

MA 225: Section 001-Summer II 2021

Zoom sessions MTWTF 8:00AM-9:30AM

TEXT: A TRANSITION TO ADVANCED MATHEMATICS

By Smith, Eggen & St. Andre, 8th edition

INSTRUCTOR: R. FULP

I check my e-mail Monday-Friday shortly before 8:00 AM and after 9:30 AM
I will respond to questions also at other times. I also check my e-mail from
time to time throughout the day and will respond when I do
E-MAIL: fulp@math.ncsu.edu

Prerequisite: MA 241

GEP Category: This course does not fulfill a General Education Program
requirement.

Essential Course Content

Chapter 1 Logic and Proof

- Propositions and Connectives
- Conditionals and Biconditionals
- Quantifiers
- Proofs

II. Chapter 2: 2.1-2.5 Set Theory

- Basic Ideas
- Set Operations
- Extended Set Operations
- Mathematical Induction

III. Chapter 3: 3.1-3.3 Relations

- Cartesian Products and Relations
- Equivalence Relations

IV. Chapter 4: 4.1-4.4, 4.6,4.7 Functions

Functions as Relations

Construction of Functions

1-1 and onto Functions

Sequences (time permitting)

Limits of Functions (time permitting) V. Chapter 5: 5.1-5.3 Cardinality

Finite and Infinite Sets

Countable and Uncountable Sets

FURTHER DETAILS:

HOMEWORK IS ASSIGNED VIA MOODLE AND WILL BE DONE VIA
HOMEWORK TEAMS

THERE WILL BE TWO TESTS AND A FINAL EXAM SUBMITTED VIA
MOODLE

GRADING

HOMEWORK WILL COUNT 25 %

EACH TEST WILL COUNT 25 %

THE FINAL EXAM WILL COUNT 25 %

Grading scale : Plus and minus grades are given sparingly. The highest A is given an A+ and the lowest A an A-, with a similar distribution for B's, C's, and D's. The scales are: 90-100 gets you an A, 80-89 a B, 65-79 a C, and 55-64 a D. Grades below 55 result in an F.

FINAL EXAM: NOT YET LISTED ON MY PACK, BUT I THINK IT IS
ON AUG 3. IT IS ADMINISTERED ONLINE

Grading/Scheduling Changing Options Related to COVID-19: If the delivery mode has a negative impact on your academic performance in this course, the university has provided tools to potentially reduce the impact:

Enhanced S/U Grading Option: Enhanced Satisfactory/ Unsatisfactory
Grading Option

Late Drop: Enhanced Late Drop Option

Be aware that if you use the enhanced S/U grading option, you will need to complete the course and receive at least a C- to pass the course.

In some cases, another option may be to request an incomplete in the course. Before using any of these tools, please discuss the options with me and with your academic advisor.

Auditing the Course: To audit the course, you must have the approval of your advisor and the Mathematics Department. In order to receive an AU, you must attend the majority of the sessions, and you must hand in all of the homework and take all of the tests. See:

<https://policies.ncsu.edu/regulation/reg-02-20-04> for more information concerning course audits.

Incomplete Grades: Incomplete grades will be handled on an individual basis. Note, however, that if an extended deadline is not authorized by an instructor or department, an unfinished incomplete grade will automatically change to an F after either (a) the end of the next regular semester in which the student is enrolled (not including summer sessions), or (b) the end of 12 months if the student is not enrolled, whichever is shorter. Incompletes that change to F will count as attempted courses on transcripts. The burden of fulfilling an incomplete grade is the responsibility of the student. The university policy on incomplete grades is located at:

<https://policies.ncsu.edu/regulation/reg-02-50-03/>.

Attendance Policy/Late Assignments/Make-up Work: You are expected to attend all classes on time. Late assignments and make-up work will only be allowed for excused absences. You should contact me by email before any anticipated excused absence. If you have an unanticipated excused absence (for example, a medical emergency), you should contact me within one week of returning to class.

For complete attendance and excused absence policies, please see:
<https://policies.ncsu.edu/regulation/reg-02-20-03-attendance-regulations/>.

COVID-19 Related Absences: If you need to miss class because you have been advised that you may have been exposed to COVID-19 or you have a personal or family situation related to COVID-19 that prevents you from attending our sessions, please contact me. Together we will develop a plan to help you keep up with your coursework during any such absences. COVID 19-related absences will be considered excused. You do not need any additional documentation. (But, again, please make sure you contact me.)

Academic Integrity/Honesty: Students are required to comply with the university policy on academic integrity/honesty found in the Code of Student Conduct:

<https://policies.ncsu.edu/policy/pol-11-35-01/>.

It is my understanding and expectation that your signature on any test or assignment means that you have adhered to the Pack Pledge:

I have neither given nor received unauthorized aid on this test or assignment.

Violations of academic integrity will be handled in accordance with the Student Discipline Procedures (NCSU REG 11.35.02).

Digital Course Components: In this course we will use Zoom and Moodle. Please see the relevant technology requirements. If you need access to additional technological support, please contact the Libraries Technology Lending Service (Technology Lending).

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.

Throughout the semester you will need to upload homework and tests in Moodle as pdfs. So make sure you have an app that will allow you to scan your work if you are not able to directly save your work as a pdf.

Zoom: Our lectures will be conducted synchronously (Monday-Friday from 8:00 AM. to 9:30 AM) via Zoom. I'll send out a Zoom invitation to your NC State email address right before class and you'll be able to click on the link in that email.

I will be recording our Zoom sessions and will be posting links to the recordings on our Moodle page for your use. These recordings are for use in our current class (and possibly for use in future educational activities). By your continued participation in this recorded course, you are providing your permission to be recorded for use in our class and for use in future educational activities.

Diversity, Equity, and Inclusion: Diversity, equity, and inclusion are important to the success of our students at NC State. Every student, every faculty member, and every staff member who comes to NC State enriches us through their varied perspectives, knowledge, and backgrounds. Our classroom is one in which every student is respected and feels heard.

I welcome any additional suggestions you have for making our classroom more welcoming and inclusive.

Accommodations for Disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Resource Office at Holmes Hall, Suite 304, 2751 Cates Avenue, Campus Box 7509, 919-515-7653. For more information on NC States policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation (REG02.20.01).

Non-Discrimination Policy: NC State prohibits discrimination, harassment, and retaliation based on a persons age (40 years or older), color, disability, genetic information, gender identity, national origin, race, religion, sex (including pregnancy), sexual orientation or veteran status. If you feel that you have been the subject of prohibited discrimination, harassment, or retaliation, you should contact the Office for Institutional Equity and Diversity (OIED) at 919-513-0574.

NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at <http://policies.ncsu.edu/policy/pol-04-25-05> or <http://oied.ncsu.edu/divweb>.

Health and Well-Being Resources: These are difficult times, and academic and personal stress are natural results. Everyone is encouraged to take care of themselves and their peers. If you need additional support, there are many resources on campus to help you:

Counseling Center (NCSU Counseling Center)

Health Center (Health Services — Student)

NC State CARES Team: As members of the NC State Wolfpack community, we each share a personal responsibility to express concern for one another and to ensure that our campus remains a healthy and safe environment for learning. Occasionally, you may come across a classmate whose personal behavior concerns or worries you, either for your classmates well-being, for your well-being, or for the well-being of others. When this is the case, I would encourage you to report the behavior to the NC State CARES team: (Share a Concern).

If you or someone you know are experiencing food, housing or financial insecurity, please see the Pack Essentials Program (Pack Essentials).

Additional COVID-19 Information: Due to the Coronavirus pandemic, public health measures have been implemented across campus. Students should stay current with these practices and expectations through the Protect the Pack website ([https://www.ncsu.edu/coronavirus/.](https://www.ncsu.edu/coronavirus/))

We are most concerned about your health and the health of the students, faculty, and staff across campus. If you test positive for COVID-19, or are told by a healthcare provider that you are presumed positive for the virus, please follow university guidelines, including self-reporting (Coronavirus Self Reporting): Self-reporting is not only to help provide support to you, but also to assist in contact tracing for containing the spread of the virus.

Community Standards related to COVID-19: We are all responsible for protecting ourselves and our community. Please see the Community Standards and Rule 04.21.01 regarding Personal Safety Requirements Related to COVID-19 (RUL 04.21.01 Personal Safety Requirements Related to COVID-19 Policies, Regulations and Rules).

NC State Rules and Regulations: Students are responsible for reviewing the NC State University Policies, Rules, and Regulations (PRRs) which pertain to their course rights and responsibilities, including those referenced both below and above in this syllabus:

Equal Opportunity and Non-Discrimination Policy Statement <https://policies.ncsu.edu/policy/04-25-05/> with additional references at <https://oied.ncsu.edu/equity/policies/>

Code of Student Conduct <https://policies.ncsu.edu/policy/pol-11-35-01/>

Important Resources for Students

NC State Keep Learning, tips for students taking courses remotely: <https://dasa.ncsu.edu/academics/keep-learning/>

Introduction to Zoom for Students: <https://youtu.be/5LbPzzPbYEw>

Learning with Moodle, a students guide to using Moodle: <https://moodle-projects.wolfware.ncsu.edu/course/view.php?id=226>

Protect the Pack FAQs: <https://www.ncsu.edu/coronavirus/frequently-asked-questions/>

NC State Protect the Pack Resources for Students: <https://www.ncsu.edu/coronavirus/reactivating-campus/resources-for-students/>