



NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

COURSE SYLLABUS

College Name: Science and Technology

Department Name: Mathematics and Statistics

Course Name: **College Algebra and Trigonometry for Engineers and Scientists II**

COURSE INFORMATION

- Course Number/Section: MATH 104.003/004
- Term: Fall 2020
- Semester Credit Hours: 3(3-0)
- Times and Days: ONLINE
- Class Location:

INSTRUCTOR CONTACT INFORMATION

- Instructor: Dr. Nicholas S. Luke
- Office Location: 107 Marteena Hall (See Blackboard for link to virtual office)
- Office Phone: 336-285-3520
- Email Address: luke@ncat.edu (Can use Blackboard Course Messages also)

STUDENT HOURS

M: 9-11am, 4-5:30pm; W: 1-3pm, R: 8:30-10am; others by appointment

These are times you may visit your professor without an appointment to request the assistance that you need. Student Hours will be conducted within the virtual office. To access the virtual office, click on the link that is posted in the announcements section of the course Blackboard page.

Note: Students are responsible for reading, understanding, and following their syllabi.

COURSE PREREQUISITES

“C” or better grade in Math 103

COURSE DESCRIPTION

This course is a continuation of Math 103. Polynomial functions, exponential and logarithmic functions, trigonometric functions, analytical trigonometry, systems of equations, and the binomial theorem will be studied.

STUDENT LEARNING OBJECTIVES/OUTCOMES (SLO)

- Students will apply quantitative and mathematical reasoning skills in examining, evaluating and solving problems in polynomial functions, exponential and logarithmic functions, systems of equations, and trigonometric functions
 - (1) Students will find the zeroes of a polynomial function.
 - (2) Students will graph polynomial functions
 - (3) Students will be able to solve exponential and logarithmic equations.
 - (4) Students will be able to know the definitions of trigonometric functions by right triangle for any angle.
 - (5) Students will know and apply the law of sines and the law of cosines
- Students will evaluate quantitative information using a variety of methods.
 - (1) Students will use the elimination and substitution methods to solve equations in two and three variables.
 - (2) Students will solve nonlinear systems of equations using a variety of methods.
 - (3) Students will graph a polynomial function (by picking points, transformations, leading coefficient test, etc).
 - (4) Students know and apply trigonometric identities of co-functions, sum/differences, double angle formulas, and half-angle formulas, etc.
- Students will manage, analyze, and present quantitative information in diverse ways
 - (1) Students will graph polynomial functions.
 - (2) Students will know and apply the definitions, domains, ranges, and graphs of exponential and logarithmic functions.
 - (3) Students know and apply trigonometric function values of special angles (ref. unit circle)

Assessment of Student Learning:

- (1) Students will be assigned homework problems from each section covered throughout the course for them to complete outside of class.
- (2) Students will take weekly or bi-weekly quizzes within class.
- (3) Students will be asked to work problems on the board, or otherwise share their work with their peers.
- (4) At the end of each unit, students will take an exam, and a cumulative final exam will be administered at the end of the course.
- (5) A post-test consisting of problems which represent the various concepts covered

General Education Student Learning Objective (SLO): Mathematical, Logical, and Analytical Reasoning

For courses emphasizing mathematical/quantitative reasoning:

SLO: employ mathematical or statistical methods to solve applied problems

Assessment of Student Learning Objective (SLO):

Students will be given an application quiz that requires them to use mathematical methods to solve.

TEXTBOOKS AND MATERIALS

MATERIALS:

1. ***MyLabMath Access Code*** (can be purchased at A&T bookstore or online),
ISBN: 9780135202746
2. Webcam

3. Microphone
4. Respondus Lockdown Browser/Respondus Monitor

TEXTS:

- e-textbook (comes with course access code) - *Sullivan: Algebra & Trigonometry 11e*

Special Note: If you are receiving financial aid, you can go to the following link to request a book voucher <http://www.ncat.edu/divisions/business-and-finance/comptroller/treasurer/bookallow-parkperm/index.html>

To access MyLabMath : Go to Blackboard and click « MyLabMath » from left hand menu. -> Click [MyLab and Mastering Course Home](#)

COURSE TOPICS

- Module 6: Polynomials and Exponential Functions
- Module 7: More on Exponential and Logarithmic Functions
- Module 8: Systems of Equations and Matrices; Binomial Theorem
- Module 9: Trigonometric Functions
- Module 10: Trigonometric Identities and Applications

GRADING POLICY

ASSIGNMENTS AND GRADING POLICY

A	92-100	B-	80-81	D+	66-67
A-	90-91	C+	78-79	D	60-65
B+	88-89	C	70-77	F	Below 60
B	82-87	C-	68-69		

GRADING ALLOCATION

Course grades are based on a weighted grading scale of 100%. The breakdown for the course is as follows:

- | | | |
|----|--|-----|
| 1. | Module Tests (Lowest test score will be dropped) | 50% |
| 2. | Quizzes | 20% |
| 3. | MyLabMath Homework | 20% |
| 4. | Class Participation/Attendance | 10% |

Numerical averages will be rounded to the nearest whole number using standard rounding procedures. If the decimal is ≥ 0.5 , the average will be rounded up to the nearest whole number. If the decimal is < 0.5 , the average will be rounded down to the nearest whole number.

COURSE POLICIES

USE OF BLACKBOARD AS THE LEARNING MANAGEMENT SYSTEM

Blackboard is the primary online instructional and course communications platform. Students can access the course syllabus, assignments, grades, and learner support resources. Students are encouraged to protect their login credentials, complete a Blackboard orientation and log in daily to course.

DISCUSSION BOARDS

Throughout the course, you will be requested to post to the Blackboard discussion boards. To receive full credit, you will need to post your own response to the given prompt and then comment on two other posts. The attendance/participation grade for the course will be based on your participation in the discussion boards. Further details for the discussion boards will be posted on Blackboard.

HOMEWORK

Online homework assignments are to be completed and submitted through MyLabMath (accessible through Blackboard). You will have an unlimited number of submissions for the online homework problems. It is your responsibility to check MyLabMath often and to submit your homework by the posted deadlines. Extensions will not be granted for homework.

MODULE TESTS

- All Module Tests must be taken on the designated day. You will have a window of time to take the test to allow for flexibility of scheduling.
- Module Tests will be administered through Blackboard. Your instructor will provide you with instructions on how to access the module test.
- When taking a Module Test, you will be required to use the Respondus lockdown browser and monitoring system. This will require you to use a computer with a webcam.
- You will only receive one attempt at the module test.
- After submitting your test, you must also submit your work. Please work the problems on the test in an orderly fashion on your own paper. Problems must be appropriately numbered and easily recognized. Using your phone or other scanning device, you will need to scan your work and upload it to the appropriate assignment in Blackboard. Your work must be uploaded within 15 minutes of submitting your test. Failure to upload your work within 15 minutes will result in a grade of zero.
- Your test grade will be based on the work that you submit. Your instructor will grade your submitted work, awarding partial credit where necessary. Any problems that were correct in the online submission system, but do not have the required work submitted will not receive any credit.

You are expected to do your own work on the tests. Cheating on tests, including use of external technology or websites will result in loss of credit for all work involved for all parties involved. Additional sanctions will be imposed as appropriate, in accordance with University's Academic Honesty policy, which is found in the Student Handbook.

MAKE-UP WORK

The administration, faculty and staff recognize that there are circumstances and events which require students to miss classes and any required course work which may be performed or due on the day of the absence. Also, they recognize that required course work is needed to give each student an adequate performance evaluation. Therefore, whenever reasonable (and more specifically described below), students should be allowed to make up required work. The following definitions will apply with respect to the make-up of missed course work:

- a. Required course work – All work which will be used in the determination of final grades, e.g. examinations, announced quizzes, required papers and essays, required assignments.
- b. Instructor – Person responsible for the course and providing instruction and evaluation.
- c. Permissible reasons for requesting make up of required work – Sickness; death of relatives (immediate family); participation in approved University related activities; acting in the capacity of a representative of the University (band, choir, sports related travel, etc.); and extraordinary circumstances (court appearance, family emergency, etc.). NOTE: Other reasons for requesting make up of required course work are not acceptable.
- d. Documentation – Verification of sickness requires a signed statement of a physician or a duly authorized staff member of the Student Health Center. Verification of death requires a signed statement from the Minister or Funeral Director. Verification of participation in University related activities requires a signed statement from the appropriate University official. Verification of other

reasonable circumstances; for example, court appearance, family emergency, etc. requires a signed statement from an appropriate official (e.g., Court Official, parent or guardian, etc.).

The make-up of required course work is as follows:

(1) A student may petition an instructor to make up required course work whenever the student has a permissible reason for requesting make up of required course work.

(2) A Student will be required to present documentation, which certifies absence constituting a permissible reason.

(3) Whenever possible, a student should consult with the instructor prior to an absence which will involve the failure to do required course work. Arrangements for make up should be discussed and agreed upon at this time.

(4) A student must petition for make up of required course work on the first day that they return to class.

(5) If permission is granted to make up required course work, the instructor and the student should agree on an acceptable date for completion of missed required course work.

(6) Failure to comply with the item four (4) may result in denial to make up required course work.

EXTRA CREDIT

None.

LATE WORK

All assignments for a particular module must be submitted before their designated deadlines. If you do not submit a test or other assignment by the deadline due to some **emergency**, you will only be allowed to a make-up test or other assignment accompanied with an official, written excuse (e.g. a note from the emergency room or a funeral program.) If you miss a test or other assignment due to a funeral, university policy requires that it be the funeral of an **immediate relative** to allow one to makeup assignments. Notes from your parents will NOT be accepted to make-up a test. You must make-up the assignment within one week of the scheduled due date. Exceptions to this rule will be analyzed on a case-by-case basis. After that time, you will not be allowed to make-up the assignment, and a score of zero (0) will be recorded for your its grade.

CLASS PARTICIPATION/ATTENDANCE

Students are expected to attend class and participate on a regular basis in order to successfully achieve course learning outcomes and meet federal financial aid requirements ([34 CFR 668.22](#)). Class attendance in online courses is defined as active participation in academically-related course activities. Active participation may consist of course interactions with the content, classmates, and/or the instructor. Examples of academically-related course activities include, but are not limited to:

- Completing and submitting assignments, quizzes, exams, and other activities within Blackboard or through Blackboard (3rd-party products).
- Participating in course-related synchronous online chats, discussions, or meeting platforms such as Zoom or Blackboard Collaborate in which participation is tracked.

CLASSROOM CITIZENSHIP

Courtesy, civility and respect must be the hallmark of your interactions.

COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT

North Carolina A&T State University is committed to following the requirements of the Americans with Disabilities Act Amendments Act (ADAAA) and Section 504 of the Rehabilitation Act.

If you need an academic accommodation based on the impact of a disability, you must initiate the request with the Office of Accessibility Resources (OARS) and provide documentation in accordance with the Documentation Guidelines at N.C. A&T. Once documentation is received, it will be reviewed. Once approved, you must attend a comprehensive meeting to receive appropriate and reasonable accommodations. If you are a student registered with OARS, you must complete the Accommodation Request Form to have accommodations sent to faculty.

OARS is located in Murphy Hall, Suite 01. We can be reached at 336-334-7765, or by email at accessibilityresources@ncat.edu. Additional information and forms can be found on the web at <https://www.ncat.edu/provost/academic-affairs/accessibility-resources/index.php>.

Please note: Accommodations are not retroactive and begin once the Disability Verification Form is provided to faculty.

TITLE IX

North Carolina A&T State University is committed to providing a safe learning environment for all students—free of all forms of discrimination and harassment. Sexual misconduct and relationship violence in any form are inconsistent with the university’s mission and core values, violate university policies, and may also violate federal and state law. Faculty members are considered “Responsible Employees” and are required to report incidents of sexual misconduct and relationship violence to the Title IX Coordinator. If you or someone you know has been impacted by sexual harassment, sexual assault, dating or domestic violence, or stalking, please visit the Title IX website to access information about university support and resources. If you would like to speak with someone confidentially, please contact the Counseling Services 336-334-7727 or the Student Health Center 336-334-7880.

TECHNICAL SUPPORT

If you experience any problems with your A&T account, you may call Client Technology Services (formerly Aggie Tech Support and Help Desk) at 336-334-7195, or visit <https://hub.ncat.edu/administration/its/dept/ats/index.php>.

FIELD TRIP POLICIES / OFF-CAMPUS INSTRUCTION AND COURSE ACTIVITIES

If applicable:

Off-campus, out-of-state and foreign instruction and activities are subject to state law and university policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at <https://www.ncat.edu/campus-life/student-affairs/index.php>.

STUDENT HANDBOOK

<https://www.ncat.edu/campus-life/student-affairs/departments/dean-of-students/student-handbook.php>

STUDENT TRAVEL PROCEDURES AND STUDENT TRAVEL ACTIVITY WAIVER

https://hub.ncat.edu/administration/student-affairs/staff-resources/student_activity_travel_waiver.pdf

OTHER POLICIES (e.g., Copyright Guidelines, Confidentiality, etc.)

STUDENT HANDBOOK

<https://www.ncat.edu/campus-life/student-affairs/departments/dean-of-students/student-handbook.php>

[Graduate Catalog](#)

SEXUAL MISCONDUCT POLICY

<https://www.ncat.edu/legal/title-ix/sexual-harassment-and-misconduct-policies/index.php>

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

<https://www.ncat.edu/registrar/ferpa.php>

STUDENT COMPLAINT PROCEDURES

<https://www.ncat.edu/current-students/student-complaint-form.php>

STUDENT CONDUCT AND DISCIPLINE

North Carolina A&T State University has rules and regulations that govern student conduct and discipline meant to ensure the orderly and efficient conduct of the educational enterprise. It is the responsibility of each student to be knowledgeable about these rules and regulations.

Please consult the following about specific policies such as academic dishonesty, cell phones, change of grade, disability services, disruptive behavior, general class attendance, grade appeal, incomplete grades, make up work, student grievance procedures, withdrawal, etc.:

- Undergraduate Bulletin
<https://www.ncat.edu/provost/academic-affairs/bulletins/index.php>
- Graduate Catalog
<https://www.ncat.edu/tgc/graduate-catalog/index.php>
- Student Handbook
<https://www.ncat.edu/campus-life/student-affairs/departments/dean-of-students/student-handbook.php>

ACADEMIC DISHONESTY POLICY

Academic dishonesty includes but is not limited to the following:

1. Cheating or knowingly assisting another student in committing an act of cheating or other academic dishonesty;
2. Plagiarism (unauthorized use of another's words or ideas as one's own), which includes but is not limited to submitting exams, theses, reports, drawings, laboratory notes or other materials as one's own work when such work has been prepared by or copied from another person;
3. Unauthorized possession of exams or reserved library materials; destroying or hiding source, library or laboratory materials or experiments or any other similar actions;
4. Unauthorized changing of grades, or marking on an exam or in an instructor's grade book or such change of any grade record;
5. Aiding or abetting in the infraction of any of the provisions anticipated under the general standards of student conduct;
6. Hacking into a computer and gaining access to a test or answer key prior to the test being given. A&T reserves the right to search the emails and computers of any student suspected of such computer hacking if a police report of the suspected hacking was submitted prior to the search; and
7. Assisting another student in violating any of the above rules.

A student who has committed an act of academic dishonesty has failed to meet a basic requirement of satisfactory academic performance. Thus, academic dishonesty is not only a basis for disciplinary action but may also affect the evaluation of a student's level of performance. Any student who commits an act of academic dishonesty is subject to disciplinary action.

In instances where a student has clearly been identified as having committed an act of academic dishonesty, an instructor may take appropriate disciplinary action, including a loss of credit for an assignment, exam or project; or awarding a grade of "F" for the course, **subject to review and endorsement by the chairperson and dean.**

ASSIGNMENTS AND ACADEMIC CALENDAR

** These descriptions and timelines are subject to change at the discretion of the instructor.*

Date	Assignment(s) Due
19-Aug	
24-Aug	Section 5.1 Homework Due by 11:59pm
26-Aug	Diagnostic Test I Due by 11:59pm
28-Aug	Section 5.2 Homework Due by 11:59pm
31-Aug	Module 6 Quiz Due by 11:59pm
2-Sep	Section 6.1 Homework Due by 11:59pm

4-Sep	Section 6.2 Homework Due by 11:59pm
7-Sep	Section 6.3 Homework Due by 11:59pm
9-Sep	Module 6 Final Quiz Due by 11:59pm
11-Sep	Module 6 Test Due by 11:59pm
14-Sep	Section 6.4 Homework Due by 11:59pm
16-Sep	Section 6.5 Homework Due by 11:59pm
18-Sep	Section 6.6 Homework Due by 11:59pm
21-Sep	Module 7 Quiz Due by 11:59pm
23-Sep	Section 6.7 Homework Due by 11:59pm
25-Sep	Section 6.8 Homework Due by 11:59pm
28-Sep	Module 7 Final Quiz Due by 11:59pm
29-Sep	Module 7 Test Due by 11:59pm
30-Sep	Section 12.1 Homework Due by 11:59pm
2-Oct	Section 12.2 Homework Due by 11:59pm
5-Oct	Section 12.3 Homework Due by 11:59pm
7-Oct	Module 8 Quiz Due by 11:59pm
9-Oct	Section 12.6 Homework Due by 11:59pm
12-Oct	Section 13.5 Homework Due by 11:59pm
14-Oct	Module 8 Final Quiz Due by 11:59pm
16-Oct	Module 8 Test Due by 11:59pm
19-Oct	Section 7.1 Homework Due by 11:59pm
21-Oct	Section 7.2 Homework Due by 11:59pm
23-Oct	Module 9 Quiz Due by 11:59pm
26-Oct	Section 7.3 Homework Due by 11:59pm
28-Oct	Section 7.4 Homework Due by 11:59pm
29-Oct	Module 9 Final Quiz Due by 11:59pm
30-Oct	Module 9 Test Due by 11:59pm
2-Nov	Section 8.1 Homework Due by 11:59pm
4-Nov	Section 8.3 Homework Due by 11:59pm
6-Nov	Section 8.4 Homework Due by 11:59pm
9-Nov	Module 10 Quiz Due by 11:59 pm
11-Nov	Section 9.1 Homework Due by 11:59pm
13-Nov	Section 9.2 Homework Due by 11:59pm
16-Nov	Section 9.3 Homework Due by 11:59pm
18-Nov	Module 10 Final Quiz Due by 11:59pm
20-Nov	Module 10 Test Due by 11:59pm
30-Nov	Practice Diagnostic Test II Due by 11:59pm
2-Dec	Diagnostic Test II Due by 11:59pm