



# MATH 1113 /Precalculus

## COURSE SYLLABUS

### Online – Fall 2021

#### COURSE INFORMATION

Credit Hours/Minutes: 3 / 2250

Campus/Class Location: Vidalia/Georgia Virtual Technical Connection (GVTC)/Blackboard

Class Meets: Via Internet for 16 weeks

Course Reference Number (CRN): 20115

Preferred Method of Contact: [Bee Hart](mailto:bhart@southeasterntech.edu) ([bhart@southeasterntech.edu](mailto:bhart@southeasterntech.edu))

#### INSTRUCTOR CONTACT INFORMATION

Instructor Name: Dr. Bee Hart

Email Address: [Bee Hart](mailto:bhart@southeasterntech.edu) ([bhart@southeasterntech.edu](mailto:bhart@southeasterntech.edu))

Campus/Office Location: Vidalia/Room 323

Office Hours: By appointment

Phone: 912.538.3131

Fax Number: 912.538.3156

Tutoring Hours: By appointment

#### SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php) (<http://www.southeasterntech.edu/student-affairs/catalog-handbook.php>).

#### NO REQUIRED TEXT

Purchase of a textbook is optional. The course uses: Blitzer, R. Precalculus (5th edition). New Jersey: Prentice Hall 2014.

#### REQUIRED SUPPLIES & SOFTWARE

Software: MathXL is the software required for the course. The MathXL Access Code may be purchased from the bookstore or from the [MathXL Website](http://www.mathxl.com) ([www.mathxl.com](http://www.mathxl.com)) after the course has started and you have the MathXL Course ID needed to register. The student will be given instructions to register for MathXL during class. The student will need to register for MathXL by obtaining the MathXL Course ID from the instructor.

Supplies: Three (3) ring binder notebook, computer access, loose-leaf paper, pencils (all math problem work must be done in pencil), highlighter, graphing calculator (TI-83 or TI-84), and graph paper. ). Cellphones or other electronic devices cannot be used in the course. Daily access to a reliable internet connection for use with Blackboard, Mathxl, mySTC, and Student Email is advisable.

**Students should not share login credentials with others and should change passwords periodically to**

**maintain security.**

## **COURSE DESCRIPTION**

This course emphasizes techniques of problem solving using algebraic concepts. Topics include: fundamental concepts of algebra; equations and inequalities; functions and graphs; systems of equations; optional topics including sequences, series, and probability; and analytic geometry.

## **MAJOR COURSE COMPETENCIES**

Topics include: fundamental concepts of algebra; equations and inequalities; functions and graphs; systems of equations; optional topics including sequences, series, and probability; and analytic geometry.

## **PREREQUISITE(S)**

Appropriate Degree Level Math Placement Test Score

## **COURSE OUTLINE**

1. Fundamental Concepts of Algebra
2. Equations and Inequalities
3. Functions and Graphs
4. Systems of Equations
5. Optional Topics including Sequences, Series, Probability, and Analytical Geometry

## **GENERAL EDUCATION CORE COMPETENCIES**

STC has identified the following general education core competencies that graduates will attain:

6. The ability to utilize standard written English.
7. The ability to solve practical mathematical problems.
8. The ability to read, analyze, and interpret information.

## **STUDENT REQUIREMENTS (ONLINE)**

Students are expected to complete all work required by the instructor and to attend the required proctored campus event. Students must register/enroll in Mathxl during the first days of class and use the Mathxl Software to successfully complete the course. Students will be No Showed who do not register for Mathxl by the end of the 3<sup>rd</sup> day of the semester. (To secure the proper information to access Mathxl, first login to our Blackboard course and go to the menu item titled as **Math Work / MathXL.**)

Quizzes, tests, and homework grades may be given at any time without prior notice, when needed, but most will be scheduled as part of the class. Failure to adhere to due dates will result in a grade of zero.

Students are expected to prove weekly academic engagement by meeting assignment deadlines each week and spending a minimum of 37.5 hours during the semester doing the required homework, quizzes, and tests. Students are expected to communicate frequently through college email and discussion boards. College email and other STC resources can be accessed from the [mySTC](#) tab on STC's Website. Email can also be accessed in the menu of your Blackboard course.

## **COVID-19 MASK REQUIREMENT**

Regardless of vaccination status, masks or face coverings must be worn at all times while in a classroom or lab of Southeastern Technical College. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC). A student's refusal to wear a mask or face covering will be considered a classroom disruption and the student may be asked to leave

campus and/or receive further discipline.

### **COVID-19 SIGNS AND SYMPTOMS**

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician's office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come on campus for any reason.

<b>COVID-19 Key Symptoms</b>
Fever or felt feverish
Chills
Shortness of breath or difficulty breathing (not attributed to any other health condition)
Cough: new or worsening, not attributed to another health condition
Fatigue
Muscle or body aches
Headache
New loss of taste or smell
Sore throat (not attributed to any other health condition)
Congestion or runny nose (not attributed to any other health condition)
Nausea or vomiting
Diarrhea
<b>In the past 14 days, if you:</b>
Have had close contact with or are caring for an individual diagnosed with COVID-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s).

### **COVID-19 SELF-REPORTING REQUIREMENT**

Students, regardless of vaccination status, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using <https://www.southeasterntech.edu/covid-19/>. Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](#), Exposure Control Coordinator, [swaters@southeasterntech.edu](mailto:swaters@southeasterntech.edu), 912-538-3195.

### **ONLINE ATTENDANCE**

It is the student's responsibility to be academically engaged each week doing course related activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an "F" (Failing 0-59) in a course.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Students will have at least one week to complete tests and assignments. All tests and assignments are due by 11:59 p.m. on Wednesday of each week and are scheduled on the lesson plan for online math. Exceptions to the time frame and Wednesday deadline may be the proctored exam and final exam.

Exceptions to the due dates of assignments due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## **STUDENTS WITH DISABILITIES**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

**Swainsboro Campus:** [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210.

**Vidalia Campus:** [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

## **SPECIFIC ABSENCES**

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## **PREGNANCY**

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

**Swainsboro Campus:** [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210.

**Vidalia Campus:** [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

## **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

## **Online Proctored Event Withdrawals**

Students who do not complete the proctored exam for an online class on the scheduled date and do not present a valid excuse within three business days of the scheduled event will be withdrawn from the course with a “WF” (Withdrawn Failing) and will be disabled in their online class. If the proctored event is scheduled during final exams, any student who misses the proctored exam will receive an “F” for the course.

### **PROCTORED EVENT REQUIREMENT**

In order to validate student identity for all online courses, students enrolled in online courses are **required** to complete one proctored event per online course. The proctored event will be administered on separate days—once on the Vidalia campus and once on the Swainsboro campus. Students must attend one of the proctored sessions as scheduled on the Lesson Plan/Course Calendar. The event will be monitored by the instructor or by an approved proctor. The proctored event may be a major exam, assignment, or presentation, etc. that will count a minimum of 20% of the course grade. Students must attend one of the scheduled proctored sessions and will need to make arrangements with work, childcare, etc. The specific dates of the proctored event are scheduled on the Lesson Plan/Calendar for the online course.

Students living farther than 75 miles from either campus who cannot come to Southeastern Tech for the event must secure an approved proctoring site. The site and the proctor must meet Southeastern Technical College's requirements (instructor will provide more information and necessary forms if this is the case). Note: Students taking proctored events off campus will utilize the Proctor Scheduling and Approval Form found in Blackboard within the Getting Started/Start Here and Proctoring Event area. The completed form should be submitted to the course instructor a minimum of two weeks prior to the proctored event. If approved, the instructor will notify the proctor.

Students arranging off-campus proctoring must take the event on one of the-originally scheduled days. Students who do not complete the proctored event as scheduled must submit a valid documented excuse within three business days after the scheduled event. If the excuse is approved by the instructor of the course, students must make arrangements with the instructor to makeup/reschedule the missed event. The penalty and makeup instructions will be at the instructor’s discretion. Proctored events will be given after the 65% point of the semester. Students who do not complete the proctored event on the scheduled date and do not present a valid documented excuse within three business days of the scheduled event will be given a zero for the proctored event.

### **PROCTORING FEES**

Students are not charged a proctoring fee when taking a proctored event at Southeastern Technical College or any other TCSG college. Students who choose to use an off-campus proctor may be assessed a proctoring fee by the proctoring site. In this instance, the student is responsible for payment.

**The required proctored event for this class is scheduled on the following dates and times: Vidalia Campus, (11-16-21), (3:00-5:00), (323) and Swainsboro Campus, (11-18-21), (3:00-5:00), (Will be announced).**

### **MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC...)**

A grade of zero will be assigned for any missed assignment regardless of the reason.

### **ACADEMIC DISHONESTY POLICY**

The STC Academic Dishonesty Policy states All forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the STC Catalog and Student Handbook.

**Note from Instructor:** Do not use cheating websites or other forms of dishonesty as such actions will have a detrimental effect on your preparedness for the Proctored Exam.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

### **1. First Offense**

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

### **3. Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

## **STATEMENT OF NON-DISCRIMINATION**

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 165 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas</a> <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3230 Email: <a href="mailto:ljonas@southeasterntech.edu">Lanie Jonas</a> <a href="mailto:ljonas@southeasterntech.edu">ljonas@southeasterntech.edu</a>

### ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

### GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on STC’s website.

### ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

### TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

### GRADING POLICY

Assessment/Assignment	Percentage
Homework	25%
Quizzes	10%
Tests	25%
Discussion Boards	5%
Proctored Event/Exam	35%

### GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

# MATH 1113 Homework Guide and Lesson Plan

## MATH 1113 PreCalculus

### Fall Semester 2021 Lesson Plan

Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Suggested extra practice book work. This will not be counted for a grade.	Competency . Area
Refer to the Lesson Plan in Blackboard for due dates this term. These dates will also be reflected in MathXL for each individual assignment as well.		First day of class/Introduction to Course—Syllabi, Outline, Rules, Regulations Coverage; Completion of forms.	Specific Homework Problems will be announced during class and and posted on MatXL. The use of a technology program called WebAssign will be considered and assigned if needed.  <b>Additional websites</b> <b>Include Purplemath and Algebasics.</b> Set 1.1 1-46 Every other odd (EOO)	8, 9,10 *a,b
	Ch. P	Algebra Review 1 Factoring P.5: Greatest Common Factor Difference of Squares Sum or difference of cubes Factor by grouping Factor trinomials	Set P.5 1-114 EOO	8, 9,10 *a,b,c
	Ch. P, Ch. 2	Algebra Review 2 Linear and quadratic equations p.7: Solve linear equations Rearrange an equation for a given variable Complex Numbers 2.1: Review complex numbers Solve quadratic equations Rational roots 2.5: Rational root theorem Descarte’s rule of signs	Set P.7 1-42 EOO Set 2.1 1-60 EOO Set 2.4 18-42 EOO Set 2.5 1-16 EOO, 34-52 EOO	8, 9,10 *a,c
	Ch. 1	Algebra Review 3	Set 1.1 1-56 EOO	



Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Suggested extra practice book work. This will not be counted for a grade.	Competency . Area
		Graphing 1.1, 1.2 Transformations 1.6	Set 1.2 1-66 EOO Set 1.6 1-118 EOO	
	Ch. 1	Algebra Review 4 Composition of functions 1.7 Inverse Functions 1.8	Set 1.7 1-64 EOO Set 1.8 1-66 EOO	
	Ch. 2, Ch. 9	Algebra Review 5 Quadratic functions 2.2 Conics parabola with vertex at the origin 9.3	Set 2.2 1-38 EOO Set 9.3 1-24 EOO	
		First day of class/Introduction to Course—Syllabi, Outline, Rules, Regulations Coverage; Completion of forms.	Specific Homework Problems will be announced during class and and posted on MatXL. The use of a technology program called WebAssign will be considered and assigned if needed.  <b>Additional websites</b> <b>Include Purplemath and</b> <b>Algebasics.</b>  Set 1.1 1-46 Every other odd (EOO)	8, 9,10 *a,b
	Ch. P	Algebra Review 1 Factoring P.5: Greatest Common Factor Difference of Squares Sum or difference of cubes Factor by grouping Factor trinomials	Set P.5 1-114 EOO	8, 9,10 *a,b,c
	Ch. P, Ch. 2	Algebra Review 2 Linear and quadratic equations p.7: Solve linear equations Rearrange an equation for a given variable Complex Numbers 2.1: Review complex numbers Solve quadratic equations	Set P.7 1-42 EOO Set 2.1 1-60 EOO Set 2.4 18-42 EOO Set 2.5 1-16 EOO, 34-52 EOO	8, 9,10 *a,c

Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Suggested extra practice book work. This will not be counted for a grade.	Competency . Area
		Rational roots 2.5: Rational root theorem Descarte's rule of signs		
	Ch. 1	Algebra Review 3 Graphing 1.1, 1.2 Transformations 1.6	Set 1.1 1-56 EOO Set 1.2 1-66 EOO Set 1.6 1-118 EOO	10 *a,b,c
	Ch. 1	Algebra Review 4 Composition of functions 1.7 Inverse Functions 1.8	Set 1.7 1-64 EOO Set 1.8 1-66 EOO	12 *a,b,c
	3	3.1 Exponential Functions  3.2 Logarithmic Functions and Their Graphs	Set 3.1 1-64 EOO  Set 3.2 1-100 EOO	11 *a,b,c
		3.3 Properties of Logarithms	Set 3.3 1-82 EOO	1, 2 *a,b,c
		3.4 Exponential and Logarithmic Equations	Set 3.4 1-90 EOO	1, 2, 15
		3.5 Logarithmic Models	Set 3.5 1-58 EOO	1, 2 *a,b,c
		<b>Chapter 3 Review</b>	Page 453-6	
	4	Trigonometry Introduction 4.1 Radian and Degree Measure	Set 4.1 1-76 EOO	3 *a
		4.2 Trigonometric Functions: The Unit Circle	Set 4.2 1-70 EOO	3 *a,b,c
		4.3 Right Triangle Trigonometry	Set 4.3 1-42 EOO	4 *a,b,c
		4.4 Trigonometric Functions of Any Angle	Set 4.4 1-86 EOO	4 *a,b,c
		4.5 Graphs of Sine and Cosine Functions	Set 4.5 1-60 EOO	3,4 *a,b,c
		4.6 Graphs of Other Trigonometric Functions	Set 4.6 1-44 EOO	3,4 *a,b,c

Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Suggested extra practice book work. This will not be counted for a grade.	Competency . Area
		4.7 Inverse Trigonometric Functions	Set 4.7 1-74 EOO	3,4,5 *a,b,c
		4.8 Applications of Trig Functions	Set 4.8 1-62 EOO	3, 4 *a,c
		<b>Chapter 4 Review</b>	<b>Pages 580-2</b>	
	5	5.1 Verifying Trigonometric Identities	Set 5.1 1-60 ALL	3, 4, 5 *a,b,c
		5.2 Sum and Difference Formulas Double-Angle, Power- Reducing, and Half- Angle formulas	Set 5.2 1-68 EOO Set 5.3 1-78 EOO	3, 4, 5 *a,b,c
		5.3 5.4 Sum and Difference Formulas	Set 5.4 1-38 EOO	3, 4, 5 *a,b,c
		5.5 Trigonometric Equations	Set 5.5 1-116 EOO	3, 4, 5 *a,b
		<b>Chapter 5 Review</b>		
	6	6.1 Law of Sines	Set 6.1 1-38 EOO	3, 4, 5 *a,b,c
		6.2 Law of Cosines	Set 6.2 1-30 EOO	3, 4, 5 *a,b,c
		6.5 Trigonometric Form of a Complex Number	Set 6.5 1-76 EOO	6 *a,b,c
		6.6 Vectors in the Plane	Set 6.6 1-52 EOO	6 *a,b,c
		6.7 Vectors and Dot Product	Set 6.7 1-50 EOO	6 *a,b,c
		<b>Review/Final Exam</b>		All

## COURSE OUTLINE

1. Define a logarithm and use logarithmic properties
2. Define and graph a logarithmic function; find domain and range; and solve applications
3. Define, determine domain and range, and graph the six circular functions

4. Define the six trigonometric functions; use to solve right/oblique triangles and solve applications
  5. Use trigonometric identities to prove other identities and work with the inverse trig. Functions
  6. Define and work with vectors
  7. Define and work with complex numbers
  8. Define basic concepts related to functions and their graphs
  9. Graph a function using a graphing calculator
  10. Define and graph linear functions and solve applications involving them
  11. Define and graph quadratic functions and solve applications involving them
  12. Perform operations involving functions including finding the inverse of a functions
  13. Define and graph polynomial functions including end behavior and zeros (real and imaginary)
  14. Define and graph rational functions including basic characteristics and transformations
- Define, evaluate, and graph exponential functions and use them to model phenomena

#### **GENERAL CORE EDUCATIONAL COMPETENCIES**

- A. The ability to utilize standard written English.
- B. The ability to solve practical mathematical problems.
- C. The ability to read, analyze, and interpret information. \*\*\*\*Instructor reserves the right to change the syllabus and/or lesson plan as necessary.\*\*\*\*\*

#### **COURSE COMPETENCY AREAS (CC): TAKEN FROM STATE STANDARDS**

1. Fundamental Concepts of Algebra
2. Equations and Inequalities
3. Functions and Graphs
4. Systems of Equations
5. Optional Topics including Sequences, Series, Probability, and Analytical Geometry

#### **GENERAL CORE EDUCATIONAL COMPETENCIES (GC):**

- D. The ability to utilize standard written English.
- E. The ability to solve practical mathematical problems.
- F. The ability to read, analyze, and interpret information.

#### **DISCLAIMER STATEMENTS**

- The instructor reserves the right to change the syllabus and/or lesson plan as necessary

#### **Discussion Board Rubric:**

Your grade for each discussion board posting will be either be a 100, 50, or 0. The overview of each grade is listed below:

Note: There is no minimum word count criterion for each discussion; however, your discussion board grade for each post is contingent upon your response providing a thoughtful and adequate reply to the given outline along with providing replies to other student posts.

100 – Your post provides a thoughtful response to each aspect of the outlined discussion and respond to at least 2 other student posts.

50- Your post provides thoughtful responses to some but not all aspects of the outlined discussion and/or you do not respond to at least two other student posts.

0- You did not respond to the discussion board post.

