

Fall 2015

## MATH 5101

K. Holladay  
*University of New Orleans*

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# Math 5101-001      Advanced Calculus      Fall 2015

**Text:** Advanced Calculus 2nd edition by Patrick Fitzpatrick  
ISBN 0-534-37603-7

## **Tentative Schedule:**

<b><u>Week of</u></b>	<b><u>Sections</u></b>	<b><u>Notes</u></b>
Aug 19	Preliminaries, 1.1	8/21 -Quiz 1
Aug 24	1.2, 1.3, 2.1	8/28 - Quiz 2
Aug 31	2.2, 2.3, 2.4	9/4 - Quiz 3
Sept 8	2.5, 3.1	9/11 - 8/7 - Labor Day, Quiz 4
Sept 14	3.2, 3.3, 3.5, 3.7	
Sept 21	3.6	9/25 - Test 1 on Chapters 1, 2, 3
Sept 28	4.1, 4.2, 4.5	
Oct 5	4.3, 4.4, 6.1	10/9 - Quiz 5
Oct 12	6.2	10/14 - Drop Day    10/16 - Fall Break
Oct 19	6.3, 6.4, 6.5	10/23 - Quiz 6
Oct 26	6.6, 7.2	10/30 - Test 2 on Chapters 4, 6
Nov 2	8.2, 8.3	
Nov 9	8.7, 9.1	11/13 - Quiz 7
Nov 16	9.2, 9.3	11/20 - Quiz 8
Nov 23	9.4	11/27 - Thanksgiving Holiday
Nov 30	9.5, 9.6	

## **Homework:**

There will be weekly homework assignments except on the weeks of tests. Assignments will be graded, returned with an answer sheet and discussed in class. Graduate students (enrolled in 5101) will have extra homework sets. These extra sets will cover topics in ordered fields, topology of metric spaces and power series that are beyond the scope of 4101. These problems will demand more exposition and will be partly graded on the quality of the exposition.

## **Tests:**

There will be 8 quizzes and 2 midterm tests. The quizzes will be short and given at the end of the Friday classes. They are designed to test competence in the basic tasks of the course. The quiz content will be announced the class before the quiz. Makeup tests will only be given for emergencies with a written notice and must be taken promptly.

**Final Exam:** Wednesday, Dec 9 - 3 to 5 pm. The final exam is cumulative.

**Course Grade:** For 5101 there will be extra homework not assigned to 4101 students. Homework is 20%, the quiz total is 10%, the midterms are 18% each, the final is 34%.

**Class Time:** MWF 2:00 - 2:50 pm    **Classroom:** Math 213

**Instructor:** K. Holladay

**Office:** Math 251

**Office Hours:** MTWThF 11 - 12:30, 3 - 3:30    TTh 2 - 3:30

**Phone:** 280-6124

**E-mail Address:** khollada@uno.edu

## **Math 5101      Advanced Calculus**

**Student Learning Outcomes:** After the course students will have familiarity with the basic facts and methods of real analysis. They will be able to read and understand proofs and produce proofs especially of the  $\epsilon$  -  $\delta$  type. They will understand the topological generalizations of real analysis concepts like continuity and compactness. They will understand the Riemann integral as defined by Darboux sums. They will understand the difference between pointwise and uniform convergence of sequences of functions.

**Attendance:** Attendance is required. Attendance will be taken each class period. It is your responsibility to find out what is covered in class if you do miss a class. You are responsible for announcements made in class.

**Prerequisites:** Credit for Math 2115 with C or better required.

**Student Conduct:** The University of New Orleans (UNO) is a multicultural community composed of diverse students, faculty and staff. UNO will not tolerate discrimination or harassment of any person or group of persons based on race, color, religion, sex, disability, national origin, age, sexual orientation, marital or veteran status or any other status protected by law. Each member of the university is held accountable to this standard, which is strongly reflected in this code.

**Academic Dishonesty:** Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at <http://www.studentaffairs.uno.edu>.

**Accommodations for students with disabilities:** It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to <http://www.ods.uno.edu>.

**How class will be taught:** This course is a lecture based course.

**Expectations of students:** Students are expected to read the textbook regularly. Students are also expected to arrive on time, remain for full class session, conduct themselves in a respectful manner to other students and the instructor and not use cell phones during class.

**Procedures of class:** Instructor will lecture on the material and do examples of problems. Considerable attention will be devoted to learning proof techniques since this is one of the main goals of the course.

**Criteria for each graded assignment:** Assignments must be completed by the due date. Students are required to show work in order to receive full credit on test problems. Quality of exposition will be a part of all grades.

**Student Support Services:** Your instructor is your first resource. Free tutoring is also available in the Math Tutor Center, Room 105 of the Math Building

## Important Dates\*

Last day to adjust schedule w/out fee.....	08/18/2015
Semester Classes Begin.....	08/19/2015
Last day to adjust schedule w/fee, or withdraw with 100% refund.....	08/25/2015
Last day to apply for December commencement.....	09/25/2015
Final day to drop a course or resign.....	10/14/2015
Mid-semester examinations.....	10/05-10/09/2015
Final examinations.....	12/07-12/11/2015
Commencement.....	12/18/2015

*\*Note: check Registrar's website for Saturday and A/B sessions, and for items not listed here: <http://www.registrar.uno.edu>*

## Withdrawal Policy – Undergraduate only

Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates on the Registrar's website, <http://www.registrar.uno.edu>. Please consult The Bulletin for charges associated with dropping and adding courses.

## Incomplete Policy – Undergraduate only

The grade of I means *incomplete* and is given for work of passing quality but which, because of circumstances beyond the student's control, is not complete. The issuance of the grade of I is at the discretion of the faculty member teaching the course. For all graduate and undergraduate students, a grade of I becomes a grade of F if it is not converted before the deadline for adding courses for credit (as printed in the Important Dates Calendar) of the next regular semester including summer semester.

## Repeat Policy

When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student's Dean gives prior approval for documented extenuating circumstances.

## Graduate Policies

Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook: <http://www.uno.edu/grad/documents/GraduateStudentHandbook2014.pdf>

## Academic Dishonesty Policy

<http://www.uno.edu/student-affairs-enrollment-management/documents/academic-dishonesty-policy-rev2014.pdf>

## Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: <http://www.uno.edu/student-affairs-enrollment-management/>

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. Find out more at <http://www.uno.edu/counseling-services/>. First-year students often have unique concerns, and UNO Cares is designed to address those students succeed. Contact UNO Cares through <http://www.uno.edu/fye/uno-cares.aspx>.

## Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification: <http://www.uno.edu/ehso/emergency-communications/index.aspx>. All emergency and safety procedures are explained at the Emergency Health and Safety Office: <http://www.uno.edu/ehso/>.

## Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university's efforts towards creating an environment of healthy respect, tolerance, and appreciation for the people from all walks of life, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities. <http://diversity.uno.edu/index.cfm>

## Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LA 334, or learn more at <http://www.uno.edu/lrc/>.

## Affirmative Action and Equal Opportunity

UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO's compliance with federal and state regulations regarding EEOC in its Policies and Resources website: <http://www.uno.edu/human-resource-management/policies.aspx>

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