

MATH 1111-H
College Algebra
Spring Semester 2019
Course Syllabus

Instructor: Dr. Geoff Clement
Office: Instructional Complex, Room 220
Office Hours: M-R 9:30-11, W 11-12 in IC 319 and W 12:30-1:30 in Student Success Center, and other times by appointment
Other Tutoring: Student Success Center (Student Center, 2nd floor, above Bookstore), STEM Center (IC 319)
Phone: 678-359-5820 or MCS Division Office (IC 219, phone: 678-359-5827)
E-mail: gclement@gordonstate.edu
Website: <http://faculty.gordonstate.edu/gclement/>
PREREQUISITE: MATH 0099 or MATH 0989 with Grade of C or better; Grade of B or better in MATH 0097 or MATH 0987 AND pass the College Algebra Pretest; COMPASS Math entrance score of 25-46 or ACCUPLACER score of 42-78; or MPI greater than 1265
CREDIT: 3 semester Credit Hours
CALCULATOR: TI-84 Plus or Higher (or Equivalent) Recommended
TEXTBOOK: Sullivan, Michael. *College Algebra and Trigonometry*. 10th Edition. Pearson Education, Inc. ISBN: 978-0-321-99859-0 Recommended
CLICKERS: Students are required to own a clicker for this course. The clicker should have their name clearly printed on it, and must be registered before the second day of class. [Turning Technologies Response Card RF-LCD]

Course Details: College Algebra: TR 11:00-12:15 Math 1111-H CRN 370 IC #220

My Math Lab website: <http://pearsonmylabandmastering.com>

My Math Lab Course ID: clement62849

My Math Lab Technical Support: 1-800-677-6337

The My Math Lab software is required for this course, and the textbook is recommended.

Note: This is a tentative syllabus and may be changed by the instructor at any time.

Welcome to Math 1111, and, for some of you, welcome to college! Do not expect this class or college to be just like high school. In college you are embarking on a career. Not only are you here to prepare for a career in the future, but college is now your job. To perform well, you need to make college your priority. Here you will be treated as an adult who has selected this class as your job. As with a job, you will be required to perform at a high level to keep your job. This will include attendance and quality of work. You wouldn't walk into your boss's office on the first day and say "Hey! I'm so and so, and I'm going to enjoy working here; however, I need to let you know up front that I'll be missing many of my work days, I will complete many of my duties late, and my overall job effort will be average or below".

College is not simply taking a few courses to get a diploma. College is not a trade school where you will take courses that only pertain to the career that you wish to pursue. College is an experience that is designed to teach you to think, to broaden your understanding of the world, and to give you the skills to grow and improve yourself for the rest of your life. You need to leave your preconceptions of this class, college, and yourself behind. Through your experience in college and this class, you can grow beyond who you have been and who you have limited yourself to be. Your growth and your success in this class and in college will depend less upon your natural gifts or talents and more upon your willingness to change, grow, apply, and, above all, work.

Do your best! Rise to the challenge! Live and learn!

COURSE DESCRIPTION

This course will cover a variety of topics in algebra, selected from Chapters 1, 2, 3, 4, 5, 6, and 12. The topics covered include the set of real numbers, equations and inequalities, functions and graphs, systems of equations, polynomial functions, exponential and logarithmic functions. MATH 1111 **does not** fulfill the Core Curriculum Area A requirement for **science majors**. MATH 1111 will count in Area B for science majors. MATH 1113 (Pre-Calculus) is the course that fulfills the Core Curriculum Area A requirement for science majors.

This course will emphasize student preparation, critical thinking, and problem solving. To do well in the course, you must **read the assignment ahead of time** and prepare questions, do problems from the text, and prepare for tests by reviewing those problems worked in class and at home. Over the course of the semester, you should devote about two hours of outside work for each hour in class. College Algebra demands your time and effort! **First, study the examples worked in class as well as those in the textbook, then practice, practice, and practice problems. And then practice some more!**

This course, as many other courses, will emphasize the written communication of ideas to others. In this course, you will be communicating mathematical ideas. Just as it is important in an English course to use the proper format in your essays and term papers, it is important to use proper form when communicating mathematical ideas. You will learn how to write mathematics so that it can be understood by others. You should carefully study how mathematics is written in class as well as how it is written in the textbook. You should pattern your writing after these sources.

COURSE OBJECTIVES

This objective is directed toward the following general education expected outcome of the college:

Mathematical Skills: Students will demonstrate a basic knowledge of the fundamentals of college-level mathematics.

Upon completion of College Algebra, students should have an understanding and be able to demonstrate their knowledge of:

1. Solving linear, quadratic, rational, radical, and absolute value equations and their applications.
2. Solving linear, quadratic, rational, radical, and absolute value inequalities and their applications.
3. The rectangular coordinate system and graphing equations in two variables.
4. Finding equations of, and graphing, lines and circles and their applications.
5. Fundamental concepts of functions, including composition of functions and inverse functions, and their application as mathematical models.
6. Fundamental properties of polynomials, the factor and remainder theorems, and the number of real zeros of a polynomial.
7. Direct and inverse variation and applications.
8. Solving systems of linear equations in two or three variables and applications.
9. The properties of exponential and logarithmic functions and their application to compound interest.
10. Solving exponential and logarithmic equations.

METHOD OF EVALUATION

1. **Tests – 50%.** There will be four unit tests. **Make-ups will be given only when your instructor excuses your absence. If you miss one test, this grade may be filled with your Final Exam score.**

Comprehensive Final Exam – This comprehensive exam is multiple choice format and may also replace the lowest unit test. *Students need to bring their Scantron form to the final. They are available in our college bookstore.*

Extra time will not be given to complete tests, unless documentation is on file with the college specifying this requirement.

2. **My Math Lab Homework** – 20%. Purchase the access code before the end of the first week of class! All deadlines are class time on the day of the test. Don't let things "snowball".
3. **Quizzes/Projects/Journal Entries** – 20%. All daily assignments are due during class with a 20% penalty for assignments coming in late on the same day and a 0 for all missed deadlines.
4. **Clicker Participation** – 10%. This is a participation grade, and there are no make ups possible.

OFFICE HOUR PROCEDURES

When you come to my office for help, please be prepared by doing the following.

1. Bring your textbook, your calculator, and your class notes.
2. Make sure you have read the section in the text, read the class notes, and studied the examples.
3. Be prepared to show me at least two odd-numbered problems from the section that you have worked.
4. Bring your incomplete or incorrect solution to each problem about which you have a question.
5. Ask for help as early as possible. **Don't wait until the day of a test.**

OTHER INFORMATION

- A. **Attendance:** Attendance at class is important. I will take attendance by using an attendance sheet or clickers. Students are responsible for every instruction, every change in the syllabus, and all material covered in class whether or not they are present. *Students who enroll in the course late are responsible for material covered before they enrolled.*
- B. **Working Problems:** Most students benefit by working *many, many* problems for practice. On the Tentative Course Outline is a list of suggested textbook problems for each section covered, and these correspond directly to the My Math Lab homework problems. These textbook problems are intended to give the student practice in specific concepts that are taught in class. I strongly encourage you to work them to better prepare for the tests. I will typically use the first few minutes of class to answer any questions about homework problems. Math is not a spectator sport — Participate, and work hard!
- C. **Group Work:** Feel free to work together on homework, but make it your goal to understand the material and develop the skills that we are modeling in class. My Math Lab has several help tool; feel free to use them, but work your way to the point where you don't need the help.
- D. **Academic Honesty:** Each student must do his or her own work on each assignment without any assistance from any outside source. The penalty in our class is a 0 on the assignment and a report to our school MPS department chair. The student handbook details school policies on academic honesty.
- E. **Accommodations for Students with Disabilities:** Gordon State College is committed to making reasonable efforts to assist individuals with disabilities in their efforts to access a high quality post-secondary education. Gordon State College will provide reasonable accommodations for persons with documented qualifying disabilities in accordance with the policies of the University System of Georgia and Gordon State College. If you have a disability and feel you need accommodations in this course, you must present a current letter to me from Accessibility Services, indicating the existence of a disability and the approved accommodations. To register a disability contact Accessibility Services, Student Center, Room 212, 678-359-5585.

The mission of Harry's House is to distribute food and toiletries to students to alleviate stress associated with short term food insecurity and other financial constraints in order to effectively reduce hunger and support educational success.

<https://www.gordonstate.edu/harrys-house/index.html>

- F. **Gordon E-mail:** Your Gordon e-mail address is where all official communication from Gordon State College is sent. This includes registration information, etc. Please check your Gordon e-mail account periodically for important information. You should also delete junk e-mail to keep your mailbox from getting full. If your mailbox is full, you may not receive important e-mail notifications. Also, if I need to communicate with you via e-mail, I will send the message to your Gordon e-mail account.
- G. **Classroom Etiquette:** Students are expected to treat the instructor and other students with respect. Please refrain from the following during class time:
1. Talking with other students
 2. Leaving class early (other than an emergency)
 3. Consistently late in arriving to class
 4. Placing or receiving cellular phone calls or text messaging during class. Cell phones should be turned off and out of sight. No cell phone use of any capacity will be tolerated.
 5. Listening to loud music through your headphones
- H. **Calculator Usage:** Students will be allowed to use a scientific or a graphing calculator. We recommend the "Texas Instruments TI-30XIIS" which is the used for the Compass exam. The TI-84 Plus graphing calculators is also excellent. You may not use a calculator such as Casio EX-115EX which simplifies radical expressions. You may not use the calculator on your cell phone.
- I. **Clicker Usage:** It is an academic integrity violation to falsify attendance information, to use a clicker to earn participation points for a student who is not present, or for students to allow their clicker to be used for that purpose. The instructor reserves the right to manually take attendance to verify that the clickers used match the students present. If a student needs to leave in the middle of a lecture due to an emergency, they must inform the instructor to avoid the appearance of the student's clicker being present when the student was not. Lost or stolen clickers must be reported to the instructor immediately.
- I. **Always Alert:** For students who struggle early in the semester, your professor will refer you to Always Alert for academic counseling. The goal of this program is to give helpful tips to help students reverse course and make positive changes in study skills and habits before they dig themselves into too big of a hole. If you have concerns, please interact with your professor.
- I. **MIDTERM – March 4 (Monday)** – Withdrawals after this date will be an automatic 'WF' except in cases of hardship as documented and approved by processing a student petition through the Registrar.
- J. **COURSE RESOURCES**
You will need a pencil, a notebook (a loose-leaf binder is best), graph paper, and a straightedge. A folder for handouts is highly recommended.

This course is enhanced by a web-based course software package called My Math Lab. Feel free to "Ask My Instructor" whenever you struggle, and use office hour help, as well. There are also significant course resources in Desire2Learn/Brightspace. The course syllabi and course resources are also on your instructor's website at <http://faculty.gordonstate.edu/gclement/>.

Besides office hours, the SSC (Student Center 2nd floor) and the STEM Center (IC 319) are available for tutoring assistance.

Also consider creating a study group with fellow classmates.

K. Required Statements

Title IX

Gordon State College is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic violence, dating violence and stalking. If you (or someone you know) has experienced or experiences any of these incidents, know that you are not alone. All faculty members at Gordon State College are mandated reporters. Any student reporting any type of sexual harassment, sexual assault, dating violence, domestic violence or stalking must be made aware that any report made to a faculty member under the provisions of Title IX will be reported to the Title IX Coordinator or a Title IX Deputy Coordinator. If you wish to speak with someone confidentially, you must contact the Counseling and Accessibility Services office, Room 212, Student Life Center. The licensed counselors in the Counseling Office are able to provide confidential support. Gordon State College does not discriminate against any student on the basis of pregnancy, parenting or related conditions. Students seeking accommodations on the basis of pregnancy, parenting or related conditions should contact Counseling and Accessibility Services regarding the process of documenting pregnancy related issues and being approved for accommodations, including pregnancy related absences as defined under Title IX.

ADA and 504

If you have a documented disability as described by the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973, Section 504, you may be eligible to receive accommodations to assist in programmatic and/or physical accessibility. The Counseling and Accessibility Services office located in the Student Center, Room 212 can assist you in formulating a reasonable accommodation plan and in providing support in developing appropriate accommodations to ensure equal access to all GSC programs and facilities. Course requirements will not be waived, but accommodations may assist you in meeting the requirements. For documentation requirements and for additional information, contact Counseling and Accessibility Services at 678-359-5585.

House Bill 280

For information regarding House Bill 280, see the University System of Georgia at the following link: <http://www.usg.edu/hb280>

Religious Holidays

Gordon State College acknowledges that the academic calendar can sometimes conflict with major holidays from among our diverse religious traditions. If a student must miss class due to the observance of a religious holiday, that absence may be excused. To be excused, the student must inform his/her instructors before the absence and make alternate arrangements for any work due at the time of the absence. An excused absence for the observance of a religious holiday does not excuse student from responsibility for required course work.

Hightower Collaborative Learning Center & Library

The Hightower Collaborative Learning Center & Library offers Gordon State students specialized library research assistance. Students can meet with their personal librarians for one-on-one help in each discipline, major, or course to search and evaluate information sources effectively. Go to schedule an appointment by clicking the **Personal** tab or click on the **Presentation Practice Room** tab to make a reservation. For immediate help, call **678-359-5076** or stop by the Circulation/Check-Out Desk. You can also [Ask a Librarian](#) or drop by the Circulation/Check-Out Desk. Check the library's [website](#) for hours, [Electronic Resources](#), and [LibGuides](#) (subject- or class-specific research guides).

Gordon State College does not discriminate against any student on the basis of pregnancy, parenting or related conditions. Students seeking accommodations on the basis of pregnancy, parenting or related conditions should contact Counseling and Accessibility Services regarding the process of documenting pregnancy related issues and being approved for accommodations, including pregnancy related absences as defined under Title IX.

Cell phone use:

Studies show that use of a cell phone or similar device during lecture strongly impairs a student's ability to take notes and remember information later, and that students significantly underestimate how much cell phone use impairs their ability to learn (Sana et al [2]). In class texting has been linked to an average drop of half a letter grade in a course (Kamenetz [1]). Furthermore, use of electronic media by students reduces the ability of other students near them to take notes by 17% (Sana et al [2]).

Use of cell phones or other electronic communication devices during lecture is prohibited, except where explicitly allowed by the instructor. Unauthorized use can result in a loss of some or all of a student's participation points for the day, at the discretion of the instructor.

[1] A. Kamenetz. "How to get students to stop using their cellphones in class". NPR Ed, Nov 10 2015.

[2] F. Sana, T. Westin, and N. Cepada. "Laptop multitasking hinders classroom learning for both users and nearby peers". *Computers and Education*, 62:24-31, Mar 2013.

Learning goals for the course:

Foundational goals: During the course, students should learn to do the following:

1. Master manipulation of numeric and algebraic expressions.
2. Solve applied problems and determine if the answer makes sense.
3. Develop some understanding, conceptually or numerically, of why the mathematical techniques they use are valid.
4. Apply mathematical techniques in unfamiliar contexts.
5. Learn mathematical ideas by reading.

Subject goals: By the end of the course, students should be able to do the following:

1. Solve linear, quadratic, radical, absolute value, exponential, and logarithmic equations and systems of linear equations.
2. Solve linear, absolute value, polynomial, and rational inequalities.
3. Master graphing in the coordinate plane and interpreting graphs.
4. Understand functions and composition of functions.
5. Analyze the properties of linear, quadratic, circular, polynomial, exponential, and logarithmic graphs and functions.

How learning goals will be assessed:

Students work will be assessed on their ability to understand conceptual and applied questions, to clearly demonstrate a series of mathematically correct steps to arrive at a solution, and to explain the solution. Assessment may occur in lecture preparation activities, homework assignments, student work during lecture, quizzes, and exams.

How students can accomplish these goals:

1. Prepare for lecture. Read the textbook and do the examples there (don't just look at how the book did it). Do any worksheets or other lecture preparation activities. Look over the previous lecture notes right before class.
2. Actively participate in the lecture. Ask questions.
3. Review the lecture. Read over your notes as soon as possible after the lecture. Where needed restate your notes so they make more sense to you.
4. Study mathematical concepts a little each day. Being able to do the problems is not enough. Explain ideas and how you solve problems as if you were teaching a class. Memorize formulas and rules, understanding why they are true will help.
5. Do the homework. Complete all of the problems, not just the ones you already know how to do. Work on the problems without looking at examples from online videos or the book; your goal is to learn math, not to learn how to copy material from a video. Check your work. Do not enter an answer unless you are certain it is correct.
6. Use resources. The student success center (SSC), professor office hours or review sessions, and student study groups can help you clarify things that are hard to understand and learn challenging concepts. In sections where it is available, supplemental instruction (SI) is an extremely useful resource.
7. Prepare for quizzes and exams. Do any practice quizzes or exams under test conditions. Make your own study guides. Make sure to get 8 hours of sleep the night before an exam.
8. Monitor your progress. If things are not going well, ask your professor for suggestions as soon as possible. Do not wait until the week before an exam.

Skills students need to succeed:

1. Health management: Get enough sleep, water, nutrition, and exercise. Manage stress.
2. Time management: Schedule 1 – 2 hours for studying math each day. Keep track of deadlines.
3. Strong work ethic: Learning math is a major commitment.
4. Curiosity: Even when the material seems boring, ask yourself why things work the way they do.
5. Adaptability: If you treat this course as a harder version of high school, you will fail.
6. Using resources: Asking questions and visiting the SSC is a sign that your education matters enough to you to take advantage of every available opportunity.
7. Self-awareness: Honestly assess which concepts you understand and which require more work. Keep track of what studying techniques work best for you.
8. High expectations: Don't settle for anything less than your best.

Keys to Success in this class:

- (1) **Have a goal for this class. Make this class a priority. You can succeed in this class!**
- (2) **Be on time every day. Don't miss class; when you must, communicate to your instructors.**
- (3) **Review class notes just before and just after class.**
- (4) **Read the text. Study the examples. Keep up with the pace of the class.**
- (5) **Practice, practice, and then practice some more. Do homework as soon as possible after class.**
- (6) **Ask questions. You have the right; asking questions shows you care and will often help others.**
- (7) **Read the directions carefully. On tests, start by "unloading" important formulas and concepts.**
- (8) **Actively listen in class. Take good notes.**
- (9) **Use our tutoring center whenever you need help. Don't let things snowball.**
- (10) **Correct any mistakes you make on quizzes and tests.**
- (11) **Be a lifelong learner. Live and learn! Rise to the challenge of college-level mathematics.**

***Treat this class like any job; take deadlines seriously. The schedule below is tentative.**

Spring 2019 SCHEDULE OF CLASSES

College Algebra: **TR 11:00-12:15** Math 1111-H CRN 370 IC #220
 My Math Lab website: <http://pearsonmylabandmastering.com> Course ID: clement62849

Date	Section	Suggested Text Homework
R 1/10	Introductions, Chapter R Overview, & 1.1: Linear Equations	1-63 odd, 71-85 odd
T 1/15	1.2: Quadratic Equations	1-75 odd, 93-101 odd
R 1/17	1.4: Radical Equations, Equations Quadratic in Form; Factorable Equations	1-87 odd, 99
T 1/22	1.5: Solving Inequalities, Quiz on 1.1-1.2 Due in MML	1-87 odd, 117
R 1/24	1.6: Equations and Inequalities Involving Absolute Value	1-59 odd, 65
T 1/29	Review, Personal Intro Due in Desire2Learn	
R 1/31	TEST I (Journal I & MML Ch R Review, 1.1-1.2, 1.4-1.6 Homework Due by 11:00)	
T 2/5	2.1: The Distance and Midpoint Formulas	1-43 odd, 63, 65
R 2/7	2.2: Graphs of Equations in Two Variables; Intercepts, Symmetry	1-77 odd
T 2/12	2.3: Lines	1-107 odd, 117, 119
R 2/14	2.4: Circles, Review	1-49 odd
T 2/19	TEST II (Journal II and MML 2.1-2.4 Homework & Quiz on 2.3 Due by 11:00)	
R 2/21	3.1: Functions	1-79 odd, 103, 105, 111
T 2/26	3.2: The Graph of a Function; *3.4: Library of Functions	1-31 odd, 35
R 2/28	*3.5: Transformations; 4.1: Linear Functions and Their Properties [Midterm Withdrawal Deadline M 3/4]	1-37 Odd
T 3/5	*4.2 Linear Models, Quiz on 3.1-3.2 Due in MML , Review	
R 3/7	4.3: Quadratic Functions and Their Properties *4.4 Quadratic Models	1-61 odd, 85, 91
M-F 3/11-15	Spring Break (No Classes)	
T 3/19	5.1: Polynomial Functions and Models	1-97 odd
R 3/21	5.4: Polynomial and Rational Inequalities, Quiz on 4.3 Due in MML	1-43 odd, 75
T 3/26	5.5: The Real Zeros of a Polynomial	1-67 odd
R 3/28	Review	
T 4/2	TEST III (Journal III and MML 3.1-3.2, 4.1, 4.3, 5.1, 5.4, 5.5 Homework Due by 11:00)	
R 4/4	6.1: Composite Functions, *6.2: One-to-One Functions; Inverse Functions	1-51 odd, 59, 63, 65
T 4/9	6.3: Exponential Functions	1-93 odd, 105, 107, 111
R 4/11	6.4: Logarithmic Functions, 6.5: Properties of Logarithms	1-111 odd, 119
T 4/16	6.5: Properties of Logarithms, 6.6: Logarithmic and Exponential Equations	(6.5) 1-61 odd, 71-79 odd (6.6) 1-47 odd, 105, 107
R 4/18	6.7: Financial Models, Review	1-65 odd
T 4/23	TEST IV (Journal IV & MML 6.1, 6.3-6.7 Homework & Quiz on 6.3-6.4 Due in MML by 11:00)	
R 4/25	12.1: Systems of Linear Equations: Substitution and Elimination	1-73 odd
T 4/30	Review (Last Day of Classes, Final Exams run from May 4-10), MML 12.1 Homework Due by 10:30	Study smart!!!
W 5/8	Final Exam (10:15-12:15 Location: TBA)	

*These sections are optional.

Important Dates: **MLK Holiday: January 21 (M)** **Midterm: March 4 (M)** **Spring Break: March 11-15 (M-F)**

Instructor: Dr. Geoff Clement

Office: Instructional Complex, Room 243

Phone: 678-359-5820

Office Hours: M-R 9:30-11, W 11-12 in IC 319 and 12:30-1:30 in Student Success Center, and other times by appointment

Other Tutoring: Student Success Center (Student Center, 2nd floor, above Bookstore), STEM Center (IC Room 319)

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