge" or "liberal arts" stage. You have chosen a professional, technical career track, and your calculator will become one of the standard instruments of your profession. A lawyer has his/her own law books, a musician has her/his own instrument, a doctor has her/his own stethoscope, . . . . Get the picture?
2. I shall reset, not clear, but reset your calculator at the beginning of each TEST, QUIZ, or FINAL EXAM. And I am sure that your friend would not appreciate having all his programs erased from memory.
3. Also, if you have your own calculator, then you probably will have your own manual that goes along with the calculator. And as I give periodic instruction on the use of your calculator, I shall often refer to specific pages in your calculator manual.

COMPUTER USE: In addition to a graphing calculator, discussed above, we shall be working with the CAS (Computer Algebra System) **MAPLE** on PC computers in AC 112. You will from time-to-time have computer homework which you will submit to me electronically. Also, there will be some test questions which will require your use of **MAPLE**.

OTHER EQUIPMENT: In addition to a graphing calculator, discussed above, you will need the following equipment:

- a straightedge,
- a compass,
- a protractor,
- a mechanical pencil (0.5, 0.7, or 0.9 mm with HB or B lead), and
- a decent eraser (One may come with your pencil, but I doubt it!)
- a ball point pen (black or blue ink)

NOTE: I require these items of my Trig and Precalc students, and there is no reason that this requirement should not carry forward to higher-level courses.

Also, the Student Edition of Maple, Release 9.5 (or higher), while not required would be useful for you to have. Although
I'm not sure that Maple 9.5 can be purchased any more. It seems that Maple is now shipping Maple 12. (Student edition is about $99US.)

GRADING POLICY:

GRADING SCALE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>&gt; 89.5</td>
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<tr>
<td>B</td>
<td>&gt; 79.5</td>
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<tr>
<td>C</td>
<td>&gt; 69.5</td>
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<tr>
<td>D</td>
<td>&gt; 59.5</td>
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<tr>
<td>F</td>
<td>&lt;= 59.5</td>
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FACTORS DETERMINING GRADE

1. THE AVG OF YOUR PODs, QUIZZES, TURN-IN HOMEWORK, and NOTEBOOKS counts as 1 TEST. (Call this avg H).
2. THE AVG OF YOUR 4 TESTS AND YOUR H COUNTS 80% of YOUR COURSE GRADE.
   THAT IS: \( (T1+T2+T3+T4+H)/5 = 80\% \) of YOUR GRADE.
3. YOUR CUMULATIVE FINAL EXAM COUNTS 20% of YOUR COURSE GRADE.
4. THIS RESULTS IN THE FORMULA \( G = 0.16( T1 + T2 + T3 + T4 + H + 0.20E ) \)
   Where G is your FINAL GRADE (numerical), and E is your FINAL EXAM grade.

HOMEWORK: Homework must be done in order to succeed in this class! If you are unwilling or unable to devote at least two homework hours outside class for every hour inside class (*), you will not realize your true potential in this course.

There are three types of homework assigned in this course:

- **PROBLEMS-OF-THE-DAY (PODs):** I will give the problem in class — not every day, but many (or "most") days. It might be a textbook problem, or it might be a problem that I make-up on the spot. Then you work the problem and turn it in at the beginning of the next class period. Group work is allowed, permitted, and encouraged on PODs.

- **TURN-IN HOMEWORK (TI):** Selected homework problems will be assigned and collected at specified times. Group work is allowed, permitted, and encouraged on TI homework. These problems will be graded for technique, accuracy, and neatness. At the end of the semester, the lowest 10% of your combined TI and POD scores will be dropped before I compute your homework average.

- **NOTEBOOK HOMEWORK (NB):** These problems are to be done on a daily basis. These problems should be kept in a separate notebook. Each section must be clearly labeled. I shall periodically spot-check your NOTEBOOK. Also, you will turn in your NOTEBOOK at test time, and I will grade it, based upon the degree of completion of the assigned problems. Each NOTEBOOK GRADE will count as three (3) turn-in assignments. No NOTEBOOK GRADE will be dropped, and no LATE NOTEBOOKS will be accepted.

Detailed instructions on how to prepare your homework will be given in a separate hand-out.

(*) Footnote: This is just homework time. It does not include the time necessary to read the textbook, work the examples in the textbook, and think about the material! All three of these activities should be done before you start to work your homework problems!

QUIZZES: Very Frequent Quizzes, both "in-class" and "take-home" (mainly in MyMathLab / CourseCompass) will be given. At the end of the semester, the lowest 10% of your QUIZ scores will be dropped before computing your quiz average.

TESTS: There will be four (4) unit tests during the semester. The tentative test dates are:

1. **TEST #1** (Chapters 12 & 13) — Thursday & Friday – Sep. 18 & 19, 2008
2. **TEST #2** (Chapter 14) — Wednesday & Thursday – Oct. 15 & 16, 2008
3. **TEST #3** (Chapter 15) — Thursday & Friday - Nov. 06 & 07, 2008
4. **TEST #4** (Chapter 16) — Thursday & Friday - Dec. 04 & 05, 2008.

BONUS PROBLEMS: From time-to-time, bonus problems will be assigned. If you don't do them, it will not count against you; however, if you do them, it will boost your homework average.
FINAL EXAM:  The Final Exam will be cumulative. It will be given in this room WEDNESDAY, DECEMBER 10, 2008, between 12:30 pm and 2:30 pm. No one will be permitted to begin the EXAM after the first person has left the room.

There will be no early exam, no late exam, and no make-up exam! IF YOU MISS THE FINAL EXAM, IT IS AN AUTOMATIC "F" IN THE COURSE.  [top]

MAKE-UP POLICY AND DUE-DATES:  There will be no "late" or "make-up" homework, quizzes, or bonuses. All work is due at a "time certain," and late work will not be accepted. Any missed assignment gets a zero. Period. End of Report!

I will drop 10% of your Turn-In Homework scores, and I will drop 10% of your Quiz scores to compensate for this "zero-tolerance" policy. But I will drop NO notebook grade!

If you miss one test, I may give a "make-up" test for the missed test if and only if you have a very good, documentable reason for missing the test.

I repeat — No Notebook-Homework grade will be dropped, and no late Notebook will be accepted. [top]

CLASSROOM POLICY:

1. No eating, drinking or smoking is allowed in classrooms. In fact, no food or liquid of any type is allowed past the classroom door.
2. Please place all trash in the appropriate container.
3. Please turn off or silence your cell phone before entering the classroom. If your cell phone rings, I'll take off one point for each second or ring that it rings on the next thing that I grade, be it quiz, homework, test, or final exam!
4. When the class has started, I expect and require that you give me your undivided attention. The only talking that should go on is my instruction and explanations, my questions and answers to you, and your questions and answers to me. If you have a question, ask me, not your neighbor. If I decide that I want your neighbor to help you, then I shall say so. What I have to tell you is important, and I want you to listen, pay attention, take notes, and understand — all at once. This requires concentration, and peripheral distractions are detrimental to your learning process.
5. Your computer station is your work area. Leave it neat-and-tidy at the end of "your shift."

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OUTSIDE HELP:  Only about 25% – 33% of your learning of Calc3 will occur in the classroom. As you read and study the material, and as you work on your homework, you will need outside help. I enjoy helping students in small groups or in a one-on-one setting. As a matter of fact, I think that all the teachers here at TCC love to give extra help. Just come by my office during my office hours (which are fairly extensive) or by appointment, and I'll help you. It would be best if you come to me with specific questions after you have read the material and tried the examples. Then we can use our time efficiently.

LEARNING COMMONS:  The TCC Learning Commons (located in LC 30, www.tcc.fl.edu/learningcommons, phone: 850.201.8193) provides one-stop convenient access to expanded learning assistance and resources. The Math and Science area offers support in mathematics and science. Students can work independently or in small groups while having access to resources including: trained tutors, specialists and learning assistants, videos, textbooks, calculators, an open-access computer lab and much more.

The TCC Learning Commons is open:

- Monday – Thursday 7:30 a.m. – 9:00 p.m.
- Friday 7:30 a.m. – 5:00 p.m.
- Saturday 10:00 a.m. – 2:00 p.m.

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