

College Algebra

MATH 112 Section 6159, Spring 2015

Tu 5:45pm – 7:55pm in room M-108; Th 5:45pm – 6:45pm in room M-106

Instructor: Jhevon Smith

Email: JhevonTeaches@gmail.com

Office Hours: By appointment.

Website: http://math.sci.ccny.cuny.edu/people?name=Jhevon_Smith

Text: Sharma, Man M. *College Algebra*, 5th Edition.

MEC Dept.: E-218 **MEC Dept. website:** <http://www.laguardia.cuny.edu/MEC/Home/>

Websites: I gave you my website since I will be posting documents and instructions for the class there, such as: review problems, announcements, solutions to tests, etc. I gave you the MEC dept. website because, well, you should have it. You can find out more information about this math course and others there, by clicking on the Mathematics link in the menu bar.

Calculator: Scientific (non-graphing) calculators are permitted in this course; however, we will try to keep the use of a calculator minimal. *You are NOT allowed to use your smart phone as a calculator.* I do not recommend that you use graphing calculators. If you do, then I will have to wipe its memory before every test. This inconveniences everyone. Also, at this stage, they can do too much of the work for you, and that doesn't help you. An adequate non-graphing scientific calculator should be affordable to virtually everyone.

Grading: Grades will be assigned according to the following chart.

Letter Grade	G.P.A.	Grade	Letter grade	G.P.A.	Grade
A ⁺	4.00	98-100	C	2.00	74-76
A	4.00	94-97	C-	1.66	70-73
A ⁻	3.66	90-93	D	1.00	60-69
B ⁺	3.33	87-89	F	0	Below 60
B	3.00	84-86			
B-	2.66	80-83			

You need a C to pass this course and move on to any course requiring it as a prerequisite. However, getting an A would be much more appropriate... and why not get an A?

As department policy demands, the final exam is worth 30% of your grade in this course. The remaining 70% will come from your in-class grade. The breakdown is as follows:

Quizzes and Homeworks: 10% (These will be done online and graded electronically.)

Three Inquiry Learning Projects: 15% (Assigned in class).

Participation: 3% (Based mostly on attendance).

In-class tests: 42% (Three exams, worth 14% each).

Final Exam: 30% (This will be a cumulative exam given at the end of the course).

Extra Credit: Not happening...

Make-up Exams: No way...

Don't miss any test or quiz! And work hard so that you don't end up in a position where you'd need extra credit!

Attendance: Attendance will be taken at the beginning of class. You are *late* if you arrive after your name is called. I will follow the attendance policy of the college, which you can find below.

To be excused for an absence (or lateness) you must email me no later than one day after that particular absence (or lateness) with the reason. Of course, proof is required where applicable. For example, if your absence or lateness was due to a doctor's appointment, I expect to see a doctor's note. If you miss a class, it is your responsibility to catch up. You can see me during my office hour to discuss what was done in class, or catch up on your own. It's up to you. **To reiterate, there is no make-up for a missed quiz/homework/exam. Seriously!**

My Expectations:

Work ethic: You are not to slack off (more on this in class)! You are to read ahead! Very Important! Read each section before coming to class. It's better if you have your mind working on the concepts before coming to class—it will be easier for you to keep up and ask intelligent questions.

Prerequisite knowledge: I also expect you to remember the math that you have done before this course. Math is cumulative. Each math class builds on the class that came before it. If you are not good at elementary algebra, then college algebra will be difficult, and so on. Be sure you've mastered the level of math that came before this. I will assume you are all experts at the lower level math courses. If this is not currently true for you, make it true, quickly; like by the end of the week.

Now, the matra.

Repeat the following to yourself 10 times a day. Five times when you wake up and five times before you go to sleep.

*I must NOT cancel across sums,
I must NOT distribute powers across sums,
I must NOT divide by zero,
All these are blasphemy!
But I will use brackets when appropriate.*

So yeah, the above may seem like a joke, and it is somewhat, but here's the part that's not funny: **do NOT commit any of the blasphemies mentioned above! Doing so will result in an instant zero (0) on any exam in which such an offense is made! Regardless of how well you did otherwise.**

Contact: You are to email me at the end of the first day of class, stating your name, your course and its section. I will deduct 5 points off your final grade if you fail to do this. I will be emailing important information from time to time; including progress reports, announcements and advice as needed. Please read the emails. If I email you, it means it is important—important enough for me to take the time to write an email so that you will have it in writing.

Feedback: I encourage you to give me feedback about my teaching or the class, whether positive or negative (just make it constructive please). You can email me or talk to me, or if you don't want to reveal your identity, there is an anonymous feedback page on my website.

Help: FREE tutoring is available in the Mathematics Learning Center, MB 44. Also, a great place to get math help, even at odd hours, is www.mathhelpforum.com. There are a significant number of brilliant people from varying time zones who decide to spend their free time helping others with math. Take advantage of this great service. Another great resource on the web is wolframalpha.com. You can use that site to check your answers. Brilliant site. Of course, there are other online contenders like YouTube, Khan Academy, etc. Check them out. Google is your friend...and big brother. And don't forget your classmates. You should get the contact information of at least one person that you can study with or get missed notes from if you are absent, etc. You're all in this together, help each other out. And, of course, there is always me! Don't be afraid to come to me if you have questions or concerns. You can contact me via email or see me after class or during my office hour. My office hour is by appointment. Usually I will have time to see students after class.

Some class rules: Please silence your cell phones and don't use them when in class. Eating in class is NOT allowed. Drinking is permitted, as long as you remove your garbage afterwards.

Academic Integrity: Any act of academic dishonesty will be dealt with by applying the most stringent penalties permitted. Cheating includes, but is not limited to, receiving help during exams and submitting work or projects without properly acknowledging persons who assisted you. More on this below, but just remember,

I really don't like cheating. Please don't do it. There, I asked nicely.

LAGUARDIA COMMUNITY COLLEGE
CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF MATHEMATICS, ENGINEERING AND COMPUTER SCIENCE

MAT 112 Syllabus: College Algebra

Catalog Description: 3 hrs Lectures, 3 Credits

Prerequisite: MAT 096 or Placement

This course will start with a review of basic algebra skills such as factoring, solving linear equations and inequalities and proceed to a study of polynomial, exponential, and logarithmic functions. These functions will be used in applications involving simple mathematical modeling where students will engage in inquiry activities aimed at improving critical-thinking skills. A scientific calculator is required.

Instructional Objectives

During this course, the instructor expects to:

1. Reinforce student's basic algebraic skills: solving equations, inequalities and systems of linear equations.
2. Introduce students to the concept of a function and its application in modeling.
3. Develop students' problem-solving and critical thinking skills through inquiry learning and the use of technological tools.
4. Introduce students to the concepts and properties of quadratic, exponential, and logarithmic functions.
5. Introduce students to quadratic modeling techniques.
6. Present exponential modeling concepts and techniques.

Performance Objectives:

At the conclusion of this course, students will be able to:

1. Perform operations on polynomials, rational expressions and radicals, and solve systems of linear equations graphically and algebraically.
2. Understand the concept of a function and its role in mathematical modeling of real-life problems.
3. Interpret and solve elementary word problems using technological tools.
4. Solve problems involving quadratic, exponential and logarithmic functions.
5. Solve problems using quadratic modeling.
6. Solve problems using exponential modeling

Textbook: *College Algebra* by Man M. Sharma: EDUCO International, Inc
Fifth Edition, 2008

Online access is required for quizzes, homework and tutorial. The access code is provided with the purchase of a new textbook along with instruction about online registration. Student may choose to purchase the online access code along with an e-book instead of a hard copy textbook. Purchase of online access only and additional information can be found at the Educo website, www.educosoft.com

Academic Integrity: This class will be conducted in compliance with LaGuardia Community College's academic integrity policy.

Sanctions for Academic Integrity Violations: Sanctions or penalties for violations of academic integrity are imposed by the faculty member teaching the course upon discovery of a violation. All cases of academic dishonesty are filed with the College Adjudicator, who maintains a record of academic integrity violations.

The occurrence of a second or third offense of academic dishonesty may involve the imposition of a disciplinary sanction in addition to the academic sanction imposed by the instructor. Sanctions for violations of academic integrity include, but are not limited to, the following:

-failure of an exam - a grade of F on an essay or research paper - failure of a course project -failure of the course - suspension from the College - dismissal from the College

IN Grade: The Incomplete grade may be awarded to students who have not completed all of the required course work but for whom there is a reasonable expectation of satisfactory completion. A student who is otherwise in good standing in a course – defined as complying with the college attendance policy and maintaining a passing average – but who has not completed at most two major assignments or examinations by the end of the course may request an Incomplete grade. To be eligible, a student must provide before the instructor submits grades for the course a documented reason, satisfactory to the instructor, for not having completed the assignments on time. (See catalog for more details).

Attendance Policy: The maximum number of unexcused absences allowed is 15% of the total class meetings (about 5 hours). Unexcused absences beyond this maximum will result in a grade of WU or F.

Department Contact Information:

Office: E-218

Tel#: (718) – 482-5710

Tutoring: Mathematics Learning Center: MB 44

Mathematics Computer Labs: MB 43, MB 45 and MB 47

Lesson	Topics	Section	Page	Suggested Exercises-odd numbers
1	Solving Absolute Value Equations and Inequalities	3.3 3.5	Page 163 - 166 Page 179 - 180	Page 167: 1 - 11 Page 184: 81 - 95
2	Graphing Linear Equations (function)	2.4	Page 97 - 101	Page 112: 1 - 7
3	Equation of a Line; slope; parallel and perpendicular lines	4.1	Page 221-226	Page 227 – 228: 1 -29
4,5	Functions and Relations; Domain	2.2	Page 76 - 82	Page 83: 1 - 19
6	Difference Quotient and Rate of Change	2.2	Page 76 - 82	Departmental Worksheet
7	Applications of Linear Functions			Departmental Worksheet
8	<i>Discussion of Inquiry Learning Project 1</i>			Project
9	Systems of Linear Equations in two variables: Graphical Method	7.1 A	Page 383 - 387	Page 391 – 392: 1 - 15
10	Systems of Linear Equations in two variables: Algebraic Method	7.1 A	Page 383 - 387	Page 391 – 392: 1 - 15
11	Systems of Linear Equations in two variables: Applications(compound interest)	7.1 C	Page 389 - 391	Page 392: 17 - 23
12	Review for Test 1			Instructor's Material
13	Test 1			Instructor's Test
14	Basic Operations (+, -, x, ÷) on Polynomials and Special Products; Long Division	1.3	Page 17 - 21	Page 27 – 28: 1 - 41
15	Factoring Polynomials	1.3	Page 21 - 27	Page 28: 45 - 97
16	Solving Quadratic Equations by Factoring	3.1 B	Page 145 -148	Page 157: 19 - 27
17	Solution by Completing the Square (optional)			Departmental Worksheet
18	Solution by Using the Quadratic Formula	3.1 B		Page 157: 29 - 37
19	Graph of the Quadratic Function	4.3	Page 247-253	Page 253 – 255: 1 - 49
20	Modeling with Quadratic Functions	4.3	Page 247-253	Page 255: 63 - 69
21	<i>Discussion of Inquiry Learning Project 2</i>			Project
22	Rational Expressions (brief review): Domain of a Rational Function	1.4	Page 29 - 37	Page 37 – 39: 1 - 55
23	Equations Containing Rational Expressions	3.2	Page 159 - 162	Page 162: 1 - 11
24	Review for Test 2			Instructor's Material
25	Test 2			Instructor's Test
26	Rational Exponents ; Equations with Radicals	3.4	Page 167 - 171	Page 171: 1 - 11
27	Inverse Functions	5.1	Page 281 - 287	Page 288: 1 - 45

28	Exponential Functions and Their Graphs	5.2	Page 289 - 295	Page 295: 1 - 31
29	Finding Equations/formulas of Exponential Functions			Departmental Worksheet
30	The Meaning of Logarithm; Properties of Logarithms	5.3 5.4	Page 297 - 302 Page 305 -312	Page 303: 1 - 47 Page 312 – 313: 1 - 85
31	Solving Exponential Equations; Logarithmic Equations	5.5	Page 314 - 321	Page 321 – 322: 1 - 53
32	Review for Test 3			Instructor's Material
33	Test 3			Instructor's Test
34	Modeling with Exponential Functions: Compound Interest; Growth and Decay (exclude half-life)	5.6	Page 323 - 329	Page 331: 17 - 25
35	<i>Discussion of Inquiry Learning Project 3</i>			Project
36	Review for Final Exam			Departmental Review
	Cumulative Departmental Final			Given during Finals Week

Developed on September 20 2012 for PATHWAYS
Revised on September 4, 2013

LaGuardia Community College **Academic Calendar 2014-2015 - SPRING**

2015 Spring Semester - Session I

MAR	2	Mon	New Student Orientation First Day of Coop Internship
	3	Tues	Opening Sessions for Faculty & Staff / Last Day to Drop for 100% Tuition Refund Last Day to Apply for Readmission or Reinstatement for Spring 2015 Session II
	4	Wed	First Day of Weekday Classes - Spring Session I
	7	Sat	First Day of Saturday Classes - Spring Session I
	8	Sun	First Day of Sunday Classes - Spring Session I
	9	Mon	Last Day to Add a Course or Change Course Sections /Last Day to Drop for 75% Tuition Refund
	10	Tues	Financial Aid Certification Day / Last Day to Drop a Course without a "WD" Grade
	11	Wed	Course Withdrawal Drop "WD" Period Begins - A Grade of "WD" will be assigned to students who Drop a Course
	15	Sun	Last Day to Drop for 50% Tuition Refund
	17	Tues	Verification of Attendance due to the Registrar to assign WN Grades
	20	Fri	Last Day to Drop for 25% Tuition Refund / Course Withdrawal Drop "WD" period ends - A grade of "WD" will be issued / Last Day to Change Major for Spring Semester /Last Day to Submit Independent Study Contract
	21	Sat	Withdrawal Period Begins - A Grade of "W" is assigned to students who Officially Drop a Course

APR	3-11	Fri-Sat	<i>Spring Recess - No Classes Scheduled</i>
	22	Wed	Irregular Day - Classes Follow Monday Schedule
	28	Tues	Last Day to Apply for the Following Candidacies: Dietetic Tech., LPN, Nursing, Occupational Therapist Asst., Physical Therapist Asst., and Radiologic Technology
	29	Wed	Last Day to Apply for Spring 2015 Graduation

MAY	8	Fri	Last Day to Withdraw from a Course - A Grade of "W" will be issued
	24-25	Sun-Mon	<i>No Classes - College Closed</i>

JUN	4	Thur	Commencement - <i>No Classes Scheduled</i>
	5	Fri	Last Day of Weekday Classes - Spring Session I
	6	Sat	Last Day of Saturday Classes - Spring Session I
	7	Sun	Last Day of Sunday Classes - Spring Session I
	8-14	Mon-Sun	Final Examinations
	16	Tues	Grades and Attendance Due by 4 pm
	19	Fri	Last Day of Coop Internship

2015 Spring Semester - Session II

JUN	3	Wed	Last Day to Apply for Readmission or Reinstatement for Spring 2015 Session II
	15	Mon	First Day of Coop Internship
	17	Wed	Last day for 100% Tuition Refund
	18	Thur	First Day of Weekday Classes - Spring Session II
	20	Sat	First Day of Saturday Classes - Spring Session II Last Day to Drop a course without a Grade of "WD"
	21	Sun	First Day of Sunday Classes - Spring Session II Course Withdrawal Drop "WD" period begins - A Grade of "WD" is assigned to students who Drop a Course
	22	Mon	Last Day to Drop for 50% Tuition Refund / Last Day to Add a Course or Change Course Sections
	26	Fri	Last Day to Drop for 25% Tuition Refund /Last Day to Submit Independent Study Contract
	27	Sat	Verification of Attendance due to the Registrar to assign WN Grades
	29	Mon	Course Withdrawal Drop "WD" period ends - A grade of "WD" will be issued
	30	Tues	Withdrawal Period begins - A Grade of "W" is assigned to students who Officially Withdraw from a Course

JUL	4-5	Sat-Sun	No Classes - College Closed
	20	Mon	Last Day to Withdraw from a Course - A grade of "W" will be Issued
	29	Wed	Last Day of Weekday Classes - Spring Session II
	30	Thur	Reading Day

AUG	1	Sat	Last Day of Saturday Classes - Spring Session II
	2	Sun	Last Day of Sunday Classes - Spring Session II
	3-6	Mon-Wed	Final Examinations
	11	Tues	Grades and Attendance Due by 4 pm
	28	Fri	Last Day of Coop Internship

Explanation of Terms

Withdraw - Students may withdraw from classes after the Last Day to Drop for 25% Tuition Refund through the Last Day to Withdraw; receive a "W" grade that is not calculated in the GPA. Students who officially withdraw from a course are NOT eligible for a tuition refund.

Withdrawal Drop "WD" - A WD grade is assigned to students who drop a course after Financial Aid Certification date in Session I until the last day to drop a course for 25% Tuition Refund. "WD" indicates that student attended a class at least once before dropping it. A WD grade will not appear on the Transcript, and is not calculated in the GPA.

Questionnaire

How did you get into this class? (Placement exam after entering college, placed here upon college entry, placed by an advisor, etc)

Are there any dates during the Spring for which you will not be able to take an exam due to religious reasons? If so, please state the date(s) and “occasion(s)” below.

Any general feelings or concerns towards this course? (For example, are you: Scared? Excited? Curious? Indifferent? Based on your perceived ability in math, what grade are you expecting? etc)

Are there any other relevant comments that you wish to add?
