

Instructor Information			
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<b>Office Hours:</b>	M-F		
Mathematics and Statistics (MS) Division Information			
<b>Assistant Dean:</b>	Kausha Miller	<a href="mailto:Kausha.Miller@kctcs.edu">Kausha.Miller@kctcs.edu</a>	Newtown NCB 311-B (859) 246 – 6417
<b>Math Coordinator:</b>	Jeff Herrin	<a href="mailto:Jeff.Herrin@kctcs.edu">Jeff.Herrin@kctcs.edu</a>	Newtown NCB 311-R (859) 246 – 6856
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<b>Website:</b>	<a href="https://bluegrass.kctcs.edu/education-training/programs/mathematics-statistics/index.aspx">https://bluegrass.kctcs.edu/education-training/programs/mathematics-statistics/index.aspx</a>		
Bluegrass Community & Technical College Information			
<b>BCTC Website:</b>	<a href="http://www.bluegrass.kctcs.edu">www.bluegrass.kctcs.edu</a>		
<b>KCTCS Blackboard:</b>	<a href="https://elearning.kctcs.edu">https://elearning.kctcs.edu</a>		
<b>KCTCS MyPath:</b>	Type in Browser: <a href="http://mypath.kctcs.edu">mypath.kctcs.edu</a>	Single Sign-on KCTCS portal to Email, Blackboard, OneDrive, Student Self-Service, STARFISH, and more.	

### OFFICIAL COURSE INFORMATION:

**Course Description:** Includes selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions; systems of equations; and an introduction to analytic geometry. (Students may not receive credit for both MAT150 and any other College Algebra or Precalculus course. Credit not available on the basis of special exam.) Lecture: 3 credits (45 contact hours).

**Prerequisites:** 1. Math ACT score of 22 or above, 2. Math ACT score of 19-21 with concurrent MAT 100 workshop, 3. Successful completion of Intermediate Algebra, MAT 126, or equivalent, or 4. KCTCS placement exam recommendation.

NOTE: Students who plan to take MA 113 in the future must earn at least a “C” in MAT 150.

### COURSE COMPETENCIES:

#### OFFICIAL COURSE COMPETENCIES/OBJECTIVES

Upon completion of this course, the student can:

1. Recognize functions and specify the domain and the range of a given function.
2. Graph linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions.
3. Write expressions from data, verbal descriptions or graph.
4. Solve polynomial, rational, exponential and logarithmic equations.
5. Solve application problems using linear, quadratic, exponential, and logarithmic functions.
6. Perform operations with functions and find inverse functions.
7. Solve linear and nonlinear systems of equations.
8. Solve nonlinear inequalities

## COURSE MATERIALS

**Required Technology:** Regular and consistent access to a computer with reliable internet access is required.

**Compatible Browsers:** Mozilla Firefox, Google Chrome, Safari

**Note:** Course is not compatible with Internet Explorer!

### Required Textbook/Supplies:

- **Included with Registration: MyLabsPlus (MLP) Student Access**

To save money for the students, registration for this course included an additional Pearson MyLabsPlus Digital Fee to cover the cost of access to the MyLabsPlus (MLP) program for the semester. You should find this fee on your student bill when tuition is calculated. *No additional purchase required for MyLabsPlus Student Access.*

- **Scientific or Graphing Calculator** **TI-36X PRO or TI 30X IIS recommended**

A scientific or graphing calculator is allowed on assignments and during class/exams, unless specified otherwise. No TI-89 or above nor TI-Nspire nor anything with a computer algebra system will be allowed. Having notes and formulas programmed into calculators is considered cheating. The memory of graphing calculators used in class must be cleared before exams and math apps must be removed.

*No cell-phone, computer, tablet, or other electronic device calculators will be allowed.*

### Optional Textbook/Supplies:

- *College Algebra, 7<sup>th</sup> edition, Blitzer* (**NOTE:** This text can be viewed online within MyLabsPlus so you would only need to purchase the text if you wanted to have a physical copy in front of you!

## CLASS POLICIES

**Attendance Policy:** Regular attendance is necessary for success in any mathematics course; therefore, students are expected to attend class regularly. Attending class means being in class on time and remaining until the class is dismissed. Arriving Late or Leaving Early may be counted as half-absences. Inappropriate classroom behavior may result in being asked to leave the classroom, and will count as an absence. Students are responsible for lecture material, assignments, and announcements given during missed classes.

### Technology Policy:

The instructor reserves the right to request the student to discontinue use or to leave class if inappropriate use of a cell phone, laptop or tablet occurs in the classroom. Inappropriate use includes, but is not limited to, sending/receiving text messages, sending/receiving phone calls, using a phone or website as a calculator, or any use of social media, music or email during class time. **The instructor reserves final right to classify an activity as inappropriate and if the student is asked to leave, he/she will be counted as absent for that day.**

## CLASS REQUIREMENTS/EXPECTATIONS

**Homework and Quizzes** Each section covered in lecture has a corresponding homework assignment in MyLabsPlus (MLP). These assignments are due the following Monday unless otherwise noted. Late homework assignments will be subject to a 10% penalty. All homework assignments must be completed by the Exam in which the material is covered. Homework Quizzes may also be assigned as homework in addition to the assignments in MyLabsPlus. Quizzes in MyLabsPlus may also be assigned. No make-up quizzes will be given, but at least one quiz will be dropped when grades are computed. Homework will be worth 75 points and Quizzes will be worth 75 points.

**Exams** Four in-class exams, each worth 100 points, will be given as listed on the daily schedule.

**Final Exam:** The final exam, worth 150 points, will be comprehensive. Students who have attended at least 80% of the classes may replace one regular exam score with their final exam percentage if the final exam percentage is higher. Only one of the three regular exam scores can be improved using a result from the final exam. If a student cheats on an exam, that exam score is not eligible to be replaced.

#### **MAKE-UP WORK/LATE WORK:**

**“Excused” Absences** shall be defined by the instructor for this course as serious illness, death in the immediate family, and other situations which seem reasonable to the instructor.

**Makeup Work In The Case Of An “Excused” Absence** In the case of a documented “excused” absence, makeup work will be handled as follows: Homework should be submitted within one week of the absence. Student will be responsible for contacting the instructor to have the late penalty removed once the assignment has been completed. There will be no make-ups for quizzes; however, the lowest quiz score will be dropped when grades are calculated. For exams, the student should contact the instructor immediately and a make-up exam will be given before the next class period or during the last week of classes.

**Late Work** Late homework is subject to a 10% penalty except in the case of an “excused” absence. All late work must be completed before the exam on which the material is covered.

Exceptions may be considered by the instructor in extenuating circumstances.

#### **COURSE GRADE:**

	<b>Possible Points</b>	<b>Grading Scale</b>
Homework	75 points	A → 90 – 100% (630-700 points)
Quizzes	75 points	B → 80 – 89% (560-629 points)
Exams	400 points	C → 70 – 79% (490-559 points)
Final Exam	150 points	D → 60 – 69% (420-489 points)
<b>Total Possible Points</b>	<b>700 points</b>	E → 0 – 59% (0-419 points)

An **“I” grade** will be given only when a student is unable to complete the course for some reason that is satisfactory to the instructor. It shall be given only when there is a reasonable possibility that a passing grade will result from the completion of the work.

#### **WITHDRAWAL POLICY:**

A **“W” grade** will be given to any student who officially withdraws from the course by the end of the last day of classes, Friday, December 6, 2019.

**For more information and Instructions on how to withdraw from a class:**

<https://bluegrass.kctcs.edu/current-students/registrar/withdrawal-policy.aspx>

#### **BCTC COLLEGE POLICIES AND RESOURCES**

##### **BCTC College Policies and Resources**

[https://bluegrass.kctcs.edu/academics/media/policies-and-procedures-updates/bctc\\_college\\_policies\\_and\\_resources.pdf](https://bluegrass.kctcs.edu/academics/media/policies-and-procedures-updates/bctc_college_policies_and_resources.pdf)

Web document includes more information about BCTC College Policies and Resources, including College Contact Info, email, campus closing for weather information, withdrawal policies, Student Code of Conduct, financial aid, emergency closing, tutoring info, and more.

## ACCOMMODATIONS:

Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for a course, must contact BCTC's Disability Support Services (DSS) Office. Students should not request accommodations directly from the instructor.

- DSS Website:

<https://bluegrass.kctcs.edu/about/student-life/accessibility-services/index.aspx>

- DSS Email: [BL\\_DSS@kctcs.edu](mailto:BL_DSS@kctcs.edu)
- DSS Toll-Free Phone: 1 - 866 - 774 - 4872 ext. 6728

## GENERAL EDUCATION COMPETENCIES:

### GENERAL EDUCATION COMPETENCIES

- A. Knowledge of human cultures and the physical and natural worlds through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts.
- B. Intellectual and practical skills, including
  - inquiry and analysis
  - critical and creative thinking
  - written and oral communication
  - quantitative literacy
  - information literacy
  - teamwork and problem solving
- C. Personal and social responsibility, including
  - civic knowledge and engagement (local and global)
  - intercultural knowledge and competence
  - ethical reasoning and action
  - foundations and skills for lifelong learning
- D. Integrative and applied learning, including synthesis and advanced accomplishment across general and specialized skills.

### STUDENT LEARNING OUTCOMES FOR QUANTITATIVE REASONING (Approved Fall 2017)

In MAT 150, students will learn to:

1. Interpret information presented in mathematical and/or statistical forms by (Gen Ed Comp B):
  - Recognizing functions and specify the domain and the range of a given function
2. Illustrate and communicate mathematical and/or statistical information symbolically, visually, and/or numerically by (Gen Ed Comp A, B, C):
  - Graphing linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions
3. Determine when computations are needed and execute the appropriate computations by (Gen Ed Comp A, B):
  - Solving polynomial, rational, exponential and logarithmic equations.
  - Performing operations with functions and find inverse functions.
  - Solving nonlinear inequalities.
4. Apply an appropriate model to the problem to be solved by (Gen Ed Comp A, B, C):
  - Writing expressions from data, verbal descriptions or graph.
  - Solving application problems using linear, quadratic, exponential, and logarithmic functions.
5. Make inferences, evaluate assumptions, and assess limitations in estimation modeling and/or statistical analysis by (Gen Ed Comp A, D):
  - Solving linear and nonlinear systems of equations

**MAT 150 – Fall 2019 Tentative Calendar – MW**

<b>Monday</b>	<b>TUESDAY</b>	<b>WEDNESDAY</b>	<b>THURSDAY</b>	<b>FRIDAY</b>
<b>August 12</b> <b>Class Work Begins</b> 12 <sup>th</sup> grade class meetings	13	14 1.2 Linear and Rational Equations	15	16 NO CLASS
19 1.5 Quadratic Equations	20	21 1.6 Other Types of Equations	22	23 1.7 Linear & Abs Val Ineq's
26 3.6 Polynomial Inequalities	27	28 2.1 Basics of Functions & Their Graphs	29	30 NO CLASS
<b>Sept 2</b> <b>Labor Day</b>	3	4 Review for Exam 1	5	6 <b>Exam 1</b>
9 2.2 Graphs and Properties of Functions	10	11 2.3-2.4 Linear Functions and Slope	12	13 NO CLASS
16 2.5 Transformations of Functions	17	18 2.6 Composition Functions	19	20 2.7 Inverse Functions
23 Review for Exam 2	24	25 <b>Exam 2</b>	26	27 No School
30 3.1 Quadratic Functions	Oct 1	2 3.2 Polynomial Functions and Their Graphs	3	4 Academic Breakfast
7 <b>FALL BREAK</b>	8	9	10	11
14 Last day to withdraw without instructor permission 3.3 Remainder/Factor Thms 3.4 Zeros of Polynomial Functions	15	16 3.5 Rational Functions and Their Graphs	17	18 3.5 Rational Functions and Their Graphs
21 Review for Exam 3	22	23 <b>Exam 3</b>	24	25 NO CLASS
28 4.1 Exponential Functions	29	30 4.2 Logarithmic Functions	31	<b>Nov 1</b> Finish 4.2
4 4.3 Properties of Logarithms	5 <b>NO SCHOOL</b>	6 4.4 Exp and Log Equations	7	8 NO CLASS
11 Continue 4.4	12	13 4.5 Exp'l Growth and Decay	14	15 Finish 4.5
18 <b>Review for Exam 4</b>	19	20 <b>Exam 4</b>	21	22 NO CLASS
<b>25</b> 5.1 Systems of Linear Eqns	26	27 <b>Thanksgiving Break – Nov. 27 – Dec 1 Wed.</b>	28	29 <b>through Sunday</b>
Dec 2 5.4 Systems of Nonlinear Eqns	3	4 Review for Final Exam	5	6 Class Work Ends (Sun, Dec. 8)
9 <b>Final Exam Week</b>	10	11	12	13 <i>End of Semester</i> (Sun, Dec. 15)

