Math 102 – Intermediate Algebra – 5 units	Fall 2018
August 20 – December 20	Sections F1857
MW 9:00 am – 11:15 am	Room 7210

Instructor: Debra Griffin   **Office Hours:** see page 5
E-mail: dgriffin@shastacollege.edu   **Phone**: (530) 529-8980

*When emailing, please include your full name, class name, and
the days and times of your class in the subject heading.*

Materials: Math 102 Lecture Notes & Homework Worksheets posted online at
www.dgriffinresources.net, scientific calculator. No textbook is required for this class.

Wait List Policy: It may take a few days to determine how many students will be allowed to add this class. Wait listed students can maximize their chances of being allowed to add by attending every class, completing and submitting every assignment, and taking every quiz or exam. However, please note that it is the student's responsibility to add this class, even if given permission to add by the instructor. The student must self enroll using a special code provided, or complete an add form and submit this form to the registrar. The last day to add this class is
Friday, August 31, 2018.

Drop Policy: Work schedule and course load can sometimes prove to be overwhelming. When this is the case, students can choose to drop classes *without* record within the first two weeks of the semester. A course that has been dropped *with* record will count as one of the three allowable attempts for that course. The last day to drop this class *without* record is
Friday, August 31, 2018.

Attendance: Attendance will be taken daily. Tardy and early departures count as ½ absence. If a student misses more than 5 class hours the student may be dropped from the class. It is important to notify me in advance or as soon as possible regarding all absences.

Food and Drink: No food or drink (except water) is allowed in any classroom at the Tehama campus. Food and drink are a distraction to the learning environment and crumbs and spills can be an unwanted attraction to pests. Snacks may be consumed outside the classroom.

Extra Help: Please feel free to drop in for help during my office hours in room 7310 located on the west side of the building nearest the parking lot. If the light on the office hallway door is green, then push hard to open the door (it sticks). Also, Tehama Learning Center has an excellent tutoring program in room 7116. I highly recommend that you take advantage of this service even if just to use the room as a quiet environment to get your homework done. Math tutoring hours are posted in the main office by the end of the first week of instruction.

Note-taking: (5 extra credit points each chapter) Lecture note-taking guides are posted on my website at www.dgriffinresources.net. The problems in the left column will be demonstrated in class; the problems on the right are to be completed neatly, ***done in pencil,*** with all worksteps shown, by students. The note-taking guides will be collected on the day of each respective exam. Under the following conditions, note-taking guide score will be:

Score	Condition
5	Complete, all worksteps shown, correct answers, neatly done in pencil, correctly ordered and fastened in folders with fasteners, turned in on time
0	Incomplete, minimal work shown, incorrect answers, illegible, out of order, or not fastened into folders

Quizzes: (6 points each) There will be approximately 12 group quizzes on which students are encouraged to work collaboratively with classmates. Work must be neat, ***done in pencil***, with all worksteps shown. Worksteps as well as the final answer to each problem will be graded for accuracy. Each quiz is due at the end of the designated class session. The two lowest quiz scores will be dropped.

Homework: (2 points each) Homework will be assigned daily and is due at the beginning of the next class session. It must be neat, organized, legible, and complete. Under the following conditions, homework score will be:

Score	Condition
2	complete (all problems attempted), done in pencil, corrected in colored ink, and more than 80% correct
1	late, incomplete, minimal work is shown, or illegible
0	not done, or is identical to another student's paper

Exams: (100 points each) There will be six mid-term exams, one for each chapter. See class calendar for schedule of exams. Exams must be ***done in pencil***. Calculators may be used, but not shared with each other and no smartphones may be used as calculators. Please remember to turn cell phones off during exams and stow them completely out of sight.

Bonus Points: Extra credit opportunities will occur in the form of bonus problems on quizzes and exams.

Final Exam: (200 points) The final exam will be cumulative and multiple choice. It will be administered in this room, 7210, on
Wednesday, Dec 19, 9:00 am – 11:15 am.

Make-Up Policy: There will be no make-up exams or quizzes. The lowest midterm exam and two lowest quizzes will be dropped. This allows for a student to miss one exam and/or two quizzes without severe penalty.

Evaluation: Grades will be determined by the percentage earned of the total points.

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

Bonus Points: Extra credit opportunities will occur in the form of bonus problems on quizzes and exams. Also, students may earn 1 point extra credit for each hour spent working on Math 102 in the Learning Center (up to 5 points per chapter).

Calculators: Students may use a scientific calculator in this class. A scientific calculator that costs about $20 will be sufficient. Smartphone calculators are not allowed during exams, nor is sharing calculators allowed.

Cheating: Unless specifically announced otherwise, during all exams the use of notes or Internet is prohibited. Receiving or giving aid, texting, or even looking at an Internet capable device during an exam may result in a zero grade on that exam and may result in being suspended from the course. This zero score will count in the final grade determination. Homework that is predominantly identical to another student's work will receive a zero score.

Behavior: Students are expected to exhibit respectful behavior to other students and the instructor. A student may be suspended from the class if he or she engages in a classroom behavior that interferes with the learning environment. Such behavior includes, but is not limited to, disruptive conversations with fellow students, regular tardiness, leaving the classroom frequently during class time, use of electronic devices, and eating or drinking in class. Students are expected to turn off all cell phones, smart phones, iPods, tablet computers, laptop computers, and *any other form of digital device* for the duration of class.

Final Exam: A final exam will be conducted during the scheduled final exam period, and all students will be expected to attend. Failure to attend during the final exam period will result in an "F" grade for the course unless special arrangements have been made in advance with the instructor.

Guests And Children: Only authorized persons are allowed in the classrooms. College liability coverage does not extend to guests or children and thus they are not allowed in the classroom.

Academic Honesty: According to the *Shasta College Student Handbook* and the *Shasta College Catalog,* there are a number of unauthorized behaviors that violate the campus academic honesty policy. Each student should become familiar with the policy. Failure to acknowledge the work of other scholars constitutes an egregious breach of ethics and is a violation of civil law. You must, in all cases, do your own work, acknowledge sources, and document them appropriately. Otherwise, disciplinary sanctions will be applied. If you have any questions about plagiarism, please do not hesitate to contact me. In other words, cheating of any sort will not be tolerated and will result in an "F" for the assignment, quiz, or exam, and the case may be reported to Student Services.

Student Conduct And Discipline: In accordance with the Student Code of Conduct (Board Policy 5500), students are expected to obey all California State laws and all Federal laws that pertain to behavior on a college campus. Shasta College's jurisdiction and discipline shall be limited to conduct that occurs on Shasta College premises or that is related to school activities. Any student found to have committed misconduct is subject to the disciplinary sanctions outlined in Board Policy, Section 5520.

Academic Accommodations Imposed By A Disability: Academic adjustments due to a disability or serious medical condition: Students should contact the office of Partners in Access to College Education (PACE) for authorization of academic adjustments (accommodations) for this course. The office is located in room 2006 (242-7790). Students will need to provide documentation that verifies the condition and the type of limitations that may result. The staff in PACE have been designated with the authority to 1) evaluate that documentation, 2) determine which academic adjustments are appropriate to this course, and 3) facilitate the provision of approved academic adjustments. Students will submit notices directly to the course instructor regarding specific academic adjustments that are authorized for this class.

Dropping: If a student misses two consecutive weeks of class or more it may be assumed they are no longer interested in the course. School policy notes that these students may be dropped by the instructor either on census day or via the instructor initiated drop process. Nevertheless, if the student decides to stop attending, it is always the student's responsibility to officially drop or withdraw from the class.

Non-Discrimination: The Shasta-Tehama-Trinity Joint Community College District ("Shasta College") does not discriminate against any person on the basis of race, color, national origin, sex, religious preference, age, disability (physical and mental), pregnancy (including pregnancy, childbirth, and medical conditions related to pregnancy or childbirth), gender identity, sexual orientation, genetics, military or veteran status or any other characteristic protected by applicable law in admission and access to, or treatment in employment, educational programs or activities at any of its campuses. Shasta College also prohibits harassment on any of these bases, including sexual harassment, as well as sexual assault, domestic violence, dating violence, and stalking.

Course Description: **MATH 102** – A second course in algebra at the developmental level. This course prepares the student to take a baccalaureate level general education mathematics course. Topics covered include equations and functions of the following types: quadratic, exponential, logarithmic, rational, and radical. The course also covers systems of linear equations and inequalities in two variables and quadratic inequalities in one variable. Applied problems are encountered throughout the course.

Prerequisite: A grade of C or higher in MATH 101, or Math Placement Level 3 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher

Course Objectives: Upon successful completion of this course, the student will be able to:
1. graph the solution set for a linear equation in two variables
2. find x and y intercepts from an equation or a graph
3. compute the value of the slope algebraically by using $\frac{y_2 - y_1}{x_2 - x_1}$
4. graph the solution set of a linear inequality in the plane
5. find solutions to systems of linear equations algebraically
6. find the equation of a line
7. solve applied problems involving linear equations
8. explain the definitions of the expressions $A^{\frac{m}{n}}$ and $\sqrt[n]{A^m}$
9. solve equations involving radical expressions
10. graph the functions $y = x^{\frac{1}{n}}$
11. solve applied problems involving radical expressions
12. add, subtract, multiply and divide simple rational expressions
13. solve an equation involving rational expressions
14. divide a polynomial by a binomial to produce a quotient and a remainder
15. solve applied problems involving rational expressions
16. use function notation
17. sketch the graph of a function given a formula
18. explain the meaning of a one-to-one function
19. find the inverse of a linear function
20. solve a quadratic equation in one variable by factoring and by using the quadratic formula
21. sketch the graph of $y = ax^2 + bx + c$ finding the vertex and the x and y intercepts.
22. identify the standard form of a parabola.
23. solve applied problems involving quadratic functions
24. solve a quadratic inequality in one variable
25. use the definitions of a logarithm function and an exponential function
26. use the property $A = C$ implies $\text{Log}(A) = \text{Log}(C)$ to solve equations
27. solve equations involving exponential expressions, e.g. $b^p = n$
28. solve equations involving logarithmic expressions, e.g. $p = \log_b(n)$
29. calculate the value of a logarithmic expression
30. graph exponential and logarithmic functions
31. solve applied problems involving exponential and logarithmic expressions

Expected Student Learning Outcome:
Upon successful completion of the course, students will be able to accurately apply steps of problem solving to solve a problem as follows:
    1) Demonstrate understanding of the problem
    2) Choose an appropriate problem-solving strategy
    3) Effectively solve the problem using the chosen strategy
    4) Clearly state the correct solution to the problem

Schedule for Professor Debra Griffin

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00	*8:00 – 9:00* **Office Hour** Room 7310 (or 7210)		*8:00 – 9:00* **Office Hour** Room 7310 (or 7210)		
8:15					
8:30					
8:45					
9:00	*9:00 - 11:15* **Math 102** F1847 Room 7210		*9:00 - 11:15* **Math 102** F1587 Room 7210		
9:15					
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12:00	*12:00 - 2:15* **Math 114/14** F0714 Room 7210	*12:00 - 2:15* **Math 114/14** F0714 Room 7210	*12:00 - 2:15* **Math 114/14** F0714 Room 7210	*12:00 - 2:15* **Math 114/14** F0714 Room 7210	
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1:30					
1:45					
2:00					
2:15	*2:15 – 3:15* **Office Hour** Learning Center	*2:15 – 3:15* **Office Hour** Learning Center	*2:15 – 3:15* **Office Hour** Learning Center	*2:15 – 3:15* **Office Hour** Learning Center	
2:30					
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5:00		*5:00 - 6:15* **Math 240** F5104		*5:00 - 6:15* **Math 240** F5104	
5:15					
5:30					
5:45					
6:00					
6:15					

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Tips for Success in Algebra

1. **Maintain a healthy lifestyle.**

    Simply put, eat right, sleep right, and exercise.
      • A diet of fruits, nuts, vegetables, and meats is better brain food than food and drink that are high in sugar, saturated fats, grains, or alcohol.
      • A good night's sleep will help your brain perform at its best. If you do homework just before falling asleep, your brain will continue to process the new learning. To assure a peaceful sleep, leave laptops and smartphones outside of your bedroom. The blue light from electronic screens tricks the brain into thinking it is daytime, causing difficulty for sleep to occur naturally.
      • A good power walk daily will actually help your brain to grow new and healthy cells.

2. **Form a study group.**

    As soon as possible, find students with whom you would like to study. Meet in the Learning Center or other location convenient to all, do homework together, and help each other in studying for exams. Your collective motivation will carry you through the more difficult times.

3. **Take good lecture notes during class and use them effectively.**

    Preview lecture notes prior to class. Listen carefully to each step shown. Don't try to take shortcuts. Complete every problem demonstrated. Use the lecture notes to help you complete homework problems and to study for exams. Place sticky tabs on pages for which you want quick access.

4. **Do every homework assignment, every problem.**

    Don't ever think of homework as a choice. It's the most effective way to practice and master the concepts taught. Try to do homework as soon as possible after class, not an hour before it's due. Set up a regular time and place to make doing homework feel automatic.

5. **Fight not to miss class.**

    Get your money's worth by attending every class! Math class moves fast, a new concept is introduced every day. Math punishes absences. To get caught up when you return from an absence, you will have to make extra time to learn what you missed in addition to learning the new material. So if there is an optional appointment to be made, take care not to schedule it during class. Also, your classmates, especially your study group, will miss you!

6. **Meet with your instructor during office hours.**

    Office hours are designated for students to interact with their instructors. Drop in to ask for help with homework, discuss concerns you may have, clarify grading procedures, etc. Also, keep your instructor informed if you have a personal issue that is impacting your ability to succeed in class. Your instructor may be able to help you work out a solution that will enable you to succeed.

7. **Analyze and understand every mistake.**

    Students sometimes will pass over a mistake made on homework or a test and just let it go. But it's important to fix mistakes and understand why they were made; otherwise they are likely to be repeated. Take time to figure out the thinking behind a mistake and how to do it right. Ask your instructor or tutor for help if you're unclear.

8. **Get help fast.**

    When a new concept is difficult, seek as much help as possible, as quickly as possible. Instructors and Learning Center tutors are very receptive to requests for extra help. Straighten out misconceptions before they start to snowball.

9. **Ask questions during class.**

    Questions are the vehicle by which we learn. If you have one, don't be afraid to ask it. Chances are that many of your fellow students have the same question. Saying it out loud will help you, your classmates, and the instructor. The more questions asked, the easier it gets.

10. Basic skills are essential.

Quick: what's 7 times 8? Multiplication facts are often the basis for many math difficulties. If you don't know them well, practice! In just a few hours, multiplication facts can be fully memorized. There are many excellent websites where students can get practice in math facts and other basic skills.

11. Know your learning style.

Students may learn best by seeing, by hearing, or by doing. Try to sit where your learning style is best served. For example, sit in the front if you are a visual learner or sit away from chatty students if you are an audial learner. If you are a kinesthetic learner, write everything in your notes the instructor writes on the board. There are other learning styles as well which can be researched online for suggestions on enhancing your learning experience.

12. Understand what the calculator is doing.

It's not enough to know how to use the calculator; students should always analyze the calculator's answer. For instance, if a problem asks for "the square of negative three," many students will type in "-3^2" which gives the answer "-9." But the correct way to enter the problem is "(-3)^2" giving the correct answer "9". Play around with your calculator and become familiar with the way it works.

13. Be persistent.

Learning math, inherently comes with frustrations and disappointments. When you persist through the struggle to learn math, then your new learning is much stronger than it would have been without the struggle. If frustration becomes overwhelming, then do something else for half an hour and return to your math work when you feel calmer. If you stay the course from beginning to end, you will be glad you did. The feeling of being successful in a difficult endeavor produces a lifelong confidence in attempting new challenges.

14. Optimize your test performance.

Study a little every day for 3 days prior to the test. Print at least three copies of the practice test. Take the practice test as if you are taking the actual test. Use the posted solutions to assess your understanding. Seek help from your instructor, Learning Center tutors, or study group partners on questions you still don't understand. Repeat the process the next day and the morning of the exam. Repetition interrupts the forgetting process by causing myelin to form and wrap around the axons that are used to send signals from one neuron to another in your brain. This myelination creates a quicker path for a thought to travel when trying to retrieve learned facts. This is called retrieval practice, the results of which are very useful during an exam!

15. Apply strategies to minimize test anxiety.

• Pack needed materials into your backpack the night before your exam (pencils, calculator, lecture notes, etc.).
• Eat a nutritious breakfast the morning of your exam.
• Arrive early. Use the time to quietly review the material one more time before class begins.
• If possible, sit where noises or activity from other students won't bother you.
• Take your time with each question. Read all directions carefully. For example, if you are "solving for *x*", make sure the directions say "Solve for *x*."
• Do the problems you think are easiest first. Sometimes, a completed problem can hold clues for how to do other problems.
• When other students begin handing in their tests before you are finished, commend yourself for taking your time and double checking your work. Also remind yourself that students turning in a test early does not mean the test is easy or that you should be done as well. Some students turn in tests early because they did not study and cannot answer many of the questions at all.
• Peppermints can cause your to brain release endorphins, thereby reducing anxiety.
• Calm breathing and positive thoughts can slow down a beating heart or a racing mind. The very act of concentrating on breathing and thinking can biometrically alter anxious feelings.

Math 102, Fall 2018		Calendar		Instructor: Debra Griffin

Week	Mon	Tue	Wed	Thur	Fri
1	*Aug 20* Syllabus 1.1 Greatest Common Factor 1.2 Factor by Grouping	*Aug 21*	*Aug 22* 1.3 Factoring Trinomials 1.4 Factoring Binomials ***Group Quiz #1***	*Aug 23*	*Aug 24*
2	*Aug 27* 1.5 Choosing a Factoring Method 1.6 Solving Equations by Factoring	*Aug 28*	*Aug 29* **Exam 1** *(No make-up exam will be allowed – lowest score will be dropped, instead)*	*Aug 30*	*Aug 31* *Last day to receive refund for full-term classes, register, add full-term class, or drop a full-term class without record.*
3	*Sep 3* *Labor Day Campus Closed*	*Sep 4* *Census day for full-term classes*	*Sep 5* 2.1 Rational Expressions and their Domains 2.2 Multiplication and Division of Rational Expressions ***Group Quiz #2***	*Sep 6*	*Sep 7*
4	*Sep 10* 2.3 Addition and Subtraction of Rational Expressions	*Sep 11*	*Sep 12* 2.4 Complex Fractions ***Group Quiz #3***	*Sep 13*	*Sep 14*
5	*Sep 17* 2.5 Equation Solving	*Sep 18*	*Sep 19* 2.6 Applications ***Group Quiz #4***	*Sep 20*	*Sep 21* *Last day to declare pass/no pass option*
6	*Sep 24* **Exam 2** *(No make-up exam will be allowed – lowest score will be dropped, instead)*	*Sep 25*	*Sep 26* 3.1 Using Ordered Pairs to Graph Lines 3.2 Slope and Geometric Characteristics of Lines ***Group Quiz #5***	*Sep 27*	*Sep 28*
7	*Oct 1* 3.3 Solve Systems by Graphing 3.4 Solve Systems by Substitution	*Oct 2*	*Oct 3* 3.5 Solve Systems by Elimination ***Group Quiz #6***	*Oct 4*	*Oct 5*
8	*Oct 8* 3.6 Applications	*Oct 9*	*Oct 10* 3.7 Solving Systems of Linear Inequalities ***Group Quiz #7***	*Oct 11*	*Oct 12*
9	*Oct 15* **Exam 3** *(No make-up exam will be allowed – lowest score will be dropped, instead)*	*Oct 16*	*Oct 17* 4.1 Review of Powers and Roots 4.2 Simplifying Radicals ***Group Quiz #8***	*Oct 18*	*Oct 19*
10	*Oct 22* 4.3 Operations with Radical Expressions 4.4 Rational Exponents	*Oct 23*	*Oct 24* 4.5 Equation Solving ***Group Quiz #9***	*Oct 25*	*Oct 26*

Week	Mon	Tue	Wed	Thur	Fri
11	*Oct 29* 4.6 Complex Numbers	*Oct 30*	*Oct 31* **Exam 4** *(No make-up exam will be allowed – lowest score will be dropped, instead)*	*Nov 1*	*Nov 2*
12	*Nov 5* 5.1 Parabolas 5.2 Solving Equations using the Square Root Method	*Nov 6*	*Nov 7* 5.3 Solving Equations by Completing the Square 5.4 Solving Equations using the Quadratic Formula *Group Quiz #10*	*Nov 8*	*Nov 9* *Veteran's Day* *Campus Closed*
13	*Nov 12* 5.5 Solving Non-linear Inequalities 5.6 Applications	*Nov 13*	*Nov 14* **Exam 5** *(No make-up exam will be allowed – lowest score will be dropped, instead)* *Last day to withdraw from a full-term class with a "W"*	*Nov 15*	*Nov 16*
14	*Nov 19* |<------------------	*Nov 20* --------- Thanksgiving Vacation	*Nov 21* ------------------	*Nov 22* -----------------	*Nov 23* ------------>|
	Nov 26 6.1 Inverse Functions	*Nov 27*	*Nov 28* 6.2 Exponential Expressions and Equations *Group Quiz #11*	*Nov 29*	*Nov 30*
15	*Dec 3* 6.3 *e* 6.4 Logarithms	*Dec 4*	*Dec 5* 6.5 Properties of Logarithms *Group Quiz #12*	*Dec 6*	*Dec 7*
16	*Dec 10* 6.6 Solving Exponential and Logarithmic Equations	*Dec 11*	*Dec 12* **Exam 6** *(No make-up exam will be allowed – lowest score will be dropped, instead)*	*Dec 13*	*Dec 14*
17	*Dec 17* Review for final exam	*Dec 18*	*Dec 19* **Final Exam** **9:00 am – 11:15 am**	*Dec 20*	*Dec 21*

Note: *This syllabus is subject to change at the discretion of the instructor.*
Revised: 7/16/18