Three Rivers Community College – Math 172
Course Syllabus – Fall 2017

College Algebra, **Fall 2017**, **Mat K172**,
W: 06:00 pm-08:45 pm, room E225
Professor: Jose Garaycochea

Pre-requisite: MAT K137 or MAT K137S with a "C" grade or better or appropriate placement∞ through multiple-measures assessment process.
Text: Precalculus
Author: John Coburn, J.D. Herdlick
Publisher: McGraw Hill

Course description:

This course is a thorough and rigorous algebra course, that strengthens the proficiency with algebraic skills and the conceptual understanding needed to be successful in the Calculus sequence. The topics include: sets, polynomial, exponential, logarithmic and rational func-tions, rational exponents, conic sections, right triangle trigonometry, matrices, polynomial, exponential, logarithmic and radical equations, linear and quadratic inequalities, absolute value equations and inequalities, linear and nonlinear systems.

Measurements:

Homeworks:	25%,
Tests	50%, and
Final Exam:	25%.

Calendar:

August 30	First class: Review
September 13	Homework 1 given
September 20	Homework 1 due
September 20	**Test 1**
October 11	Homework 2 given
October 18	Homework 2 due
October 18	**Test 2**
November 8	Homework 3 given
November 15	Homework 3 due
November 15	**Test 3**
November 22	Homework 4 given by email
November 29	Homework 4 due
November 29	**Test 4**
December 6	Review and make-up under instructor's discretion
December 13	**Final Exam. (Mandatory)**

Grade equivalents: A 93 – 100,
A- 90 – 93,
B+ 87 -89,
B 83 – 86,
B- 80 – 82,
C+ 77 – 79,
C 73 – 76,
C- 70 – 72,
D+ 67 – 69.
D 63 – 66,
D- 60 – 62,
F below 60,
N if the student completed less than 60% of work.

Support Services: Tutorial services.

Meeting with me for an extra help: by appointment.
E-mail jgaraycochea@trcc.commnet.edu

The Learning Portfolio (Digication)
Login address: https://digication.ct.edu

All students are required to maintain an online learning portfolio using a TRCC designed template. Through this electronic tool, students can see their own growth in college-wide learning. The student can keep and continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select random works to improve the college experience for all. No names will be attached to the assessment work; it will remain private and anonymous for college improvement purposes. In class outlines, students will find recommended assignments which support various college-wide learning abilities. The student will have a tool which can integrate their learning from the classroom, school, and life and allow for another opportunity of learning at TRCC! Students will be able to make multiple portfolios.

Class Cancellation: In case of increment weather, check the college website for class cancellations or call 860-886-0177 for recorded message on the college phone.

Plagiarism and Academic Honesty:
At TRCC, we expect the highest standards of academic honesty. The Board of Trustees' Proscribed Conduct Policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism.

Academic Integrity:

Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College.

Exams are considered individual work and must be completed without unauthorized assistance of any kind, including help of other students, tutors, or notes. All test material is to be turned in with the test paper. Attempting to bring work out of the testing area and/or share that work with other students is consider cheating. Cheating on tests,
misrepresentation of attendance, falsifying records, or lying will result, at a minimum, in loss of credit for all work involved.

BOARD OF REGENTS FOR HIGHTER EDUCATION AND CONNECTICUT STATE COLLEGES AND UNIVERSITIES POLICY REGARDING SEXUAL MISCONDUCT REPORTING, SUPPORT SERVICES AND PROCESSES POLICY

Statement of Policy for Public Act No. 14-11: An Act Concerning Sexual Assault, Stalking and Intimate Partner Violence on Campus:

"The Board of Regents for Higher Education (BOR) in conjunction with the Connecticut State Colleges and Universities (CSCU) is committed to insuring that each member of every BOR governed college and university community has the opportunity to participate fully in the process of education free from acts of sexual misconduct, intimate partner violence and stalking. It is the intent of the BOR and each of its colleges or universities to provide safety, privacy and support to victims of sexual misconduct and intimate partner violence."

UNITED STATES DEPARTMENT OF EDUCATION AND OFFICE OF CIVIL RIGHTS TITLE IX STATEMENT OF POLICY:

"Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in education programs and activities in federally funded schools at all levels. If any part of a school district or college receives any Federal funds for any purpose, all of the operations of the district or college are covered by Title IX.

Title IX protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination, including discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. All students (as well as other persons) at recipient institutions are protected by Title IX – regardless of their sex, sexual orientation, gender identity, part-or full-time status, disability, race, or national origin-in all aspects of a recipient's educational programs and activities."

If any student experiences sexual misconduct or harassment, and/or racial or ethnic discrimination on Three Rivers Community College Campus, or fears for their safety from a threat while on campus, please contact Edward A. Derr, the Diversity Officer and Title IX Coordinator:

Edward A. Derr
Title IX Coordinator and Diversity Officer
Admissions Welcome Center * Office A116
574 New London Turnpike, Norwich CT 06360
860.215.9255 * EDerr@trcc.commnet.edu

Disabilities: If you have a disability that may affect your progress in this course, please meet with a Disability Service Provider (DSP) as soon as possible. Please note that accommodations cannot be provided until you provide written authorization from a DSP.

TRCC Disabilities Service Providers Counseling & Advising Office Room A-119	
Matt Liscum (860) 383-5240	- Physical Disabilities - Sensory Disabilities - Medical Disabilities - Mental Health Disabilities
Chris Scarborough (860) 892-5751	- Learning Disabilities - ADD/ADHD - Autism Spectrum

Course Materials Required:

- Text: Precalculus, by John Coburn, J.D. Herdlick, McGraw Hill
- Folder
- Loose leaf paper
- Pencils
- Calculator

Attendance:

Attendance and participation are required for this course. You are expected to work on math during class time. Texting, web browsing, or engagement in other non-course related activities will result in an unsatisfactory attendance and participation grade.

Please note: if you miss more than 10% of the scheduled instructional classes will put you in <u>serious</u> jeopardy of completing the program and continuing on to the next level of Math.

Class Conduct:

In addition to the rules and policies previously stated in this syllabus, students are asked to:
- Be respectful of each person,
- Do not use cell phones, beepers, or similar devices during class and lab time. It is expected that these devices will be turned off or on "silent mode" during all class, workshop and tutoring.

From the TRCC Student Handbook: "The College has the right and responsibility to take appropriate action when a student's conduct directly and significantly interferes with the College's educational mission and the rights of others to pursue their educational objectives in an environment conducive to learning." Such action will, at minimum, be the dismissal of the student from the remainder of class that day.

Contact:

Check your email regularly to be informed of any changes in schedule.

Grading Policy:

- C is the minimum grade to pass this class.

• F: This grade indicates that you did not successfully complete the requirements of the course within the semester, or that you have an unsatisfactory attendance grade. If you receive a F, you can register for MAT 172 next semester.

Additional Resources:

Contact the Instructor if you need additional assistance outside of class. TASC (the combined Tutoring Center and Writing Center) is located in room. C-117. TASC provides free one-to-one or group tutoring in math as well as in many other subject areas. TASC also has textbooks, videotapes, and many handouts available for student use.
One of your greatest resources is each other. I encourage you to get to know your classmates and exchange contact information.

Course Outcomes:

 • Recognize and articulate the fundamentals of numerical and algebraic reasoning
 • Utilize inductive and deductive thought processes for creating algebraic expressions and applying theorems and algorithms
 • Demonstrate effective communication with mathematical terms
 • Develop and apply metacognitive, affective and academic behaviors
 • Choose appropriate technology and representations to solve math problems.

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Chapter 1: **Relations, Functions, and Graphs**
    *1.1) Rectangular Coordinates, Graphing Circles and Other Relations
    *1.2) Linear Equations and Rates of Change
    *1.3) Functions, Function Notation, and the Graph of a Function
    *1.4) Linear Functions, Special Forms, and More of Rates of Change
    1.5) Solving Equations and Inequalities Graphically; Formulas
    1.6) Linear Function Models and Real Data

Chapter 2: **More on Functions**
    2.1) Analyzing the Graph of a Function
    2.2) The Toolbox Functions and Transformations
    2.3) Absolute Value Functions, Equations, and Inequalities
    2.4) Basic Rational Functions and Power Functions
    2.5) Piecewise-Defined Functions
    2.6) Variation: The Toolbox Functions in Action
    *Appendix A 5-E) Solving Rational Equations
    *Appendix A 6-F) Solving Radical Equations

Chapter 3: **Quadratic Functions and Operations on Functions**
    *3.1) Complex Numbers
    *3.2) Solving Quadratic Equations and Inequalities
    3.3) Quadratic Functions and Applications
    3.4) Quadratic Models: More on Rates of Change
    3.5) The Algebra of Functions
    3.6) The Composition of Functions

Chapter 4: **Polynomial and Rational Functions**
    4.1) Synthetic Division: the Remainder and Factor Theorems
    4.2) The Zeros of Polynomial Functions
    4.3) Graphing Polynomial Functions
    4.4) Graphing Rational Functions
    4.5) Additional Insights to Rational Functions
    4.6) Polynomial and Rational Inequalities

Chapter 5: **Exponential and Logarithmic Functions**
    5.1) One-to-One and Inverse Functions
    5.2) Exponential Functions
    5.3) Logarithms and Logarithmic Functions
    5.4) Properties of Logarithms
    5.5) Solving Exponential and Logarithmic Equations
    5.6) Applications from Business, Finance, and Science
    5.7) Exponential, Logarithmic, and Logistic Equation Models

Chapter 9: **Systems of Equations and Inequalities**
    9.1) Linear Systems in Two Variables with Applications
    9.2) Linear Systems in Three Variables with Applications