

CALCULUS 2 2:00-2:50PM FALL 2004 CRC 116 / HICKOK 207

- Instructor: Jonathan White
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- Web Page: <http://www.coe.edu/~jwhite/>
- Office: Hickok 206A
- Office Hours: MTWF 3:00-3:50pm and by appointment
- Office Phone: 399-8280
- Home Phone: 841-5111 (between 7am and 10pm)
- Text: *Calculus, Single and Multivariable*, 3rd Edition, Hughes-Hallett et al.
- Problem Sets & Quizzes: There will be several problem sets and quizzes during the semester. Together these will be worth 200 points (25% of the final grade)
- Exams: There will be four in-class exams administered during class time. The dates of these are indicated in the schedule on the back side of this sheet. These exams will be worth 100 points (12.5% of the final grade) each.
- The final exam will be held during finals week at the date and time indicated on the back side of this sheet. The final 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.
- Makeups: Makeups for exams will generally 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 due to extenuating circumstances will generally be subject to a penalty of 20% of the possible points for each day past due.

Calculus 2 is a continuation of topics introduced in Calculus 1, but with a greater depth and sophistication. The problems get bigger, and the ideas get bigger as well. Some truly interesting questions become answerable, and more aspects of the world come within reach, but the techniques involved become substantially more difficult.

To enter this class, each student must pass (with a score of 80% or more) a computer-administered multiple-choice “gateway” exam. You are allowed to attempt this exam as many times as desired, provided that you demonstrate understanding of previous mistakes before beginning a retake. After the third week grades will be lowered by 10% for each week or portion of a week without passing this exam.

The use of technology, particularly the software package *Maple*, will be an important component of the course, and most Tuesday meetings will be “Lab” sessions spent on the computers. Ability to compute with pencil and paper will also be important, as will conceptual understanding of the topics treated.

This combination of approaches and topics is likely to prove challenging, partly because few people will find that all of these aspects play to personal strengths. Don’t let that be overwhelming, though, and remember that I’m around to help.

Tentative Schedule

Monday August 23 rd §6.1 & 2 Antiderivatives	Tuesday August 24 th Lab: Introducing <i>Maple</i>	Wednesday August 25 th §6.4 & §6.5 Motion	Friday August 27 th §7.1 u -Substitution
Monday August 30 th §7.2 Integration by Parts	Tuesday August 31 st Lab: Computer Integration	Wednesday September 1 st §7.3 Tables of Integrals	Friday September 3 rd §7.4 Trig Substitution
Monday September 6 th No classes – Labor Day	Tuesday September 7 th Lab: Approximations	Wednesday September 8 th Review	Friday September 10 th Exam 1
Monday September 13 th §7.7 Improper Integrals	Tuesday September 14 th Lab: §7.8 Comparison	Wednesday September 15 th §8.1 Area and Volume	Friday September 17 th §8.2 Volume and Length
Monday September 20 th §8.3 Center of Mass	Tuesday September 21 st Lab: Slicing	Wednesday September 22 nd §8.4 App. To Physics	Friday September 24 th §8.5 App. To Econ.
Monday September 27 th §8.6 Probability	Tuesday September 28 th Lab: Probability	Wednesday September 29 th Review	Friday October 1 st Exam 2
Monday October 4 th §9.1 Geometric Series	Tuesday October 5 th Lab: Sequences & Series	Wednesday October 6 th §9.2 Convergence	Friday October 8 th §9.3 Convergence Tests
Monday October 11 th No class – Fall Break	Tuesday October 12 th No class – Fall Break	Wednesday October 13 th §9.3 Convergence Tests	Friday October 15 th §9.3 Convergence Tests
Monday October 18 th §9.4 Power Series	Tuesday October 19 th Lab: Conv. Graphically	Wednesday October 20 th §10.1 Taylor Polynomials	Friday October 22 nd §10.2 Taylor Series
Monday October 25 th §10.2 Taylor Series	Tuesday October 26 th Lab: Polynomial Approx.	Wednesday October 27 th §10.3 Finding Taylor Ser.	Friday October 29 th §10.3 Using Taylor Series
Monday November 1 st §10.5 Fourier Series	Tuesday November 2 nd Lab: Fourier Series	Wednesday November 3 rd Review	Friday November 5 th Exam 3
Monday November 8 th §11.1 Diff. Eq.	Tuesday November 9 th Lab: Slope Fields	Wednesday November 10 th §11.2 Slope Fields	Friday November 12 th §11.3 Euler's Method
Monday November 15 th §11.4 Sep. of Variables	Tuesday November 16 th Lab: Exponential Growth	Wednesday November 17 th §11.5 Growth and Decay	Friday November 19 th §11.6 Modeling
Monday November 22 nd §11.7 Population Growth	Tuesday November 23 rd Lab: Logistic Growth	Wednesday November 24 th No class – Thanksgiving	Friday November 26 th No class – Thanksgiving
Monday November 29 th §11.8 Systems	Tuesday November 30 th Lab: The Phase Plane	Wednesday December 1 st Review	Friday December 3 rd Exam 4
Monday December 6 th Appendix B Polar Coord.	Tuesday December 7 th Review	Wednesday December 8 th Review	
Wednesday December 15 th – 1pm – Final Exam			

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

The faculty has adopted a policy on academic integrity. It is your responsibility to understand and follow it.

Diversity, in all its forms, is valuable.