

MA 401-002
APPLIED DIFFERENTIAL EQUATIONS II
NORTH CAROLINA STATE UNIVERSITY - SPRING 2019

Mondays, Wednesdays, & Fridays 11:45am-12:35pm, 339 Riddick Hall

1. IMPORTANT DETAILS

- Instructor: Dr. Elisabeth Brown
- Email: embrown5@ncsu.edu
- Office: SAS 3262

NO email will be read or answered unless the email includes

- ★ a specific detailed subject line (for example: *MA 401-002 HW #4 Problem 1(c)*),
- ★ the course and section number,
- ★ your name, and
- ★ what you have already attempted to do to resolve the issue.

I will read all thoughtful and signed emails but will not promise to be able to answer all of them. Try to find the information on your own first.

- Moodle page: <https://moodle-courses1819.wolfware.ncsu.edu/course/view.php?id=7244>
- Office hours: Tuesdays 11:00am-12:00pm
Wednesdays 1:30pm-2:30pm
Fridays 3:30pm-4:00pm
- Textbook: Applied Partial Differential Equations, Third Edition by J. David Logan (**Required**)
 - Textbook available as a free e-book through the NCSU library:
catalog.lib.ncsu.edu/record/NCSU3339742
 - We will cover sections from Chapters 1, 2, 3, and 4.
 - I expect you to read sections of the textbook around the time of lectures and attempt homework from those sections. The textbook has additional examples and discussion that you will find helpful. Some test questions may resemble examples from the textbook.
- Grades: Available on course Moodle page.

2. COURSE DETAILS

2.1. **Course Description.** MA 401 is a 3-hour credit course.

Topics include an introduction to methods for solving some classical partial differential equations; wave, heat, and Laplace equations; Sturm-Liouville problems; solutions by separation of variables and expansion in Fourier Series or other appropriate orthogonal sets; use of power series as a tool in solving ordinary differential equations.

Prerequisite: MA 341; Credit for both this course and MA 501 will not be given.

2.2. **Structure.** The course consists of

- Lectures: This course is scheduled for 3 days a week.
- Homework: The main purpose of homework is practicing individual methods through problem solving. STAPLED homework will be collected at the beginning of class on the following dates:

HW/Quiz	Due Date	HW	Due Date	HW	Due Date
Appendix A Quiz	Fri. January 11	4	Wed. February 13	8	Fri. March 22
1	Wed. January 16	5	Wed. February 20	9	Wed. April 3
2	Wed. January 23	6	Fri. March 1	10	Fri. April 12
3	Fri. February 1	7	Fri. March 8	11	Wed. April 24

If you cannot make it to class, please make sure to get your homework to me on time. *No late homework will be accepted and/or graded.* Selected problems will be graded in detail. You are encouraged to discuss homework with other students, but you must write up the solution in your own words based on your own understanding. Any marked similarity in form or notation between submissions with different authors will be regarded as evidence of academic dishonesty, so protect your work.

- Four 50-minute in-class tests:
 - ★ **Wednesday, February 6th**
 - ★ **Monday, February 25th**
 - ★ **Wednesday, March 27th**
 - ★ **Wednesday, April 17th**
- Final Exam: **Monday, April 29th, 8:00am-11:00am** in regular classroom
 - ★ The comprehensive final exam will cover all course material.
 - ★ The final exam is scheduled according to the NCSU final exam schedule. This schedule is posted *now*, so make your summer travel plans accordingly!!
 - ★ **This exam can *only* be rescheduled if a student has 3 exams within 24 hours and *prior* departmental approval.** This must be done *before* April 18th.

During each test and the final exam, students will place all bags/notes/purses/etc. against the front wall of the classroom. Students will also place cell phones on their initials on a table at the front of the classroom.

2.3. **Attendance Policy.** Students are expected to arrive on time, contribute to group work and class discussions, and stay until the class ends. Attendance at all class meetings is expected.

2.4. **Index cards.** By **January 14th**, each student shall bring 40 index cards (3" × 5") to class. One index card will be used during each class meeting throughout the semester. Index cards are available for purchase at the student bookstore.

2.5. **Grading.** This course will use the following letter grading cutoffs: 100-97 A+, 96.9-93 A, 92.9-90 A-, and similarly for B/C/D plus/minus/etc. Satisfactory/Unsatisfactory and Audit grading per University policy. Grades will not be curved; it is theoretically possible for everyone in the class to get an A (or an F). Your grade depends only on *your* performance, *not* on how everyone else in the class performs. Therefore, it is in your best interests to help your classmates, while keeping the academic integrity policy in mind. Your final grade in this course will be determined by grades earned:

Component	Weight
Homeworks & Quizzes	30%
Tests	40%
Final Exam	30%

2.6. **Corrections to the grading.** If a grading error is found on a homework assignment or test, then you should explain the error **in writing**, attached to the original assignment/test, to me within 2 class periods after the assignment/test was returned. **Do not alter the original work.** The entire assignment/test may be re-graded, and the grade is *subject to remain the same, increase, or decrease.*

2.7. **Make-up policy for missing one of the four in-class scheduled tests.** Test make-up policy is in accordance with the University policy.

- (1) All anticipated absences must be excused in advance of the test date. These include University duties or trips (certified by an appropriate faculty or staff member), required court attendance (certified by the Clerk of Court), or religious observances (certified by the Department of Parent and Family Services).
- (2) Emergency absences must be reported within *one* week of returning to class and must be appropriately documented (illness by an attending physician or family emergencies by Parent and Family Services).
- (3) If the absence is excused, there will be one make-up time within one week after the test date; if you cannot come to that time, then your exam score will count for that test score. If you choose not to take the make-up test and the absence was excused within one week of the original test date, then your exam score will replace that one missing test score.
- (4) Make-ups for oversleeping, car trouble, or any other excuse not approved by the University may **ONLY** be given on the day of the test! Time of make-ups will be subject to instructor availability. **There will be an automatic 15 point deduction from the test.**

3. MISCELLANEOUS

3.1. **Getting help.** Student must take responsibility for their learning and seek help when needed. Communication with the instructor is essential to your success. I want to help! The Mathematics Multimedia Center (SAS 2103/2105) has free tutoring and computers on a first-come, first-served basis and is open throughout the week. Another resource is the Undergraduate Tutorial Center: <http://tutorial.ncsu.edu>

3.2. **Students with disabilities.** See <http://policies.ncsu.edu/regulation/reg-02-20-01>. Students who require accommodations will need documentation through the Disability Services Office (DSO) and are encouraged to seek such accommodations early in the semester. Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the DSO: <http://dso.dasa.ncsu.edu>

3.3. Code of Student Conduct. This will be upheld, and documentation will be submitted to the Office of Student Conduct for students who violate University regulations on academic integrity. Your signature on any test or assignment indicates “I have neither given nor received unauthorized aid on this test or assignment.” See <http://policies.ncsu.edu/policy/pol-11-35-01> for a detailed explanation of academic honesty.

3.4. Electronic Course Components. Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

3.5. Calculators and Computers. No devices are allowed during the four in-class tests and one final exam, including, but not limited to, non-graphing calculators, graphing calculators, cell phones, tablets, and computers. Laptop computers are never allowed to be used during class.

3.6. Non-Discrimination Policy. NC State provides equal opportunity and affirmative action efforts, and prohibits all forms of unlawful discrimination, harassment, and retaliation that are based upon a persons race, color, religion, sex, national origin, age, disability, gender identity, genetic information, sexual orientation, or veteran status. NC State’s policies and regulations covering discrimination, harassment, and retaliation may be accessed at <http://policies.ncsu.edu/policy/pol-04-25-05>. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity.