

**Math 171 A**  
**Analytic Geometry and Calculus II**  
**Spring 2016**

**Instructor:** Fred Schultheis

**Office:** PPHAC 218

**Phone:** 610-625-7887

**Office Hours:** M 1:30-2:30, MW 10:15-11:15 pm and by appointment.

**Required Text:** Calculus: Single Variable, Jon Rogawski, third edition

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**Course Prerequisite:** Math 170 or its equivalent, such as the sequence Math 106-166

**Course Goals and Content:**

In this course you will be continuing your study of the mathematics of infinite processes. We will study advanced integration, elementary differential equations, and infinite sequences and series. You should gain

- a mastery over basic techniques of integration
- deeper insight into the power of calculus as a tool for modeling real world situations
- further expertise in using Maple as a tool for problem solving

The main content of the course is contained in Chapters 5–10 of the text.

**Course Description**

The course meets MWF 7:30-8:40 in Comenius 114. Homework assignments will be given at each class meeting. Students are expected to complete these assignments by the next class meeting, where they will be discussed. No one can learn mathematics without doing it themselves and so, **to the student, homework is the most important part of the course.** Since class participation is important, students are expected to attend every class.

**Grading**

Your final grade will be based on weekly quizzes (100 points), class participation (50 points), computer projects (about 100 points), 3 hourly exams (100 points each), and a comprehensive final exam (150-200 points). Exams may be in-class, take-home, or a combination of the two. Graded assignments must be turned in by the beginning of class on the date due to be graded without penalty. No assignment will be accepted after graded papers have been returned to the students. The following grading scale is used for assigning your final grade.

|          |           |         |           |         |           |         |           |           |          |
|----------|-----------|---------|-----------|---------|-----------|---------|-----------|-----------|----------|
|          |           | 87 – 89 | <i>B+</i> | 77 – 79 | <i>C+</i> | 67 – 69 | <i>D+</i> | $\leq 59$ | <i>F</i> |
| 93 – 100 | <i>A</i>  | 83 – 86 | <i>B</i>  | 73 – 76 | <i>C</i>  | 63 – 66 | <i>D</i>  |           |          |
| 90 – 92  | <i>A–</i> | 80 – 82 | <i>B–</i> | 70 – 72 | <i>C–</i> | 60 – 62 | <i>D–</i> |           |          |

**The final exam is scheduled for Wednesday May 4, 2016, 8:00-10:00 am.**

### **Attendance**

Class attendance is required. You will lose 10% from your class participation grade for each unexcused absence. If you are sleeping in class, you are not there. If you feel the need to leave class before it is over, even if you come back, you are not there. In other words, in any of these cases you will be considered absent and will lose 10% of your class participation grade. You are responsible for all work covered in class and all assignments, even if absent from class. If you must miss more than one class due to illness or emergency, you should notify the instructor.

**There will be no make-up for missed quizzes. Make-up tests are given only in extreme cases. If a student has to miss a test it is the student's responsibility to contact the instructor as early as possible..**

### **Extra Credit**

One goal for this course is to develop an appreciation of the beauty and utility of mathematics. To help foster this appreciation you should spend some time outside of class thinking and discussing mathematics.

There are no specific requirements for this portion of the course but many opportunities for you to earn extra credit. Some examples of such activities include: attending talks, giving a talk, reading a paper, or solving a problem.

Some typical examples include, but are not limited to

- attending an epsilon talk
- attending a Mathematics Colloquium at Moravian
- attending a math talk at another LVAIC school
- attending math talks at the Moravian College Mathematics conference in February
- attending math talks at the EPADEL conference in April
- solving a problem outside the scope of the class (5-infinite points)

If you attend an event relevant to your mathematical growth, then to earn extra credit you need to write a short paper that explains what the event was and how it deepened your appreciation of differential equations or mathematics. **For any talks you attend a write up is due within one week of when the talk was given. No extra credit points will be accepted after the second last Friday (April 29, 2016) of the term.**

### **Learning Disability Accommodations**

Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located in the lower level of Monocacy Hall, or by calling 610-861-1401. Accommodations cannot be provided until authorization is received from the Academic Support Center.

## **ACADEMIC HONESTY POLICY GUIDELINES**

### **MATHEMATICS COURSES**

The Mathematics and Computer Science Department supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Student Handbook, also available on AMOS. The following statements will help clarify the policies of members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thoughts of others, however, you must acknowledge the source. For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of an individual other than your instructor. If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College. For homework which is not to be graded, if you choose, you may work with your fellow students. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and ungraded.

**Note:** This syllabus is a guideline for the course. It may be necessary to make changes during the semester. I will announce any changes in class.