MATH 1113 PreCalculus

COURSE SYLLABUS
Spring Semester 2019

COURSE INFORMATION

Credit Hours/Minutes: 3/2250
Class Location: Room 323
Class Meets: Monday, Tuesday, and Wednesday 8:00-8:50
Course Reference Number (CRN): 40083

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Dr. Bee Hart
Email Address: Bee Hart (bhart@southeasterntech.edu)
Campus/Office Location: Vidalia/Room 323
Office Hours: 3:00-4:30 Monday, Tuesday, Wednesday, Thursday
Phone: 912.538.3131
Fax Number: 912.538.3156
Tutoring Hours: 2:30-3:30 Wednesday

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).

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** (**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 used be in the course. Daily, Monday through Thursday, access to a reliable internet connection for use with Blackboard, Mathxl, mySTC, and Student Email.

COURSE DESCRIPTION

This course prepares students for calculus. The topics discussed include an intensive study of polynomial, rational, exponential, logarithmic, and trigonometric functions and their graphs. Applications include maximum and minimum problems, exponential growth and decay.

MAJOR COURSE COMPETENCIES

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
15. Define, evaluate, and graph exponential functions and use them to model phenomena

PREREQUISITE(S)

Regular Admission and MATH 1111 with a grade of C or better

GENERAL EDUCATION CORE COMPETENCIES

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

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS

Students are expected to attend all classes and proactively engage themselves in the learning process. Students are expected to seek help and clarification for topics/assignments for which they need additional support and to make gainful contributions during group work. Students are also expected to complete all assignments by the given due date. Students should anticipate spending 1-2 hours each day outside of class working on the course.

ATTENDANCE GUIDELINES

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may

receive a grade of “F” (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

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. 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” in a course.

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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**: Macy Gay mgay@southeasterntech.edu, 478-289-2274, Building 1, Room 1208
Vidalia Campus: Helen Thomas hthomas@southeasterntech.edu, 912-538-3126, Building A, Room 108

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: Macy Gay mgay@southeasterntech.edu, 478-289-2274, Building 1, Room 1208
Vidalia Campus: Helen Thomas hthomas@southeasterntech.edu, 912-538-3126, Building A, Room 108

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.

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.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (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 when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

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 accessed due to the withdrawal. All grades, including grades of 'W', will count in attempted hour calculations for the purpose of Financial Aid.

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

MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC…)

A grade of zero will be assigned for any missed assignment regardless of the reason. If the instructor is informed of a scheduled absence ahead of time, an assignment date may be rescheduled at the discretion of the instructor.

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that 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 Southeastern Technical College Catalog and Handbook.

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 and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, 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 school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

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

American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer	**Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer**
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1st Street, Vidalia Office 108 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1st Street, Vidalia Office 138B Phone: 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu

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 Southeastern Technical College'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 (STC) Website (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
Exams	40%
Quiz Average	10%
Homework Average	25%
Final Exam	25%

GRADING SCALE

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

MATH 1113 PreCalculus

Spring Semester 2019 Lesson Plan

Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Assignments The instructor will determine exact dates during class time.	Competency . Area
1		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. ***Additional websites*** ***Include Purplemath and Algebasics.*** Set 1.1 1-46 Every other odd (EOO)	8, 9,10 *a,b
2	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
3-5	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
6-7	Ch. 1	Algebra Review 3 Graphing 1.1, 1.2	Set 1.1 1-56 EOO Set 1.2 1-66 EOO	

Hours/Minutes 37.5 hrs = 2250 min.	Chapter	Content/Objectives	Assignments The instructor will determine exact dates during class time.	Competency . Area
		Transformations 1.6	Set 1.6 1-118 EOO	
8	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	
9-10	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	
1		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. ***Additional websites*** ***Include Purplemath and Algebasics.*** Set 1.1 1-46 Every other odd (EOO)	8, 9,10 *a,b
2	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
3-5	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

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		Rational roots 2.5: Rational root theorem Descarte's rule of signs		
6-7	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
8	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
10-14	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
		Chapter 3 Review	Page 453-6	
15-20	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	Set 4.6 1-44 EOO	3,4

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		Trigonometric Functions		*a,b,c
		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
		Chapter 4 Review	***Pages 580-2***	
21-24	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
		Chapter 5 Review		
25-28	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
29-34		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
35-37.5		**Review/Final Exam**		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)
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15. 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.*****