

## MA 182, Calculus II – Syllabus

### I) Course Information

MA 182  
CRN : 40820  
Calculus II  
Room : SE212  
Time : 8:00 -10:25 A.M.  
Days : Monday through Friday  
Prerequisite: A grade of C or better in MA 181

### II) Instructor Information

Name : Dr. Ben Nicholson  
Phone : 240-567-5222  
Office: 25 Science West  
Email: [ben.nicholson@montgomerycollege.edu](mailto:ben.nicholson@montgomerycollege.edu)  
Office Hours: Mondays through Thursday 1-2 or by appointment  
Website : <http://www.montgomerycollege.edu/~bnichols/>

### III) Course Description

A continuation of MA 181; intended primarily for students of the physical sciences, engineering, and mathematics. Further differentiation and integration of transcendental functions. Methods of integration with applications, indeterminate forms, improper integrals, Taylor's formula; infinite series; polar coordinates.

### IV) Course Outcomes

| #   | Outcome: Upon completion of this course/program a student will be able to:                            |
|-----|---|
| 1.  | Evaluate integrals by using the appropriate techniques.   |
| 2.  | Approximate definite integrals by using appropriate numerical techniques.                             |
| 3.  | Find limits involving indeterminate forms.  |
| 4.  | Evaluate improper integrals.  |
| 5.  | Set up, evaluate, and interpret integrals that represent arc length, area, volume, and average value. |
| 6.  | Set up, evaluate, and interpret integrals that model applications in physics.                         |
| 7.  | Solve selected differential equations using graphical, numerical, and analytic methods.               |
| 8.  | Model applications such as population growth with differential equations.                             |
| 9.  | Determine the convergence or divergence of sequences and series.                                      |
| 10. | Represent functions with power series and approximate functions with Taylor polynomials.              |
| 11. | Graph polar equations.  |
| 12. | Use integration to find the area of a polar region.   |
| 13. | Use technology as an appropriate tool.  |

### V) Texts and Supplies

Textbook : *Calculus: Concepts and Contexts 4<sup>th</sup> edition*, 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-83/84 extensively in the course.

### VII) Calculator Policy

A graphing calculator is required for this course. TI 83/84 preferred. **TI89/92 are not acceptable.**

**VIII) Course Requirements**

Grades will be composed of 3 parts: quizzes, gateways, and exams.

**Homework**

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

**Gateways**

1. There will be 2 gateway assignments, one over derivatives and one over integrals. Both will be worth 30 points.

**Quizzes**

1. There will be periodic short quizzes over important material.

**Exams**

1. There will be 3 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.

**Writing**

4. There will be two writing assignments each worth 40 points.

**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.

**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 without a W : June 6

Last Date to Drop with a W: June 26

No class: Monday July 4th

Final Exam: July 7<sup>th</sup>, 8 A.M.

**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/ma182.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/mathscriv/>

**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/academicvp/Student\\_PandP.htm](http://www.montgomerycollege.edu/departments/academicvp/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](http://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](http://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.