MA 280, Multivariable Calculus – Syllabus

I) Course Information

MA 280
CRN : 20757
Multivariable Calculus
Room : HU302
Time : 10:30- 11:55 A.M.
Days : Mondays, Wednesdays, and Fridays
Prerequisite: A grade of C or better in MA 182

II) Instructor Information

Name : Dr. Ben Nicholson
Phone : 240-567-5222
Office: 25 Science West
Email: ben.nicholson@montgomerycollege.edu
Office Hours: Mondays and Fridays 9:30-10:30 AM and Wednesdays 2-3 PM or by appointment
Website : http://www.montgomerycollege.edu/~bnichols/

III) Course Description

Calculus of vector functions; analytic geometry of space; partial differentiation; multiple integrals; classical theorems of Green, Gauss, and Stokes.

IV) Course Outcomes

#	*Outcome: Upon completion of this course/program a student will be able to:*
1.	Describe surfaces parametrically in three-dimensional space and find an equation of a plane.
2.	Describe and recognize graphs of vector functions and space curves.
3.	Evaluate limits of functions of several variables.
4.	Find equations of tangent planes to surfaces.
5.	Use and apply the Chain rule for derivatives of functions of several variables.
6.	Use LaGrange's Multipliers method to optimize functions of several variables with additional constraints.
7.	Find volumes of solids bounded by surfaces.
8.	Change the order of integration and compute double and triple integrals.
9.	Determine the surface area of the graph of a function of several variables.
10.	Use the Fundamental Theorem of Line Integrals and Green's Theorem to compute line integrals.
11.	Compute the divergence and curl of a vector function.
12.	Use the Divergence Theorem and Stoke's Theorem to compute surface integrals.
13.	Use MATLAB or a similar computer algebra system as a visualization tool and as a comprehensive programming language to solve problems in engineering, mathematics and sciences using Multivariable Calculus.

V) Texts and Supplies

Textbook : *Calculus: Concepts and Contexts 3, Multivariable* by James Stewart, Cengage/Brooks/Cole.
The book will be used extensively for assignments and readings and is required of all students.
You may also purchase the student solutions manual in the bookstore. There is a copy of the solution manual in the Math Center for student use

VI) Required Supplies

We will be using the TI-89 extensively in the course. You are highly encouraged to have one.

VII) Calculator Policy

We will be using the TI-89 extensively in the course.

VIII) Course Requirements

Grades will be composed of exams and projects

Homework

1. Homework will be assigned on a near daily basis but not collected.

Exams

1. There will be 4 exams plus a final exam.
2. Each exam will be worth 100 points, and the final will be worth 200 points.
3. The final exam will replace your lowest exam grade if it is higher.

Projects

1. There will be 10 MATLAB assignments worth 10 points each.

IX) Grading Policy and Criteria

Final grades will be a percentage of points earned versus points possible.

90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
Below 60%	F

X) Make-Up Policy

If you must miss an exam you must let me know **BEFORE** class by either sending me an email or calling or leaving a message on my voice mail and make arrangements to take the exam by the next class period. There will be no late projects accepted.

XI) Attendance Policy

You are expected to be in class on time every time. It is imperative that we be ready to begin on time every day.

XII) Important Dates

Last Date to Drop with a Refund : September 7
Last Date to Drop without a W : September 21
Last Date to Drop with a W: November 16
No class: September 6, Labor Day
November 24th and 26th, Thanksgiving
Final Exam: Monday, December 13, 10:15-12:15

XIII) Email

MC student e-mail is an official means of communication for Montgomery College. Students are responsible for information and announcements sent via MC e-mail, and it is expected that students check their student e-mail regularly. When e-mailing an instructor, it is expected that students use their MC student e-mail account.

XIV) Website

The instructor maintains a website where all course related materials and assignments are posted. You may access this website through the instructor's website, through the MyCourses tab on MyMC, or directly at http://www.montgomerycollege.edu/~bnichols/ma280.html

XV)Math/Science Center

Rockville Campus, Math/Science Center, Macklin Tower 02, 240-567-5200,
Hours: Mon. – Thurs. 8am – 8pm, Fri. 8am – 4pm, Sat. 10am – 3pm
http://www.montgomerycollege.edu/Departments/mathscrv/

XVI) Academic Regulations & Student Code of Conduct

All MC students are expected to follow "Academic Regulations" & "Student Code of Conduct" as described in the MC Student Handbook. These regulations and guidelines can be found at: www.montgomerycollege.edu/departments/academicevp/Student_PandP.htm

Cheating and plagiarism in any form will not be tolerated. At a minimum, it will earn you a zero on the assignment or exam and could lead to disciplinary action from the college. It is encouraged and expected that students will work together to complete assignments. There is a difference however between working together and copying someone else's paper.

XVII) Accommodations for Students with Disabilities Statement:

Disability Support Services (240-567-5058)
Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hour. A letter from Disability Support Services (CB122) authorizing your accommodations will be needed. Any student who may need assistance in the event of an emergency evacuation must identify to the Disability Support Services Office; guidelines for emergency evacuations for individuals with disabilities are found at: www.montgomerycollege.edu/dss/evacprocedures.htm

XVIII) Inclement Weather

If inclement weather forces the College or any campus or College facility to suspend classes or close, public service announcements will be provided to local radio and television stations as early as possible. You may also call MC at 240-567-5000 or check the college website www.montgomerycollege.edu to verify MC school closings. Any exams planned on days classes are suspended will be administered at the first class meeting once classes resume. Note that the Montgomery County Public Schools (MCPS) and Montgomery College do not follow the same school closing procedures.