Prerequisites: Math 0099 or high school Algebra II and a suitable score on a mathematics placement test.

Learning Outcomes: After successful completion of the course the student will be able to:
1. Model situations from a variety of settings in mathematical forms by extracting quantitative data from a given situation, translating the data into information in various modes, evaluating the information, abstracting essential information, making logical deductions, and arriving at reasonable conclusions;
2. Manipulate mathematical information, concepts, and thoughts in verbal, numeric, graphical and symbolic form while solving a variety of problems;
3. Solve multiple-step problems through different (inductive, deductive and symbolic) modes of reasoning;
4. Express mathematical information, concepts, and thoughts in verbal, numeric, graphical and symbolic form while solving a variety of problems;
5. Shift among the verbal, numeric, graphical and symbolic modes of considering relationships;
6. Use appropriate technology in the evaluation, analysis, and synthesis of information in problem-solving situations.

Course Description: This course is a study of equations, functions, graphs, modeling, and problem solving. Linear, quadratic, exponential, and logarithmic equations in one variable are applied to a variety of problems, which concern real-world situations. Systems of linear equations in two variables are studied in conjunction with their use in problem solving. The concepts of functions and graphing are studied as essential tools for interpreting functions of one variable. Linear, quadratic, exponential, polynomial and logarithmic functions are emphasized and used to model a variety of real-world situations.

Outcomes:

Communication: Students will gain a knowledge base of basic mathematics in analytical, graphical, and numerical form. Students will communicate their ideas orally in class discussions and in written form on quizzes and examinations.

Critical Thinking: Students will apply their knowledge to solve applied problems presented in class, on quizzes, and on examinations. Students will determine the mathematical question and appropriate concepts with which to draw a conclusion, and then provide evidence of a logical answer.
**Course Materials:** The following materials are required and should be brought to every class meeting.

**Computer (required):** A computer is required in Math 1101. Each student in Math 1101 needs access to a notebook computer. Students will use their notebook computers during class sessions and tests. Clayton State University requires that students have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student's academic program. See [http://itpchoice.clayton.edu](http://itpchoice.clayton.edu) for full details of this policy. It is a student’s responsibility to have a working computer. Please keep your instructor updated if you are having computer problems. In most cases, if your computer is not working properly, you can see someone in the HUB or contact a software help center.

**Math Software (required):** The software package that the mathematics faculty will be using in Math 1101 is Graph. Graph is a free package, downloadable from [http://www.padowan.dk/download/](http://www.padowan.dk/download/). Follow the download and installation instructions on the indicated web site.

**Textbook and MyMathLab Access (required):** Ronald Harshbarger & Lisa Yocco *College Algebra in Context*, Fourth edition, Pearson Education, Inc., 2013. New textbooks are shrink-wrapped with a MyMathLab.com access code. MyMathLab is an online course resource, homework tutorial, and testing center. Students are **required** to use MyMathLab.com in this course. Purchasers of used textbooks can purchase a stand-alone *MyMathLab Starter Kit* in the CSU bookstore which includes the access code or, buy the code online at [http://www.pearsonmylabandmastering.com/northamerica/mymathlab/](http://www.pearsonmylabandmastering.com/northamerica/mymathlab/) with a credit card AND the course ID. This course ID will be provided as soon as it is available. You will not be allowed to register for MML until you have both, the course ID and the purchased access code. Students are encouraged to use [PriceLoch.com](http://www.pearsonmylabandmastering.com/northamerica/mymathlab/) to comparison shop for textbooks.

You will be required to use MML to complete online homework and quizzes, but access will also make available many online resources found at this website. Follow the instructions provided with the access code to set up your computer to access these resources. Once you have accessed MML you will need to go through the Installation Wizard in order to install all software plug-ins necessary for the system to operate properly on your machine.

*You should bring your computer and textbook to each class meeting.*

**Course Content:**

**Functions, Graphs, and Models; Linear Functions:** Functions and Models, Graphs of Functions, Linear Functions, Equations of Lines. (Sections 1.1 – 1.4)
**Linear Models, Equations, and Inequalities:** Algebraic and Graphical Solutions of Linear Equations, Fitting Lines to Data Points: Modeling Linear Functions, Systems of Linear Equations in Two Variables, Solutions of Linear Inequalities. (Sections 2.1 - 2.4)

**Quadratic Piecewise-Defined, and Power Functions:** Quadratic Functions; Parabolas, Solving Quadratic Equations, Piecewise-Defined Functions and Power Functions, Quadratic and Power Models. (Sections 3.1 - 3.4)

**Additional Topics with Functions:** Transformations of Graphs and Symmetry, Combining Functions; Composite Functions, One-to-One and Inverse Functions. (Sections 4.1 – 4.3)

**Exponential and Logarithmic Functions:** Exponential Functions, Logarithmic Functions; Properties of Logarithms, Exponential and Logarithmic Equations, Exponential and Logarithmic Models, Exponential Functions and Investing. (Sections 5.1 - 5.5)

**Higher-Degree Polynomial and Rational Functions:** Higher Degree Polynomial Functions, Modeling with Cubic and Quartic Functions, Solution of Polynomial Equations. (Sections 6.1 - 6.3)

**University Policies:** See the current online Academic Catalog at [http://www.clayton.edu/publications](http://www.clayton.edu/publications) for details on the following policies.

**No Shows:** Any paid student who has failed to attend a class by the deadline posted in the official university calendar for the term will be identified as a “no show.” The “no show” student will be administratively withdrawn from the class, a grade of W$ will be posted, and the student will NOT be reinstated. Any appeals on the decision are made to the Dean of the student’s major.

**Three-Attempts:** A student who has withdrawn or earned a less-than-satisfactory grade (F, U, D, WF, or W) a total of three times in a course at CSU will not be allowed to take the course again. Any appeals on the decision must be made to the Dean of the student’s major.

**Midterm Grades:** All students of MATH 1101 will be issued a midterm grade by **October 6, 2015.** This midterm grade will reflect approximately 33% of the entire course grade. Based on this midterm grade, a student may choose to withdraw from the course and receive a grade of W. Any student who wishes to pursue this option must withdraw no later than **October 9, 2015.**

**Student Conduct:** For the health, safety and general well-being of all students, faculty, and staff, students must abide by the policies set forth in both the Clayton State University Handbook ([http://www.clayton.edu/Portals/46/docs/student-handbook.pdf](http://www.clayton.edu/Portals/46/docs/student-handbook.pdf)) and the Basic Undergraduate Student Responsibilities as listed in the current CSU Academic Catalog, [http://www.clayton.edu/Portals/5/BasicUndergraduateStudentResponsibilities.pdf](http://www.clayton.edu/Portals/5/BasicUndergraduateStudentResponsibilities.pdf).

**Academic Integrity:** Students are expected to do their own work on all graded material for MATH 1101 including quizzes, tests, and the final exam, as outlined in the Clayton State University Student Code of Conduct, which can be found in the Student Handbook. Cheating will not be tolerated in MATH 1101, and any student who engages in suspicious conduct will be confronted...
and subjected to the disciplinary process. Cheaters will, at a minimum, receive a failing grade on
the quiz, test, or exam, which could result in a failing grade in the entire course.

**Disruptive Classroom Behavior:** According to the CSU Student Handbook, behavior which
disrupts the teaching-learning process during class activities will not be tolerated. This includes but
is not limited to belligerent, abusive, profane, distracting and/or threatening behavior. More subtle
forms of behavior may also negatively impact the teaching-learning process. Some examples
including: inappropriate attire, eating during class time, and unwillingness to participate in
educational activities, in some cases, may significantly impact the instructor’s ability to conduct the
class. A student who fails to respond to reasonable faculty direction regarding classroom behavior
and/or behavior while participating in classroom activities may be dismissed from class.

*A student who is dismissed is entitled to due process and will be afforded such rights as soon as
possible following dismissal. If found in violation, a student may be administratively withdrawn
and receive a grade of WF.*

**Thank you for turning off your cell phones during lecture and exams!**

**Attendance:** Students are expected to attend each class meeting. Students are responsible for
knowing about in-class announcements whether they are present or not. Please consult your
instructor’s class policies for specific attendance requirements for your individual section. **In the
event of an unexpected instructor absence or university closure, be sure to check your email for
instructions.**

**Evaluation:** Your grade in MATH 1101 is dependent on the following four criteria.

**Online Homework / In-class Assignments and Quizzes:** Your homework grade in this category,
up to 100 points, will be determined by the average score that you earn on the best 21/23
MyMathLab homework assignments (Your lowest two MML homework grades will be dropped.
This includes scores of zero for incomplete or late assignments) and / or by the points (up to 100)
that you earn on other assignments determined by your instructor. You should make every effort to
complete the homework assignments and seek help during office hours with problems you have not
been able to solve. Beginning with the second section of each chapter, you must score at least 60%
on a particular homework before being allowed to work on the next section’s homework. For
example, there is no pre-requisite to section 1.1, 2.1, etc. but you must score at least 60% on 1.1 to
be allowed to work on homework 1.2 and so on. Reading the sections of the textbook
corresponding to the assigned homework exercises is considered part of the homework assignment;
you are responsible for material in the assigned reading whether or not it is discussed in the lecture.
It will be expected that you read the assigned material in advance of each lecture. MyMathLab
homework is not timed and you are allowed unlimited attempts up to the due date. Homework due
dates are set as a pacing guide. However, homework can be attempted after the due date. Please
consult your instructor’s class policies for other homework or in-class quiz details.

**Quizzes:** Your quiz grade in this course will be determined by the best 10/12 departmental
MyMathLab quizzes. (Your lowest two quiz grades will be dropped. This includes assigned scores
of zero for incompletes.) You must score at least 60% on the corresponding homework for each quiz before you will be allowed to take the quiz. MyMathLab quizzes have a limited number of attempts and have a time limit. Quizzes must be completed by the due date and time.

**Tests:** There will be three or four tests worth a total of 300 points. Other graded assignments may be included in this category. Consult your instructor’s class policies for the number of tests and tentative test dates along with other possible graded assignments.

**Make-ups:** It is your responsibility to make sure that you have no schedule conflicts and can take the tests at the times designated by your instructor. Please consult your instructor’s class policies for any make-up policies specific to your class section. If no specific make-up policies are given the following rule will be in effect:

*There will be no early or makeup tests given. If you miss a test for any reason, your course grade will be computed with a zero for the missed test.*

**Final Exam:** The Departmental Final Examination is comprehensive and is worth 100 points. No student will be excused from taking the Final Examination, and only under unusual circumstances will a student be allowed to take the Final Examination at any time other than the regularly scheduled time. Failure to take the Final Examination will result in the grade of "F" for the course.

**Assessment Points:**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Point Value</th>
<th>% of Overall Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>MML Homework</td>
<td>50</td>
<td>10%</td>
</tr>
<tr>
<td>MML Quizzes</td>
<td>50</td>
<td>10%</td>
</tr>
<tr>
<td>3 or 4 Tests/other assessments</td>
<td>300</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Final Course Grade:** Your course grade will be determined by the following Grading Scale.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>89.5% - 100%</td>
<td>448 - 500</td>
</tr>
<tr>
<td>B</td>
<td>79.5% - 89.4%</td>
<td>398 – 448</td>
</tr>
<tr>
<td>C</td>
<td>69.5% - 79.4%</td>
<td>348 – 398</td>
</tr>
<tr>
<td>D</td>
<td>59.5% - 69.4%</td>
<td>298 – 348</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 59.5%</td>
<td>&lt; 298</td>
</tr>
</tbody>
</table>

**Student Resources :**

**Instructor Office Hours:** Your instructor holds regular office hours and is willing to help. If you are unable to make it to your instructor's regular office hours, please contact them by email or
phone to see if another time is available. Remember that MyMathLab is a good resource for video lectures and help with completing homework problems.

**Center for Academic Success:** The Center for Academic Success (CAS) is located in Edgewater Hall, Suite 276 and is typically open Monday through Thursday from 8:00 a.m. – 6:00 p.m. and on Friday from 8:00 a.m. – 5:00 p.m.

The Center for Academic Success (CAS) provides tutoring for this course. Instructions for setting up an appointment can be found at [http://www.clayton.edu/cas/tutoring/scheduleappointment](http://www.clayton.edu/cas/tutoring/scheduleappointment) or contact the CAS at (678) 466-4070.

If a student needs more extensive help than an instructor can provide during office hours, the student should investigate the resources available in the CAS. Specifically,

- A student may obtain assistance with mathematics problems from personnel in the CAS for brief periods of time. Appointments should be made in advance.
- A student may obtain assistance from a peer tutor. Appointments must be made in advance.
- A student may use materials in the CAS. Among the available materials are: Videotapes, CD’s, and computer software which cover various mathematics topics.

For more information and specific details about the Center for Academic Success and on some of these resources, check the Center for Academic Success web page, [http://www.clayton.edu/cas](http://www.clayton.edu/cas).

**Operation Study:** At Clayton State University, we expect and support high motivation and academic achievement. Look for Operation Study activities and programs this semester that are designed to enhance your academic success such as study sessions, study breaks, workshops, and opportunities to earn Study Bucks (for use in the University Bookstore) and other items.

**Students with Disabilities:** Students with disabilities who require reasonable accommodations need to register with the Disability Resource Center (DRC) in order to obtain their accommodations. The Disability Resource Center is located in Edgewater Hall Room 255, phone 678-466-5445, email DisabilityResourceCenter@clayton.edu. For more information on services offered check the website: [http://adminservices.clayton.edu/disability/](http://adminservices.clayton.edu/disability/).

**Counseling and Career Services:** Students may obtain help with education, career, and personal concerns from a staff of counselors. Its services may be of help to students with test anxiety or other problems that limit academic success. **For more information on services offered by Counseling Services and Career Services, check the web pages**, [http://adminservices.clayton.edu/counseling/](http://adminservices.clayton.edu/counseling/) and [http://adminservices.clayton.edu/career/](http://adminservices.clayton.edu/career/).

**Technology:**

**Technology Prerequisite:** The computer is used extensively in Math 1101. *You should bring your computer and textbook to each class meeting*. Basic computer skills for using email, the Internet, and file management are necessary to succeed in Math 1101. If you are having trouble installing necessary software, you should contact to the HUB at [http://www.clayton.edu/hub](http://www.clayton.edu/hub).
Technology Etiquette: The computer is used extensively in this course. When you come into class you should immediately set up your computer, unless otherwise informed by your instructor. During class do not play computer games, play music on the computer, surf the net, pass e-mail notes, use computer headphones, or use the computer in any way that is distracting to the instructor or any other student. Set the volume on your computer to a low setting. Outside of class, any e-mail sent to your instructor should state your name and identify the class you are taking. Remember to act professionally when sending e-mail to your instructor. Any unprofessional e-mail sent to an instructor will not be tolerated.

Teacher Education Policy: The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies and learned society/professional education associations. Please refer to the course correlation matrices located at the following website
http://www.clayton.edu/arts-sciences/teachered/standardsoutcomes

Conceptual Framework: The mission of the Teacher Education Unit is to prepare professional educators who engage in reflective practice and who are competent, caring, committed, collaborative, culturally responsive, and prepared to teach diverse learners in an ever-changing society. For the complete CSU Teacher Education Unit Conceptual Framework, follow the link below: http://www.clayton.edu/portals/5/departments/teachered/docs/Conceptual-Framework.doc

Important Dates for the Fall 2015:

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sat, Aug 15</td>
<td>First day of weekend classes</td>
</tr>
<tr>
<td>Mon, Aug 17</td>
<td>First day of weekday classes</td>
</tr>
<tr>
<td>Mon, Aug 17 – Aug 20</td>
<td>Drop/Add</td>
</tr>
<tr>
<td>Thu, Aug 20</td>
<td>Final Fee Payment Deadline</td>
</tr>
<tr>
<td>Thu, Aug 27</td>
<td>No-Show Deadline</td>
</tr>
<tr>
<td>Sat, Sept 5 – Sept 7</td>
<td>Holiday – No classes</td>
</tr>
<tr>
<td>Tue, Sept 22 – Oct 6</td>
<td>Mid-term grade Reporting Period</td>
</tr>
<tr>
<td>Fri, Oct 9</td>
<td>Last Day to Withdraw and Receive a W</td>
</tr>
<tr>
<td>Sat, Oct 10 – Oct 13</td>
<td>Fall Break – No classes</td>
</tr>
<tr>
<td>Wed, Nov 25 – Nov 28</td>
<td>Holiday – No classes</td>
</tr>
<tr>
<td>Mon, Dec 7</td>
<td>Last day of classes</td>
</tr>
<tr>
<td>Tue, Dec 8 – Mon 14</td>
<td>Final Exams</td>
</tr>
<tr>
<td>Fri, Dec 18 11:59 pm</td>
<td>Faculty Grade Submission Deadline</td>
</tr>
</tbody>
</table>

See CSU Academic Calendar (http://www.clayton.edu/calendar) for the most recent academic calendar for the Fall 2015 semester.

**The instructor reserves the right to add or delete topics and adjust due dates. Students will be given sufficient notice and any changes will be announced through email and during class.**