

MATH 255-02 Calculus II

FALL 2009

- **Meeting Times:** MF 2:30-3:20 pm ST 254, TR 2:05-2:55 pm Killian 109
- **Instructor:** Risto Atanasov
 - Office:** 444 Stillwell **Phone:** (828) 227-3942
 - e-mail:** ratanasov@email.wcu.edu
 - Office Hours:** M 1:30-2:20 pm, T 3:00-4:00 pm, W 2:00-3:30 pm, F 1:30 -2:20 pm, or by appointment
- **URL:** <http://paws.wcu.edu/ratanasov/>
- **Communication about the course**

You should monitor regularly your catamount e-mail, my webpage, and the course site on WebCAT for homework assignments, take-home assignments, announcements, due dates, etc.
- **Prerequisites:** Successful completion of MATH 153 (Calculus I)
- **Required Text:** *Calculus, Single and Multivariable*, D. Hughes-Hallet, A. M. Gleason, W. G. McCallum, et al. fourth edition
- **Rationale/Purpose**

The goal of the course is to impart the key theories, concepts, and methods of inquiry in Calculus II, selected from the following topics: techniques and applications of integration, the calculus of transcendental functions, infinite series, polar coordinates, parametric equations.
- **Aims and Learning Objectives**
 - A. **Aims:**
 - To continue the study of calculus of one variable begun in MATH 153
 - To provide a rigorous course in the integral calculus of one variable
 - To introduce and familiarize students with applications of integrals
 - To acquaint students with the tools to analyze infinite series
 - B. **Learning Objectives:** By the end of this course the students will be able to:
 - Express differentiation rules as antidifferentiation rules and use these rules or appropriate substitutions to calculate indefinite integrals.
 - Use the Fundamental Theorem of Calculus to calculate definite integrals.
 - Evaluate an indefinite integral by integration by parts, using trigonometric identities, or partial fractions.

- Use integrals to calculate volumes and areas of solids of revolution.
- Calculate centroids of plane and solid figures.
- Identify and compare different types of sequences and series.
- Determine if a series is divergent or convergent.
- Write a Taylor or MacLaurin polynomial/series for a particular function.

• **Course Outline**

- Integration (Chapter 7)
- Using the Definite Integral (Chapter 8)
- Sequences and Series (Chapter 9)
- Approximating Functions Using Series (Chapter 10)

• **Grading**

- Three in-class (non-gateway) tests 39% (13% each)
- Gateway exam 15%
- Quizzes 11%
- Two Projects 10% (5% each)
- Final Exam 25%

Letter grades will be assign according to the following:

A+: 98-100	B+: 88-89.9%	C+: 78-79.9%	D+: 68-69.9%	
A: 92-97.9%	B: 82-87.9%	C: 72-77.9%	D: 62-67.9%	F: 0-59.9%
A-: 90-91.9%	B-: 80-81.9%	C-: 70-71.9%	D-: 60-61.9%	

• **Exam Dates**

- Test 1: Thursday, September 24
- Gateway Exam: By appointment after we cover section 7.4
- Test 2: Thursday, October 29
- Test 3: Thursday, December 3
- Final Exam: Thursday, December 17, 8:30-11:00 am

The contents of each test will be determined one week before the test. The final exam will be cumulative, covering the whole course. **For all in-class exams/tests you must provide your own bluebooks (available at the WCU bookstore).**

- **Gateway Exam**

The gateway exam will consist of 10 skills-questions about integration, which must be completed without the aid of a calculator. Each question is worth 10 points, and **no partial credit will be awarded**. You may take the gateway exam more than once. There will be regularly scheduled opportunities during the semester to take or *re-take* a gateway exam outside of class (after we cover section 7.4). If you are not satisfied with your gateway performance, you may try for a higher grade. However, you may take the gateway exam only once weekly, and you can not take it during the weeks when there are another in-class test scheduled. Failure to successfully complete a gateway activity (less than 80%) will result in a 0 grade for this activity.

- **Absence from exams**

In the case of an excused absence (e.g., a documented illness or a sanctioned University activity), the instructor may approve a make-up exam. Appropriate written documentation must be presented to the instructor for approval, preferably in advance. An unexcused absence from an exam will result in a zero for that exam. Please contact me early if you anticipate any conflicts with the time of the final exam.

- **Homework**

Homework will be assigned on a regular basis but it will not be collected for a grade unless some specific problems are assigned to be turned in as part of a quiz. It is expected that the student is mature enough to do the non-collected homework without the instructor checking. Homework is truly an integral part of the course. There is not sufficient class time for an instructor to go over every variation of problem that can be encountered. The homework therefore is meant to reinforce what is done in class AND is a tool for independent discovery.

- **Quizzes**

There will be a quiz every week in which an exam is not scheduled (sometimes maybe more than one). The questions on the quizzes will come directly from the homework list. **Quizzes may not be made-up**, but the two lowest quiz grades will be dropped at the end of the semester.

- **Projects**

There will be two projects assigned throughout the semester that will provide opportunities to explore applications. You may choose to work individually or in pairs. If you chose to work with a partner, you may work on the problem together, but you must write up the solution individually. You must attached the cover sheet that I will provide to your write-up when I assign the project. **Late assignment will not be accepted.**

- **Tutoring**

The Department of Mathematics and Computer Science offers free tutoring in room

Stillwell 455. The Math Lab is available most hours 9:00 am–5:00 pm Monday–Friday and 6:00–9:00 pm Monday–Thursday. Check the posted schedule outside the door for exact times.

- **Attendance**

You are expected to be present and on time for each scheduled class meeting, to be prepared for class (by completing the recommended homework and the assigned reading), and to participate. Attendance, preparation, and participation may be factors in borderline cases. The instructor reserves the right to report chronic absences to the Office of Academic Affairs and/or to the Office of Student Affairs.

- **Accommodations for Students with Disabilities**

Western Carolina University is committed to providing equal educational opportunities for students with documented disabilities. Students who require disability services or reasonable accommodations must identify themselves as having a disability and provide current diagnostic documentation to Disability Services. All information is confidential. Please contact Disability Services for more information at (828) 227-2716 or 144 Killian Annex.

- **Academic Integrity Policy**

Academic Honesty Policy Western Carolina University, as a community of scholarship, is also a community of honor. Faculty, staff, administrators, and students work together to achieve the highest standards of honesty and integrity. Academic dishonesty is a serious offense at Western Carolina University because it threatens the quality of scholarship and defrauds those who depend on knowledge and integrity. Academic dishonesty includes:

- a) Cheating - Intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
- b) Fabrication - Intentional falsification of information or citation in an academic exercise.
- c) Plagiarism - Intentionally or knowingly representing the words or ideas of someone else as one's own in an academic exercise.
- d) Facilitation of Academic Dishonesty - Intentionally or knowingly helping or attempting to help someone else to commit an act of academic dishonesty, such as knowingly allowing another to copy information during an examination or other academic exercise.

See the student handbook at: <http://www.wcu.edu/4595.asp> for more information.

- **CourseEval:** Course Evaluation Forms will be available on-line from November 22 to December 6. You should use your Catamount Mail to access the system.

- **Cell phones:** Please turn off your cell phones prior to the start of class. Repeat offenders will be asked to leave the classroom for the remainder of the class.
- **Important Dates**

Aug. 24-Sept 4, Mon.-Fri.	Instructor initiated drop and attendance grading in affect for all courses
Aug. 28, Fri., 5:00 pm	Schedule adjustment activities for all students close
Sept. 4, Fri., 5:00 pm	University Census Day (no enrollment after midnight)
Sep. 7, Mon.	Labor Day holiday (no classes meet)
Sept. 21 - 28, Mon. - Mon.	5th week Progress Grade Reporting (on Web only)
Oct. 8-13, Thur.-Tue.	Fall Break (no classes meet)
Oct 21, Wed.	Advising Day (no classes)
Oct. 30, Fri. 5:00 pm	Last day to drop a course with an automatic grade of "W"
Nov. 25-29, Wed.-Sun.	Thanksgiving holiday
Dec. 1, Tue. 5:00 pm	Last day to withdraw from a course for mental health, medical, legal, or administrative reasons
Dec. 11, Fri.	Last day of regular class meetings
December 17, Thursday	Final Exam 8:30-11:00 pm