

NCSU DEPARTMENT OF MATHEMATICS  
MA 103 Fall 2019

**MA 103:** Topics in Contemporary Mathematics

**Course Coordinator:** Molly Fenn ([mafenn2@ncsu.edu](mailto:mafenn2@ncsu.edu))

**Office:** SAS 2108

**Course Description**

Primarily for students in Humanities and Social Sciences. Illustrations of contemporary uses of mathematics, varying from semester to semester, frequently including sets and logic, counting procedures, probability, modular arithmetic, and game theory.

**Textbook**

The textbook for this course is a pdf file which will be pre-loaded into WebAssign for the students. Students will have access to it once they register with WebAssign. Instructors can obtain a hard copy from Carolyn Gunton in SAS Hall 2108.

**Homework**

All homework assignments for MA 103 are submitted through WebAssign. (<http://webassign.ncsu.edu>) Web-Assign is the only type of homework grading available for MA 103, so any other assignments or quizzes that you choose to give will have to be handled/graded by you. MA 103 instructors unfamiliar with WebAssign should see Seyma Bennett-Shabbir as soon as possible. She can give you an introduction to WebAssign in 15 – 20 minutes.

WebAssign closely follows the lecture notes. All problems have randomized numbers so it is highly unlikely that two students will have the same problem. You should frequently remind students of WebAssign due dates. Also warn them that lack of planning on their part does not constitute an extension of the assignment. It is a serious mistake for students to procrastinate on any assignment because the system might go down at any time. Students should be encouraged to work well AHEAD of the schedule. Instructors may elect the "Self- Extension" policy with penalty. Ask Jennifer George Burt to set WebAssign "self-extensions with penalty". Be sure you understand how this works before you choose this.

WebAssign is purchased online by each student at <http://webassign.ncsu.edu>

Note: Students should be aware that having difficulties with their computer accounts does not exempt them from doing the assignments. Students are responsible for ALL WebAssign assignments in this course. If a student has difficulties with his/her computer account, they are responsible for getting this problem taken care of within a reasonable period of time (I recommend giving them the first week of class) and notifying the instructor of these difficulties so that extensions can be given on assignments if necessary.

**Grades**

This course uses standard NCSU letter grading, with no rounding.

$90 \leq A^- < 93$

$93 \leq A < 97$

$97 \leq A^+ \leq 100$

80 ≤ B- < 83

70 ≤ C- < 73

60 ≤ D- < 63

0 ≤ F < 60

83 ≤ B < 87

73 ≤ C < 77

63 ≤ D < 67

87 ≤ B+ < 90

77 ≤ C+ < 80

67 ≤ D+ < 70

One example of a grading distribution is below. You may modify it for your class, if desired. Four tests and a final exam are scheduled; each instructor may in addition assign a paper or a project to use as an extra test or in place of a test. Webassign will be used for a homework grade.

Grade Component	Weight	Details
WebAssign Homework	20%	Homework will be done through WebAssign and will be due frequently.
In-Class Tests	60%	You may choose to give 3 or 4 tests.
Final Exam	20%	The final exam will be given on TBD.

### Academic Integrity

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at <http://policies.ncsu.edu/policy/pol-11-35-01>

The [NCSU Student Code of Conduct](#) covers all work done in this course. Any suspected violations will be promptly reported. Academic dishonesty will result in an automatic failing grade for the course.

### Course Evaluations

A formal evaluation is conducted by the University at the end of the semester and the goal is to achieve 100% class participation in this survey. Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructor.

### Accommodations for Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Resources Office (<https://dro.dasa.ncsu.edu/>), 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at <http://policies.ncsu.edu/regulation/reg-02-20-01>.

## Schedule

The schedule below is meant as a suggestion. You may need to modify it slightly based on your class. We suggest that a lot of time be spent in working problems with the students.

Dates	Text Chapter	Topic
Weeks 1-3	Chapters 1 and 2	Voting Systems, Weighted Voting Systems
Week 4	Review and TEST 1	
Weeks 5 and 6	Chapters 3 and 4	Fair Division, Apportionment
Week 7	Review and TEST 2	
Weeks 8 and 9	Chapters 5 and 6	Euler Circuits, Hamilton Circuits
Week 10	Review and TEST 3	
Weeks 11, 12, and 13	Chapters 7 and 8 and Review	Minimum Networks, Scheduling Problems
Week 14	TEST 4	
Weeks 14 and 15	Chapter 9 and Review	Sequences

Feel free to use or adapt any of the material below for your class syllabus.

## Course Website

We will be using the Moodle learning management system (<http://wolfware.ncsu.edu>) for this course. You will log in using your Unity ID and password. (Refer to online information at <http://oit.ncsu.edu/unityid> or contact (919) 515-HELP or [HELP@ncsu.edu](mailto:HELP@ncsu.edu) for assistance with your Unity ID). After the beginning of the semester, you will see a link to our course site. Once in the site, you can Bookmark or add the site as a Favorite in your web browser so that you can return directly to that page.

## Course Communications

Modes of communication in use for this course include email, office hours, and Moodle.

- Moodle discussion forums will be used to facilitate class discussion. Check these forums often and please feel free to reply to your fellow students' posts.
- I will do my best to respond to weekday e-mails and posts within 24 hours. Email messages or posts left after 4 pm Friday will be responded to by Monday evening.

· If you would like to speak with an instructor in person and you can't make it to the posted office hours, please email me to schedule a time that is convenient. Include several time slots that would work for you in your email.

Please be aware that ALL email communications for this course will be sent to your NCSU unity email. If you do not regularly use your ncsu.edu account, there are settings within Gmail that allow you to forward your e-mail to another account. For more information, please see <http://google.ncsu.edu/what-best-way-forward-my-nc-state-gmail-non-nc-state-e-mail-address>

If you have a question that the whole class may benefit from hearing the answer to, please post on the "Course Content Q&A" forum. I will check this forum often to respond to open questions. You should also check frequently to answer or ask questions.

If you have a question that is very specific to the work you have done (i.e. if you nearly finished your work but got stuck towards the end), you can email your instructor with your question. Including a scan or photo of your work can help. If an instructor receives an email with a question more appropriate to the forum, she may copy and paste the question there without identifying the student who sent it.

### **Make Up Tests**

Should you need to miss an in-class test, a cumulative makeup test will be given during class time in the last week of the semester. Everyone will take the same makeup exam, regardless of which test you missed. The grade for the makeup exam will be used in place of the grade for the test you missed. Details about the makeup test will be sent to students eligible to take it later in the semester. Only students who missed a test are eligible to take the makeup exam.

### **Trans-Inclusive Statement**

In an effort to affirm and respect the identities of transgender students in the classroom and beyond, please contact me if you wish to be referred to using a name and/or pronouns other than what is listed in the student directory.

### **Basic Needs Security**

Any student who faces challenges securing their food or housing or has other severe adverse experiences and believes this may affect their performance in the course is encouraged to notify the professor if you are comfortable in doing so. Alternatively, you can contact the Division of Academic and Student Affairs to learn more about the Pack Essentials program <https://dasa.ncsu.edu/pack-essentials/>

### **Supporting Fellow Students in Distress**

As members of the NC State Wolfpack community, we each share a personal responsibility to express concern for one another and to ensure that this classroom (as well as the campus as a whole) 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 classmate's 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 on the link located on NC State's Students of Concern website (<http://go.ncsu.edu/NCSUcares>).

### **List of Policies**

Students are responsible for reviewing the NC State University PRRs (policies, rules and regulations) that pertain to their course rights and responsibilities:

- Equal Opportunity and Non-Discrimination Policy Statement <https://policies.ncsu.edu/policy/pol-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/>
- Grades and Grade Point Average <https://policies.ncsu.edu/regulation/reg-02-50-03/>
- Credit-Only Courses <https://policies.ncsu.edu/regulation/reg-02-20-15/>
- Audits <https://policies.ncsu.edu/regulation/reg-02-20-04/>