

## SYLLABUS FOR MATH 221: CALCULUS AND ANALYTIC GEOMETRY I

INSTRUCTOR: Clare Hemenway

OFFICE: Room 87F

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CLASS TIME AND PLACE: MTWRF 11:00 – 11:50 in Room 192

OFFICE HOURS: MF 10-11, MWF 12-1

Many other times if you just ask, or just drop by.

TEXT: Calculus: Early Transcendentals, 8<sup>th</sup> ed, by Stewart

MATERIAL COVERED: Chapters 2 thru 6. Topics include limits of functions at a point (including L'Hopital's rule), limits at infinity, continuity, derivatives of functions (including trig, inverse trig, exponential and logarithmic functions), implicit differentiation, tangent lines, applications of the derivative, theory of maxima and minima, curve sketching, introduction to the definite and indefinite integral, Fundamental Theorem of Calculus, areas, and volumes of solids of revolution.

A scientific calculator is required; NO calculator with a Computer Algebra System (CAS) allowed for tests

HOMEWORK: Assigned most days; it is not collected—it is your responsibility to do homework, keep up with the material, and ask questions (either in class, office hours, or the math tutoring lab)

TEST DATES:           Thursday Sep 27  
                          Tuesday Oct 23  
                          Thursday November 15  
                          Tuesday December 11

FINAL DATE:           Wednesday, December 19           10:30 – 12:30

If you **must** miss a test, **you must notify me ahead of time** (unless it is an emergency) via phone or e-mail. If the excuse is deemed reasonable, you will be allowed to either use that test as your dropped test or you might be allowed to take the test at a later date.

GRADING:           4 tests (drop lowest test grade) 75% (25% apiece)  
                          Comprehensive Final Exam       25%

Up to 10 points extra credit, (added to a test score) may be obtained through in-class and take home quizzes (NO late quizzes accepted).

### GRADING RUBRIC

A *average*  $\geq 92$

A-  $90 \leq \textit{average} < 92$

B+  $88 \leq \textit{average} < 90$

B  $82 \leq \textit{average} < 88$

B-  $80 \leq \textit{average} < 82$

C+  $78 \leq \textit{average} < 80$

C  $72 \leq \textit{average} < 78$

C-  $70 \leq \textit{average} < 72$

D+  $67 \leq \textit{average} < 70$

D  $62 \leq \textit{average} < 67$

D-  $60 \leq \textit{average} < 62$

F *average*  $< 60$

COURSE OBJECTIVES:

- To review basic algebra skills while learning calculus
- To prepare for Calculus II
- To learn some applications of Calculus
- To learn the basic concepts of limit, derivative and integral
- To Improve graphing techniques
- To learn some history of Mathematics
- To appreciate the beauty of Mathematics
- To have some FUN (yes, fun) along with the inevitable FRUSTRATION of learning mathematics