MATH 156 Spring 2016 Syllabus (CRN #10268),
Feb. 23, 2016 Edition*

Prof. Zachariah Etienne

Class meets MTWF 9:30AM–10:20AM, Hodges Hall, Room 301

Instructor Contact Information

- zbetienne *<at>* mix.wvu.edu
- Office hours:
  - Armstrong Hall 409C
  - Monday and Friday 2:00–3:00PM, or by appointment

Course Website

- http://math.wvu.edu/~zetienne/

Course Prerequisites

- A grade of C or better in Math 154 or MATH 155. Be sure to check your `mix` e-mail during the first week of classes. If the department believes that you do not meet the prerequisites, you will receive an e-mail and will be required to show documentation of how you meet the prerequisites. If you do not provide the appropriate documentation, you will be dropped from this course.

Course Materials

- *Textbook*: Essential Calculus: Early Transcendentals, 1st Edition, by James Stewart OR the WVU custom version that is sold at the bookstores. Instead of purchasing a hard copy, you are welcome to purchase access to the e-book, available through WebAssign. This is the same textbook that is used in Math 154, Math 155, and Math 251 (Calculus 1 and 3).
- *Calculator*: Calculators will NOT be allowed on exams or for in-class exercises.

Evaluation & Grade Assignment

Throughout this course, you will be graded not only on your ability to obtain the correct answer to a problem, but also on your ability to use the problem solving methods taught in this course and your ability to justify your work. **A CORRECT ANSWER WITHOUT THE SUPPORTING WORK WILL BE GIVEN NO CREDIT.** This applies to exams and in-class exercises. When in doubt, show all of the steps!

Grading

Each student's final grade in this class will be divided as follows.

- 5%: Class Attendance
- 20%: In-Class Exercises (Note that if a student scores above 100% in In-Class Exercises, their grade will be capped at 100%. Similarly, if a student scores below 0%, in In-Class Exercises their grade will be floored at 0%.)
- 50%: Midterm Exams (divided evenly across four exams)

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*Note that this syllabus is subject to revision, at the option of the instructor. If revised, the new syllabus will not become official until the instructor has distributed it to students over email.

- 25%: Comprehensive Final Exam, **8:00AM–10:00AM Wed. May 4, 2016** (see `http://registrar.wvu.edu/current_students/finals`)

Letter grades will be assigned as follows:

- **A**: 90–100%
- **B**: 80–89.9%
- **C**: 70–79.9%
- **D**: 60–69.9%
- **F**: 0–59.9%

Testing Procedures and Policies

There will be four midterms and a comprehensive common final exam. Test dates will be announced in class a week in advance. **CALCULATORS WILL NOT BE PERMITTED ON ANY EXAM OR THE FINAL.**

Tentative Midterm Test Days

(Subject to change)
  2/3/2016, 2/23/2015, 3/16/2015, 4/18/2015.
  Changes will be announced at least one week prior to test. Students who fail to take a test due to missing the class in which the test day change is announced will take sole responsibility for not taking the test.

Exam Makeup Policy

There are no make-up exams. If you miss an exam, your grade will be recorded as a zero. The final exam percentage can be used to replace your exam grade for this exam. Missing more than one exam will result in a score of zero for exams after the first missed exam. Only students with valid university sanctioned event excuses will be given an opportunity to make up the missed exams. No exceptions will be made to this policy.

Help Outside the Classroom

There are several ways to seek help with MATH 156.

1. You may attend the office hours.

2. You may also stop by the Math Learning Center, 301 Armstrong, where you may receive FREE tutoring from the graduate teaching assistants and undergraduate math majors. Hours of operation are posted at the MLC. This is a great place to work on your homework alone or with classmates!

3. You are able to use the IML Computer Lab during open lab hours. These times will be listed on the course website. Tutors are often available in this location.

4. Tutoring is available in the University Learning Centers in the residence halls.

5. You may wish to hire a private tutor. Several graduate students are available for tutoring. A list of tutors is available in the Math Office, 320 Armstrong Hall.

6. You may enroll in a section of Supplemental Instruction. (A handout with more information is available.)

MATH 156 Specific Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Apply techniques of integration to various integral problems.
2. Recognize and calculate the limit of a sequence.
3. Recognize series and apply appropriate convergence tests to solve series problems.
4. Represent functions as power series.
5. Move fluently between Cartesian and Polar coordinate systems and parametric equations.
6. Use integrals to solve problems involving area, volume, force, work, moments and center of mass (Physics and Engineering)

Class Procedure for This Section

Each class will consist of two basic components: **In-Class Exercises** and the **Lecture**. The ordering of these components is at the instructor's discretion, and elements from Lecture may be interspersed before and/or after In-Class Exercises. During Lecture, the instructor will review the basic theory and procedure for completing the next homework assignment. Each assignment will consist of roughly 8–16 problems from the textbook and will be posted online in advance.

At the start of the semester, all students will be given a total of 30 bonus points toward In-Class Exercises. This is to cover unexcused absences.

The In-Class Exercise component will consist entirely of Pop Quizzes, for which the policy is as follows:

Pop Quizzes

The in-class Pop Quiz will be given to all students, and will count for 10 In-Class Exercise points, with a minimum score of zero. The Pop Quiz will be based on the homework assignment section assigned for that day, and the Instructor may grade all or a random subset of students' Pop Quizzes.

Pop Quizzes may be given out at any time during the class period.

If a student arrives late to class and during a Pop Quiz, the student may attempt the Pop Quiz, but must return the Pop Quiz at the same time as all other students. If a student arrives after the Pop Quizzes have been collected, or has an unexcused absence that day, they will receive a grade of zero for that Pop Quiz.

Questions about Pop Quizzes (grading, solutions, etc) may be asked during office hours or via email.

Attendance Policy

This policy does not apply to exams. For exam make-up policy, see Exam Make-Up Policy above.

Mathematics is the language of science and engineering. As a great majority of students who take MATH 156 are science and engineering majors, the goal of this class is to instill *fluency* in mathematics at the MATH 156 level. To this end, the instructor's expectation toward class participation will be along the lines of taking a foreign language class.

Attendance is mandatory. 5% of the course grade will be based on classroom attendance. Each non-exam class period is worth ten points. **Starting Feb 17, Attendance Points will only be given for completed homework assignments.**

Prior to Feb 17: If a student is late to class, five attendance points will be deducted.

Prior to Feb 17: If a student leaves prior to the end of the class period, five attendance points will be deducted.

Throughout semester: Disturbing in-class manners, including eating, talking, napping, and cell phone ringing will result in point deductions from the student's daily Attendance Points.

Throughout semester: Each student will be granted a total of three unexcused absences to class, in the form of 30 points being added to the student's classroom attendance grade. Thus students who have no unexcused absences are effectively given bonus points.

Starting Feb. 17: Attendance Points will be given only for handing in homeworks due for the day at the start of class (homeworks are as assigned in the In-Class Exercise Schedule). If a student arrives late to class but hands in the homework, they will lose half of the Attendance Points for that day. Otherwise, late homeworks will not be accepted, except in the case of Excused Absences (see Excused Absence Policy below). *Students' homeworks will not be graded for correctness because all students have access to the correct solutions via the solution manual, Wolfram Alpha, their smart friend, etc.* The purpose of Attendance Points is to reward the good habit of keeping up with the lecture material by working through assigned homework problems **every day**. Thus **assignments without work shown will receive no credit**, but assignments with all work shown for all problems (even if the work resulted in the incorrect answer) will receive full credit. Homeworks must be handwritten by the student to receive credit; photocopies or electronic versions will not be accepted. Students must ensure that homework assignments are stapled; homeworks without a staple will be penalized two points (to a minimum of zero points); the Instructor will not provide a stapler. Generally, all homeworks from the previous week will be returned on the following Tuesday. **Students are responsible for photocopying their homework assignments, so that they may be used as study guides during exam weeks.**

Starting Feb. 24: To encourage and reward participation in active learning exercises, the Instructor may require that problems assigned in class be handed in at the end of class. These problems will be graded as though

they were a supplement to the homework assignment for the day. Note that a five-point homework penalty (to a minimum of zero points) will be applied to any student who chooses not to engage in these activities (e.g., does not hand in the problems) or is disruptive in any way. For days in which no homework assignment is due, active learning exercises will comprise the full 10-point homework grade for that day.

Excused Absence Policy

This policy does not apply to exams. For exam make-up policy, see Exam Make-Up Policy above.

Excused absences take one of two forms: **Prearranged** and **Unexpected**. **Travel is never an excused absence.**

Prearranged absences must be arranged with the instructor *at least one week in advance*. Absences might include student athletics in which the student is the athlete, attendance at professional conferences, job/internship interviews, student hospitalizations, etc. The instructor will require official documentation from a third party for all prearranged absences.

Unexpected absences must be accompanied by a doctor's note explaining why the student was unable to attend class, after the absence.

Any absences that do not follow the above patterns will be considered **unexcused, WITH NO EXCEPTIONS**.

Academic Dishonesty

The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, I will enforce rigorous standards of academic integrity in all aspects and assignments of this course. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the Campus Student Code. This Code may be found linked from the Office of Student Conduct web page: `http://campuslife.wvu.edu/office_of_student_conduct`. Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see me [the instructor] before the assignment is due to discuss the matter.

Inclusivity Statement & Accommodations

"The West Virginia University community is committed to creating and fostering a positive learning and working environment based on open communication, mutual respect, and inclusion. If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please advise me [the instructor] and make appropriate arrangements with the Office of Accessibility Services (304-293-6700). For more information on West Virginia University's Diversity, Equity, and Inclusion initiatives, please see `http://diversity.wvu.edu`."

Students requesting special accommodations are required to inform the instructor at least 48 hours in advance of a test.

Electronic Device Policy

During lectures and exams, **cellular phones** and other electronic devices (including but not limited to **calculators**, tablet computers, laptops, PDAs, MP3 players, Blackberrys) are not permitted, except with the consent of the instructor. All forbidden devices must be turned off before the beginning of the class period and placed out of sight (for example, in a backpack or handbag) until the class has concluded.

A student's first violation of this policy **during lectures** will result in a verbal warning (one verbal warning per semester), and each subsequent violation *even during the same lecture* will result in a 1% deduction in the student's overall course grade. Violations of this policy **during exams** will result in a zero grade on the exam and possible expulsion from the course.

Intellectual Property Notice

All course materials, including lectures, class notes, quizzes, exams, handouts, presentations, and other materials provided to students for this course are protected intellectual property. As such, the unauthorized purchase or sale of these materials may result in disciplinary sanctions under the Campus Student Code.