NCSU DEPARTMENT OF MATHEMATICS
MA 108 Spring 2021

MA 108: Precalculus II
Instructor:
Office: SAS 2108

You can copy/paste any parts of this in putting together your own syllabus, as desired. I recommend using the syllabus tool (https://apps.delta.ncsu.edu/syllabus_tool//) to ensure you have all the required info and language.

Feel free to get in touch with me anytime with questions or concerns about your class. I'm happy to talk through issues with students or material.

Textbook
Precalculus, Jay Abramson. This text is a free pdf download from openstax (https://openstax.org/details/books/precalculus). See Carolyn Gunton in SAS 2108 about the possibility of getting a printed copy.

Course Description
Algebra, analytic geometry and trigonometry; inequalities, conic sections, complex numbers, sequences and series, solving triangles, polar coordinates, and applications.

Tests and Homework/Quizzes
I've included 3 tests in the rough schedule below, one after each chapter covered. There is no webassign for this course at this point. You can choose to assign written homework but because it's a small class, you'll most likely have to grade it and the class tests yourself.

This means instead of regular homework, you may instead want to assign problems and then give a 'homework quiz' where you give them 5-10 minutes of class time to do one or more of those assigned problems. This will motivate them to do the homework but will cut down on your grading. Another alternative would be to assign and collect written homework but only grade selected problems and/or grade some problems for completion rather than correctness, or put some HW problems in moodle as Moodle Assignments. Bevin Maultsby has great resources on this and would be happy to help further. Check https://maultsby.wordpress.ncsu.edu/resources/ for useful info.

If you choose to, you could assign projects or something similar.

Chapters and topics to be covered

Chapter 5 Trigonometric Functions *(roughly weeks 1-3)*

- 5.1 Angles
- 5.2 Unit Circle: Sine and Cosine Functions
- 5.3 The Other Trigonometric Functions
- 5.4 Right Triangle Trigonometry

Test 1 *(around week 4)*

Chapter 6 Periodic Functions *(roughly weeks 5-7)*

- 6.1 Graphs of the Sine and Cosine Functions
- 6.2 Graphs of the Other Trigonometric Functions
- 6.3 Inverse Trigonometric Functions

Test 2 *(around week 8)*

Chapter 7 Trigonometric Identities and Equations *(roughly weeks 9-12)*

- 7.1 Solving Trigonometric Equations with Identities
- 7.2 Sum and Difference Identities
- 7.3 Double-Angle, Half-Angle, and Reduction Formulas
- 7.4 Sum-to-Product and Product-to-Sum Formulas
- 7.5 Solving Trigonometric Equations
- 7.6 Modeling with Trigonometric Equations

Test 3 *(around week 13)*

The following chapter is optional topics you can choose to teach according to your interests and pacing

Chapter 8 Further Applications of Trigonometry *(weeks 14-15)*

- 8.1 Non-right Triangles: Law of Sines
- 8.2 Non-right Triangles: Law of Cosines
- 8.3 Polar Coordinates
- 8.4 Polar Coordinates: Graphs
- 8.5 Polar Form of Complex Numbers
- 8.6 Parametric Equations
- 8.7 Parametric Equations: Graphs
- 8.8 Vectors

Grades

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

90 ≤ A- < 93	93 ≤ A < 97	97 ≤ A+ ≤ 100
80 ≤ B- < 83	83 ≤ B < 87	87 ≤ B+ < 90
70 ≤ C- < 73	73 ≤ C < 77	77 ≤ C+ < 80
60 ≤ D- < 63	63 ≤ D < 67	67 ≤ D+ < 70
0 ≤ F < 60		

This is just a suggested grade breakdown. Feel free to modify as you see fit:

Grade Component	Weight	Details
Homework/Quizzes	20%	Homework or quizzes will need to be chosen, assigned, and graded by you.
In-Class Tests	60%	There will be three in-class tests, each worth 20% of your grade.
Final Exam	20%	The final exam will be given on TBD.

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 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.

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.

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/