

MA 103: Topics in Contemporary Math — Course Calendar

Spring 2026 Course Calendar

The table below lists the planned schedule for this course. See the [course syllabus](#) for additional course information. Typos are possible. You are responsible for tracking university closures, final exam schedules, etc. through the [NC State University Academic Calendar](#).

Due dates for assignments should be confirmed through Moodle, always check the assignments themselves for specific dates. These due dates are tentative based on the start of the semester; dates may change on Moodle without changing on this schedule.

MA 103: Topics in Contemporary Math — Spring 2026 Course Calendar

Week	Date Range	Lecture / Session	Sections Covered	Assignments
1	Jan 12 – Jan 16	Intro to Voting Theory	Preference ballots; Plurality; Borda count	Lessons 1 and 2, Homework 0 and 1
2	Jan 19 – Jan 23	Strategic Voting & Voting Methods. <i>Martin Luther King Jr. Day</i>	Strategic voting; Instant Runoff Voting (IRV); Pairwise comparison; Condorcet and Majority Conditions	Lessons 3 and 4, Homework 2
3	Jan 26 – Jan 30	Arrow and Weighted Voting	Independence of irrelevant alternatives; Arrow's theorem; Intro to weighted voting	Lessons 5 and 6, Homework 3
4	Feb 02 – Feb 06	Weighted Voting Power	Dictators; Veto power; Dummy players in weighted voting	Lessons 6 and 7, Homework 4
5	Feb 09 – Feb 13	Power Indices	Modeling power; Banzhaf Power Index	
6	Feb 16 – Feb 20	Intro to Graph Theory. <i>Wellness Day</i>	Euler paths	Exam 1
7	Feb 23 – Feb 27	Graph Algorithms	Fleury's algorithm; Shortest path problem; Dijkstra's algorithm	
8	Mar 02 – Mar 06	Traveling Salesperson Problem	TSP; Brute-force algorithm; Nearest neighbor heuristic	
9	Mar 09 – Mar 13	Optimization & Scheduling	Optimality and efficiency; Scheduling problems; Digraphs	
10		Spring Break		

Week	Date Range	Lecture / Session	Sections Covered	Assignments
	Mar 16 – Mar 20			
11	Mar 23 – Mar 27	Modeling Networks	Modeling internet traffic; Social media influence	
12	Mar 30 – Apr 03	Intro to Cryptography	Intro to cryptography; Caesar cipher	
13	Apr 06 – Apr 10	Classical Ciphers & Number Theory	Substitution cipher; Frequency attacks; Modular arithmetic	Exam 2
14	Apr 13 – Apr 17	Modern Ciphers & Key Exchange	Vigenere cipher; Key exchange problem; Exponents and logarithms	
15	Apr 20 – Apr 24	Public-Key Cryptography	Modular exponentiation; Diffie Hellman key exchange; Public key cryptography	
16	Apr 27 – Apr 28			

Final exams for courses with set meeting times are determined before the semester begins; find your final exam schedule here: [NC State University Final Exam Calendar](#) for the date and time of all of your final exams. I recommend that you schedule the final exam for this course early in the semester.