Syllabus for Math 112 (Sec. 01 and 02) Calculus II

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Instructor Web Site: www.math.wm.edu/~tomforde
Course Web Site: www.math.wm.edu/~tomforde/Math112-1-2.html

Office Hours: MWF 10:00AM – 11:00AM
                  Th   1:30PM – 3:00PM
                  (or by appointment)

Note About Office Hours: I encourage you to come by my office if you have any questions, need help with homework problems, or would just like to talk about the material. You are welcome to come see me at times other than my office hours. If I am available, I will be more than happy to talk with you. Also, if for some reason you are unable to make it to Office Hours, you are welcome to email me to set up an appointment.

Meeting Times: Lecture: MWF 11:00–11:50AM in Jones 302
                      Lab: Sec. 01: Tu 8:30–9:20AM in Jones 203
                              Sec. 02: Tu 9:30–10:20AM in Jones 203

Course Description: This course covers basic concepts, fundamental techniques, and certain applications of the Integral Calculus. Topics covered will include: Area between curves, volumes (disks, washers, slicing), work, fluid force and pressure, integration by parts, trigonometric integrals, trigonometric substitution, partial fractions, numerical methods of integration, improper integrals, arc length, modeling with differential equations, exponential growth and decay, sequences, series, various tests for convergence of series, power series, and Taylor/Maclaurin series.

Text: (1) The textbook used for this course is *Single Variable Calculus, Early Transcendentals (5th Ed.)*, by James Stewart. The student solutions manual and study guide are optional. We will cover at least the following sections of the above text: 5.5, 6.1, 6.2, 6.4, 7.1–7.8, 8.1, 8.3, 9.1–9.5, and 11.1–11.10.
(2) You will also need to purchase the lab manual for the Math 112 Calculus Maple Labs.

Calculator: No calculator is required, but if you would like to use one I recommend a TI-83, or TI-83Plus calculator. You may not use a TI-89 (or any calculator that does symbolic manipulation) on tests or quizzes.

Course Web Page: The course web page is located at

www.math.wm.edu/~tomforde/Math112-1-2.html

On the course web page you will find the homework as it is assigned, as well as a copy of this syllabus, dates of exams, and announcements as they are made.

Grading: The final grade for the class will be determined as follows:

Hour Exam 1:	20%
Hour Exam 2:	20%
Final Exam:	25%
Quizzes:	20%
Labs:	15%

Exams: There will be three exams: two midterm exams during the semester and one final exam at the end of the semester. The first two exams will be held Friday, Sept. 23 and Friday, Oct. 28. The Final Exam is a "block exam", taken by all sections of Math 112 on Tuesday, Dec. 6 from 8:30–11:30AM. It is William & Mary policy that final exams are not subject to rescheduling, so please do not make plans to leave campus until after the final exam.

> **Hour Exam 1:** Friday, Sept. 23, 11:00–11:50AM in class.
> **Hour Exam 2:** Friday, Oct. 28, 11:00–11:50AM in class.
> **Final Exam:** Tuesday, Dec. 6 from 8:30–11:30AM, place TBA.

Weekly Quizzes: Roughly once per week on Mondays (starting Sept. 5) there will be a short, 10 minute quiz to make sure you are keeping up with the homework. The types of problems on the quiz will be very similar in style to those assigned in the homework, and in fact sometimes problems will be taken directly from the assigned homework. Missing a quiz will result in

a score of zero on that quiz. There will be 9 quizzes given throughout the term. Your lowest 2 quiz grades will be dropped when figuring out your final grade. (There will be no quiz on the Mondays following the Hour Exams, there will be no quiz during Fall Break, and there will be no quiz on the Monday after Thanksgiving break.)

Labs: The 4th hour of this course is a lab. You are required to be present at the meeting of your lab section. Problems assigned in the lab packets are graded by the Teaching Assistant (TA) and count toward your overall grade for the course. Lab 0 is a review of sections 5.1–5.4. It is in the lab packet and is due at the beginning of your first lab meeting.

Homework: A list of homework problems will be given every week on the course web page. Occasionally (once or twice) these homework problems will be due in the lab, but in general the problems will not be collected or graded. It is your responsibility to work on the problems, and to make sure you are comfortable with the material they cover. Weekly quizzes will be based on the problems assigned. Expect to spend approximately 3 hours working on homework outside of class for every one hour spent in class.

Makeup Policy: In general, missing a Test, Quiz, or Lab results in a score of zero, and you will not be allowed to make up the work. Exceptions may be made in the case of extreme circumstances, such as a documented, serious illness. In the event that you cannot be present for an exam or quiz, and you believe your circumstances warrant special consideration, you need to speak to me *in advance*, and you need to take the quiz or exam *before* (and not after) the rest of the class takes it.

Honor Principal: William & Mary students are expected to adhere to the honor principal. In this course this shall mean the following: Homework can and should be worked on and discussed with others. However, any write-ups (in labs, for instance) should be done individually. Furthermore, quizzes and exams shall be worked on independently. The quizzes and exams are closed books and closed notes, and until they are graded you are not allowed to discuss the problems with anyone except the instructor. In addition, if you are aware of anyone who is cheating or receiving unfair outside assistance, you are honor bound to inform the instructor of what is occurring.

Tutoring: Free tutoring is available for Math 111 and Math 112 on Sunday through Thursday evenings from 5:00–8:00PM in Jones 112.

General Education Requirement: Math 112 fulfills the college's GER 1 — Mathematics and Quantitative Reasoning. In order to satisfy this requirement, the course will:

1. involve numerical calculations;

2. include mathematical justifications explaining why the approaches and calculations used in the course of study actually work;

3. include applications of mathematics to real-world settings or disciplines other than mathematics.

Special Needs: Any student with a disability or chronic health problem for whom special accommodations would be helpful is encouraged to discuss with the instructor the types of assistance that might be offered.