Course Location Moody Hall 201, MW 230-320p, TU 2-315p

AND TIME

INSTRUCTOR Prof. Ashley K. Wheeler Office: Roop Hall 322

Visiting Assistant Professor Email: wheeleak@jmu.edu

Department of Mathematics & Statistics

Office Hours TWU 330-430p or by appointment. Best times: late mornings or late afternoons

MTWU, late morning or early afternoon on Fridays.

Textbook Calculus: Early Transcendentals, 8th Ed., Stewart.

CALCULATORS Sliderules are permitted, but not required.

ATTENDANCE AND

CLASS PARTICIPATION YOU ARE RESPONSIBLE for attending class. If you cannot make it make sure to

get notes from a classmate or meet me during office hours.

Participation is expected. Ask questions when you have them. When time permits, I will call students to present solutions to problems to the class. Be supportive of each

other!

Decorum Cell phones, palm pilots, Blackberries, iPods, etc. – please be courteous about their

use during class. Do not plan to use any such device, even as a clock, on an exam. No

earplugs/headsets allowed.

Class activities should fit as precisely into the scheduled time as possible. I will do my best to start on time and not lecture past the end of classtime. In return, if for whatever reason you end up late to class or if you need to leave during lecture, for example, to use the restroom, please do so as discreetly as possible. Rolling in late and/or packing up early are not cool, as the noise distracts and sabotages your classmates' investment

in the course.

ACADEMIC HONESTY JMU students are fully responsible for knowing and abiding by the University's Academic Integrity Policy. See www.jmu.edu/honorcode/code.shtml for JMU's honor code. Students with questions about how these policies apply to a particular course or

assignment should immediately contact their instructor.

On take-home written assignments, you are welcome to use any resources you like **but you must document them.** There is no format I require for documenting sources (e.g., MLA). I am interested in where you get your mathematical information – from peers, tutors, websites, other textbooks, etc. You don't need to document material from this course's text or notes.

ACCOMMODATIONS JMU abides by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, which mandate reasonable accommodations be provided for students with documented disabilities. If you have a disability and may require some type of instructional and/or examination accommodations, please contact me early in the semester so that I can provide or facilitate provision of accommodations you may need. If you have not already done so, you will need to register with the Office of Disability Services, the designated office on campus to provide services for students with disabilities. The office is located in Wilson Hall, Room 107 and you may call 540-568-6705 for more information.

INCLEMENT WEATHER POLICY See http://www.jmu.edu/JMUpolicy/policies/1309.shtml.

Religious OBSERVATION ACCOMODATIONS All faculty are required to give reasonable and appropriate accommodations to students requesting them on grounds of religious observation. The faculty member determines what accommodations are appropriate for his/her course. Students should notify the faculty by no later than the end of the Drop-Add period the first week of the semester of potential scheduled absences and determine with the instructor if mutually acceptable alternative methods exist for completing the missed classroom time, lab or activity.

Grading

Exercises (online) 15%

WeBWork.

Take-Home Quizzes 20%

Average of your top 8 quizzes (out of \sim 10).

Three In-Class Exams 15% each

Dates TBA.

20% Final (comprehensive)

Letter grades will typically follow a 90-80-70-60 scale, although your instructor reserves the right to revise downward if necessary. For example, a 90% or higher will always guarantee an A.

DISCLAIMER.

THIS SYLLABUS IS SUBJECT TO CHANGE. You will be notified in email and/or in class of changes.

MATH 235. Calculus I.

Goals of the Course

- 1. Limits
 - a. Graphical and computational evaluation of limits
 - b. Formal definition of a limit
 - c. Understand how to prove the existence of a limit ("delta-epsilon proofs").
 - d. Limit rules
- 2. Intuitive and formal definition of continuity of a function at a point.
- 3. Differentiation
 - a. Conceptual understanding of derivative (slope of tangent line, instantaneous rate of change)
 - b. Calculating derivative based on formal definition
 - c. Understanding derivative rules, including chain rule
 - d. Calculating derivatives of the exponential and logarithm functions
- 4. Derivative applications
 - a. Related rate problems
 - b. Extreme value problems
 - c. Determining relative maxima and minima of a function and intervals of increase/decrease using first derivative
 - d. Determining concavity and inflection points using second derivative
 - e. Using derivative and second derivative information to graph functions
 - f. Using calculus to solve optimization problems
- 5. Integration
 - a. Estimating area under a curve with Riemann sums
 - b. Calculating area under a curve using limits of Riemann sums
 - c. Calculating antiderivatives using basic rules
 - d. Understanding and applying the Fundamental Theorem of Calculus to calculate definite integrals.

Nature of the Course Content

MATH 235*-236. Calculus I-II.

4 credits each semester. Offered fall and spring.

Differential and integral calculus of functions of one variable. Sequences and infinite series. Prerequisite for MATH 235: Sufficient score on the Mathematics Placement Exam. Prerequisite for MATH 236: MATH 232 or MATH 235 with grade of "C" or better. MATH 235 is not open to students who have already earned credit in MATH 232.