

MAT 235 Calculus III

QUINSIGAMOND COMMUNITY COLLEGE

Instructor:	Patrick MacDonald	
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Course:	MAT 235 Calculus III (4 Credits)	Section 60
Semester:	Spring 2006	
Class Times	Thursday 6:00 pm – 9:40 pm.	
Location:	254 A	
Course Website:	http://www.qcc.mass.edu/pmacdonald/2006S/mat_235.htm	
Description:	This course covers conic sections, rotation of axis, plane curves, parametric equations, vectors; polar, cylindrical, and spherical coordinates and graphs; vector-valued functions, differentiation, and integration; functions of several variables, partial derivatives, gradients; applications of extrema of functions, Lagrange multipliers; multiple integrations; area, volume, center of mass, moment of inertia, change of variables, Jacobians; Green's divergence and Stokes' theorems. Students learn to use calculus to solve engineering and scientific problems. The course may conclude (time permitting) with some elementary differential equations. This encompasses (essentially) Chapters 9 through 14 of the text.	
Prerequisites	MAT 234 Calculus II	
Text	Calculus with Analytic Geometry, 7 th Edition. Authors: Larson, Hostetler & Edwards. Publisher: Houghton Mifflin	
Additional Requirements	Use of a Computer Algebra System (Maple 10.0) Graphing Calculator such as TI-86 or lower for use on exams (optional)	
Attendance	Please be on time. Attendance is strongly encouraged. Courses in mathematics invariably build on the foundations laid in previous lectures. Students are held responsible for any material discussed or announcements made during missed lectures.	
Breaks	There will be one 10 minute break during the class.	
Homework	Mathematics cannot be learned vicariously or through osmosis. It takes active problem solving to understand and apply the mathematical theories. You cannot take a passive approach to this course. This means homework. See the attachment for the exact schedule.	
Quizzes	Mathematics is a sequential subject. It is better to keep up than try to catch up. In order to ensure that you do not fall behind, there will be a short, 10 minute quiz each evening covering selected material from the previous week. The problem(s) will be taken directly from the assigned homework so doing the homework will prove helpful. The combined quiz grade average will be part of the course grade. In calculating the average, the lowest two quiz grades will be dropped. There will be no make up on quizzes for any reason.	
Projects	There will be one or more optional Maple based projects assigned during the semester. The course website will contain details.	

NOTE: THE COURSE CONTENT MAY BE MODIFIED BY THE INSTRUCTOR IF NECESSARY.

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Exams	<p>There will be three hourly exams during the semester plus a comprehensive, two hour final exam. Exams will be given during the scheduled class.</p> <p>No exam will be dropped. A missed exam will be treated as 0 points when computing your final grade.</p> <p>If, due to circumstances beyond your control you must miss a scheduled hourly exam, please inform me before the exam or, at the latest, prior to the day of the next class meeting to discuss your particular situation.</p> <p>Makeup exams are usually more difficult than regular exams and must be completed no later than the class meeting following the regularly scheduled hourly exam.</p>		
Grading	Quizzes	15%	150 points total
	Exam I	20%	200 points
	Exam II	20%	200 points
	Exam III	20%	200 points
	Final Exam	25%	250 points - Comprehensive Exam
	TOTAL	100%	1000 points
	Maple Projects		TBD points – Optional (points to be assigned)
	The optional Maple projects are for a To Be Determined amount of extra credit. The course website will contain details.		
Instruction	The lecture style will be informal. Questions are expected and classroom participation will be encouraged.		
Extra Help	<p>Mathematics takes time and effort to learn. If you find yourself not understanding or having trouble with the problems, please make arrangements to make use of the Math Support Center (http://www.qcc.mass.edu/mathsupport/) or to meet with me.</p> <p>I am also happy to answer questions by email (pmacdonald@qcc.mass.edu)</p>		
Additional Resources	<p>http://college.hmco.com</p> <p>Specifically:</p> <p>http://college.hmco.com/mathematics/larson/calculus_analytic/7e/students/index.html This is the publisher's site for the book. It has practice exams, reviews and other resources</p> <p>http://www.amatyc.org/OnlineResource/index.html This has links to a multitude of mathematics resources.</p> <p>http://www.sosmath.com/ Helpful site with a multitude of math information</p> <p>http://www.math.hawaii.edu/%7Elee/calculus/index.html Covers topics relevant to this course</p>		