CALCULUS 1 MTWF 10:00-10:50AM FALL 2011 STUART 305

Instructor:	Jonathan White
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Office:	Stuart 316
Office Hours:	MTWF 9:00-9:50am and by appointment
Office Phone:	399-8280
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Text:	*Calculus, Early Transcendentals*, 1st Edition, by Briggs & Cochran, Addison-Wesley.
Problem Sets and Quizzes:	Assorted Problem Sets will be given throughout the term to supplement class work. Many of these will benefit from the use of the software package *Mathematica*, which is available on the computers in the labs in Stuart and Peterson Halls. Several assignments will be made through the WeBWorK system, and quizzes will be given occasionally. Combined these will be worth 200 points (25% of the final grade).
Exams:	There will be four exams during the course of the semester. The dates of these are indicated in the schedule on the back of this sheet. These exams will be worth 100 points (12.5% of the final grade) each. The final exam will be held at the scheduled time during finals week and will be worth 200 points (25% of the final grade).
Grading:	Grading will approximately follow a 90% A, 80% B, 70% C, 60% D scale. Current grade information will be available online through Moodle at all times.
Makeups:	For the sake of fairness to those who follow the schedule, makeups for exams will be allowed only under extenuating circumstances, with documentation and advance notice when humanly possible. Late problem sets and quizzes will generally not be accepted, and if accepted will generally be subject to a penalty of 20% of the possible points for each day past due.

The "Big Idea" of Calculus is using mathematics to deal with change. Calculus 1 deals primarily with rates of change, whether they be of quantities that change as time goes by or quantities that change as some other quantity is adjusted. These ideas cut across all quantitative disciplines – whether it's a falling stone, a falling stock, a declining population, or an endothermic reaction, there are mathematical commonalities, and those are what Calculus deals with.

In addition to regular exams, all students must successfully complete a computer-administered gateway exam over computing derivatives in order to pass this course.

Calculus is a demanding course in many ways. It requires both a level of computational proficiency and also a level of conceptual understanding beyond any prior mathematics course. Yet because of or despite these difficulties, students who have previously found math classes easy because of an aptitude for moving symbols around might find that there is more to this class than they expect, and students who have in the past felt they weren't good at math might find this class more suited to them. In either case, this class might not be quite what you're used to, and it might be unsettling at first. Give it some time, and feel free to take advantage of my office hours to help past the rough spots.

Tentative Schedule

Monday, August 29th §1.1 Review of Functions	Tuesday, August 30th §1.2 Representing Functions	Wednesday, August 31st §1.3 Inverse Functions	Friday, September 2nd §1.3 Inverse Functions
Monday, September 5th No Class – Labor Day	Tuesday, September 6th §1.4 Trig Functions	Wednesday, September 7th §1.4 Trig Functions	Friday, September 9th §2.1 Limits Informally
Monday, September 12th §2.2 Limits Semi-formally	Tuesday, September 13th §2.3 Computing Limits	Wednesday, September 14th §2.4 Infinite Limits	Friday, September 16th §2.5 Limits at Infinity
Monday, September 19th §2.6 Continuity	Tuesday, September 20th §2.7 Limits Rigorously	Wednesday, September 21st Review for Exam	Friday, September 23rd **Exam 1**
Monday, September 26th §3.1 Derivatives	Tuesday, September 27th §3.2 Differentiation Rules	Wednesday, September 28th §3.3 Product & Quotient Rules	Friday, September 30th §3.4 Trig Derivatives
Monday, October 3rd §3.5 Rates of Change	Tuesday, October 4th §3.6 Chain Rule	Wednesday, October 5th §3.7 Implicit Derivatives	Friday, October 7th §3.8 Derivatives of Logs
Monday, October 10th §3.9 Inverse Trig Derivatives	Tuesday, October 11th Review for Exam	Wednesday, October 12th Review for Exam	Friday, October 14th **Exam 2**
Monday, October 17th No Class – Fall Break	Tuesday, October 18th No Class – Fall Break	Wednesday, October 19th §3.10 Related Rates	Friday, October 21st §4.1 Maxima and Minima
Monday, October 24th §4.2 Derivatives & Graphs	Tuesday, October 25th §4.2 Derivatives & Graphs	Wednesday, October 26th §4.3 Graphing Functions	Friday, October 28th §4.4 Optimization
Monday, October 31th §4.4 Optimization	Tuesday, November 1st §4.5 Linear Approximation	Wednesday, November 2nd §4.6 Mean Value Theorem	Friday, November 4th §4.7 L'Hôpital's Rule
Monday, November 7th §4.7 L'Hôpital's Rule	Tuesday, November 8th §4.8 Antiderivatives	Wednesday, November 9th Review for Exam	Friday, November 11th **Exam 3**
Monday, November 14th §5.1 Approximating Areas	Tuesday, November 15th §5.1 Approximating Areas	Wednesday, November 16th §5.2 Definite Integrals	Friday, November 18th §5.3 Fun. Theorem of Calc.
Monday, November 21st §5.3 Fun. Theorem of Calc.	Tuesday, November 22nd §5.4 More on Integrals	Wednesday, November 23rd No Class – Thanksgiving Break	Friday, November 25th No Class – Thanksgiving Break
Monday, November 28th §5.5 *u*-Substitution	Tuesday, November 29th §5.5 *u*-Substitution	Wednesday, November 30th Review for Exam	Friday, December 2nd **Exam 4**
Monday, December 5th §6.1 Velocity & Net Change	Tuesday, December 6th §6.1 Velocity & Net Change	Wednesday, December 7th §6.2 Areas between Curves	Friday, December 9th Review for Final
Monday, December 12th Review for Final			
Final Exam – 8am Friday, December 16th			

Any students with disabilities which might affect their performance in this class should contact me as soon as possible to arrange accommodations.

Coe's faculty has adopted an academic integrity policy. It is your responsibility to understand and follow it.

Diversity, in all its forms, is valuable.