

Instructor: Prof. Jan Minton 461 Trexler Hall
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Office Hours: By appointment: Monday & Wednesday 3:00-4:30 and Tuesday & Thursday 1:00-2:30
Make appointments online at jminton.youcanbook.me

Course Objective: This course is the sequel to Math 118. Together they provide an introduction to calculus, with integrated pre-calculus review of relevant topics. Calculus topics include the study of derivatives, beginning integrals and graphing. An additional focus of the course will be the use of technology as a learning aid.

Intended Learning Outcomes:

- ... apply techniques of differentiation and integration to model and solve problems.
- ... understand the role of Calculus and the infinitesimal in modern mathematics
- ... calculate, by hand, rudimentary integrals and derivatives
- ... understand and manipulate various types of functions
- ... recognize the role of technology in Calculus, understand when it should be used, and be aware of its limitations.

Required Materials **Text:** *Calculus: Early Transcendental Functions*, Smith and Minton, 4th Edition
Technology: Graphing Calculator
Inquire course management system
Installation of *Mathematica* software – see course *Inquire* site for instructions

Attendance Policy: Full attendance is expected. Simple attendance is not graded, but graded activity will occur during many class periods. As stated in the Academic Catalog, “Every student is accountable for all work missed because of class absence. Instructors, however, are under no obligation to make special arrangements for students who are absent.” Also, anytime you come in late or leave during class you miss part of the course and you disrupt the educational experience for everyone else. Do this only in the case of emergency.

Overall Workload: In addition to the 3 hours of class time, you are expected to work outside of class for a minimum of 9 additional hours per week.

Quizzes There will be routine “weekly” quizzes on recent calculus material. No make-up quizzes will be given, but the lowest quiz grade will be dropped.

Class preparation quizzes: Frequently students will be directed to prepare for class watching a video. A brief quiz (some on *Inquire*, some on paper) will follow each assignment. No make-ups.

Mathematica Throughout the semester we will enhance our study of calculus by doing a series of Mathematica Projects. These projects will introduce you to the software package Mathematica and allow you to take advantage of its graphical and computational capabilities to reinforce your understanding of calculus.

Practice: Practice problems will be assigned regularly from the textbook. For the most part these will not be graded, but it is important that you do these exercises in a timely fashion so that you can monitor your own progress.

Tests/Exams: There will be four tests and a final exam as indicated on the day by day course schedule. Make-up tests will be given only under *very* extenuating circumstances that prohibit you from physically appearing in the classroom.

Co-curricular Involvement: The Math, Computer Science and Physics department offers a series of discussions that appeal to a broad range of interests related to these fields of study. These co-curricular sessions will engage the community to think about ongoing research, novel applications and other issues that face our discipline. There is a link to the dates and times for these sessions on *Inquire*.

Members of this class are invited to attend all appropriate meetings; however participation in **at least two** of these sessions is mandatory. A response form is available on Inquire. Within one week of attendance, students must submit this completed form to the instructor. These two scores will count in the Preparation Quiz category.

Inquire Policy Students are required to be knowledgeable of all postings on Inquire. It is each student's responsibility to consistently (at least daily) monitor Inquire for course information. Any assignment that requires an Inquire upload will not be accepted in any other form. Also, to receive credit for uploads, the file must be immediately readable on the instructor's college computer. It is the student's responsibility to make successful submissions. It is the student's responsibility to resolve technology problems through the college's IT department.

Academic Integrity And Electronic Devices: The college policy is fully supported. All tests and quizzes will be closed book and closed notes unless otherwise indicated.

The use of any electronic device during a quiz or exam is strictly prohibited. Exceptions may be made regarding the use of calculators or computers. Cell phones are never permitted. **Any use of a non-approved device during a quiz or exam will be considered a breach of academic integrity.**

Grading: Weights for the various components of the course and final course letter grade assignments are given below:

"Weekly" Quizzes	15%	A 93-100	B- 80-82	D+ 67-69
Preparation Quizzes	10%	A- 90-92	C+ 77-79	D 63-66
Mathematica Projects	15%	B+ 87-89	C 73-76	D- 60-62
Tests (10% each)	40%	B 83-86	C- 70-72	F below 60
Final Exam	20%			

IMPORTANT TO NOTE: The Inquire gradebook will be used for grade STORAGE only. Inquire will not be used to calculate your official course average. Any averages you might see in Inquire for this course should not be trusted.

Material, content, and scheduling are subject to change if deemed appropriate or necessary by the instructor.

Date	Topic	Mathematica
M- Jan 15	Intro	
W- Jan 17	3.3 on [a,b]	
F - Jan 19	3.3 on (a,b), (a,b), [a,b)	P1: Local max & min
M - Jan 22	3.4	
W - Jan 24	3.4/3.5	
F - Jan 26	3.5	
M - Jan 29	3.6 w/ Mathematica	P2: Graphing with f' , and f''
W- Jan 31	3.7	
F - Feb 2	3.7	P3: Elvis pt 1
M - Feb 5	Review	
W - Feb 7	Test 1	
F - Feb 9	3.8	
M - Feb 12	3.8/3.9	P4: Elvis pt 2
W - Feb 14	4.1	
F - Feb 16	4.1/4.2	
M-Feb 19	4.2	
W - Feb 21	4.3	P5: Areas and Distributions
F- Feb 23	4.3/4.4	
W-Feb 28	Review	
M - Feb 26	4.4	
F - Mar 2	Test 2	

Spring Break

M - Mar 12	4.5	
W - Mar 14	4.5	P6: Integration
F - Mar 16	4.6	
M - Mar 19	4.6	
W - Mar 21	4.7	P7: Numerical Integration
F - Mar 23	5.1	
M -Mar 26	Review	
W -Mar 28	Test 3	
F- Mar 30	No Class -Good Friday	
M - Apr 2	5.1 Continued	
W - Apr 4	5.2	
F - Apr 6	5.2/5.4	P8: Solids of Revolution
M - Apr 9	5.4/6.2	
W - Apr 11	6.2	
F- Apr 13	6.6 w/ review of L'Hopital's Rule	
M - Apr 16	6.6	P9: Gabriel's Horn
W - Apr 18	Review	
F - Apr 20	Test 4	
M - Apr 23	Review	

W - Apr 25 Final Exam 8:30-11:30