MAT 1275-D535 College Algebra & Trigonometry (4 cr, 4 hr) Sp 17

Course Meetings: TuTh 2:15PM-3:55PM (N703)   **Email:** ehalleck@citytech.cuny.edu
Instructor: Ezra Halleck   **Phone:** (718) 260-5931
Office Hours: T Th 4-5 and by apt*   **Office:** N726
In particular, I will often be available for appointments from 1 to 2 on Tuesdays. Please confirm/remind me of an apt. via email the evening before.

Text: Custom Text by McGraw-Hill containing material from
1. *Intermediate Algebra, 3rd edition* by Julie Miller, Molly O'Neill, and Nancy Hyde
2. *Trigonometry, 2nd edition* by John Coburn

Technology: A scientific calculator is required. Those of you going on to MAT 1375 (pre-calculus) should instead invest in a graphing calculator such as a TI-84. **Cell phones are not permitted during exams.**

Course Description: An intermediate-advanced algebra & trig course. Algebra topics include systems of equations, & quadratic, exponential and logarithmic functions; trig topics include identities, equations & sol'ns of triangles.

Prerequisite: MAT1175 or score of at least 45 on both pre-algebra and algebra sections of placement exam

Student Learning Outcomes: At the end of the semester, students will be able to
1. Perform operations with/simplify polynomial, rational, radical, complex, exponential & log expressions.
2. Solve:
    a. Linear and fractional equations;
    b. One-variable quadratic equations by factoring, completing the square, and the quadratic formula;
    c. Radical and exponential equations;
    d. Systems of 2 nonlinear and up to 3 linear equations.
3. Apply the distance and midpoint formulas and graph circles and parabolas.
4. For the trigonometry portion of course (~1/3), solve problems involving right and oblique triangles, prove identities, solve equations and graph the sine and cosine function.
5. Apply knowledge of algebra and trigonometry to solve verbal problems.

Attendance: It is strongly suggested that you do not miss more than 3 classes. Lateness between 0 and 40 minutes counts as 1/2 absence. Once in class, stay for the full period; if you *leave early* without making prior arrangements, *you will be marked as absent* and any work done that day will be invalidated. Students who have attended the course at least once but who stop attending will receive a WU grade. Every withdrawal (official or unofficial) can affect a student's financial aid status.

Cell phones: Please turn *off* **(or on vibrate if expecting an important communication)** and place out of sight. If I see or hear a phone, I may ask that you hand it to me for the duration of class.

Academic honesty: You are encouraged to work in groups for much of what we do, both in and outside of class, but be able to explain *anything* you turn in. During an exam, showing someone else your work is cheating; you will be treated in the same way as the person who copies. Please cover your work.

Set enough time aside each week: You are expected to spend 4-8 hours outside the classroom each week reading the text, watching the videos and writing responses, doing homework, both written and online, and preparing for quizzes and exams.

Tutoring Resources:
1. Atrium Learning Center (approximately 10AM-8PM, M-Th, shorter hours on F & Sat*):* While some of the tutors are advanced undergraduate students, many are adjunct faculty.
2. Peer-Assisted Learning (PAL) workshops: *Studies have shown that students who are actively involved in the learning process and work in small groups retain more than students that work alone* (details TBA).
3. Math department may have some limited hours of tutoring by advanced undergraduates (details TBA).

***Time* problems?** Here is a **damage control priority list:**
1. *Read the section and watch the video prior to the class in which it is covered.* This will facilitate your understanding and participation in class.
2. *Attempt at least some of the homework problems immediately after class,* so that you know how much of the class you understood and whether you will need to get help in order to complete hm wk on time.
3. *Take advantage of office hours:* If you are unable to attend the scheduled hours, make an appointment.
4. Get some tutoring help (see above).

Grade components

Openlab participation (5%): NOTE, you will be making a total of TWO postings, all other contributions are comments on your or another student's posting.
1. Join openlab **and** course and make a posting by **Tu 2/14** explaining how math relates to your career (include a photo of yourself with an aspect of mathematics and/or your career in the background).
2. Make a 2nd posting by **Tu 3/14** of a real world parabola. Examples are suspension bridge cables & satellite or microwave dishes. Take your own photograph (1% extra credit) or find one on the internet (just regular credit). Include a paragraph describing its context and purpose. Provide its location and a link to the source if you found it on the internet.
3. In class, I will show you how to superimpose a graph over your photo. By **Tu 3/21,** you should have added the superimposed graph and its equation. You will be paired with another student.
4. By **Tu 3/28**, comment on and make suggestions for how the your partner can improve his or her posting and create a word problem based on his/her graph.
5. By **Th 4/6**, respond to your partner's comment by editing your original post or explain why you disagree with his or her suggestion. Solve the word problem that your partner has created.
6. Finally, by **Tu 5/9**, comment on your original posting on blackboard, summarizing your overall experience in the course and update your thoughts on how mathematics relates to your career.

Writing Assignments (5%): These will include daily out-of-class assignments based on watching the videos as well as occasional in-class laboratories and short writing assignments.

Daily Quizzes (5%): These will be given at or near the beginning of class and will be based on one or more of the webwork problems. One purpose is to make sure that you know how to show your work.

Homework (10%) On the "schedule" is a *list of problems*. These will not be graded individually but you should include them as part of your portfolio. The homework grade will be based on "webwork", which is closely based upon this list of problems. Webwork has many features that I will do my best to demonstrate in class.

Midterm Exams (20% each, 40% total): There are 3 non-final exams. One week before each exam, a sample exam will be posted on the openlab. No makeups will be given; instead, the best 2 scores will be selected. After each of these exams, **you may make up to 15 points or 30% of what you lost** (whichever is less) by doing corrections: on a separate sheet, for each problem you lost more than a point or 2, write a sentence explaining what you did wrong and then redo the entire problem. Staple your corrections to the exam and **submit no later than 1 week after the exams have been returned**.

Final Exam (30%): Final exam review questions are available at the department's website**. If you miss the final exam and have been failing the course, you will receive a WU or F.** Otherwise, if you have a documented illness or emergency, you will have an opportunity to take a makeup final exam (small fee).

Portfolio (5%): Procure a 3 ring binder and make 4 separate sections, one for each of the exam periods. Within each exam period, order chronologically or have separate areas for inclass notes, quizzes, homework, writing assignments, the exam itself and corrections to the exam. Bring the portfolio to each exam. Score is out of 10 for 1st & fin exms & 15 for middle 2 exms.

Grade scale:

93 – 100	A	77 – 79.9	C+
90 – 92.9	A-	70 – 76.9	C
87 – 89.9	B+	60 – 69.9	D
83 – 86.9	B	0 – 59.9	F
80 – 82.9	B-		

Pie chart: fin exam, 30%; portfolio, 5%; online, 5%; writing, 5%; quizzes, 5%; webwork, 10%; MT exams, 40%.