

Course Syllabus

MATH1314-027 – College Algebra

Fall 2018

Instructor: Kiyomi Kaskela

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Office Hours:

| Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------|------------------|----------------|------------------|--------------------|
| | 10:20 – 10:50 AM | | 10:20 – 10:50 AM | 10:00 AM – 1:00 PM |
| 1:45 – 2:25 PM | 12:15 – 12:55 PM | 1:45 – 2:25 PM | 12:15 – 12:55 PM | |
| 5:00 – 5:25 PM | 4:20 – 5:00 PM | 5:00 – 5:25 PM | 4:20 – 5:00 PM | |

Also by appointment

Prerequisites: 2 years of high school algebra or Math 0320, TSI compliance

Supplies: a scientific calculator (All of the work must be done without a graphic calculator.)

Textbook (recommended): College Algebra, 7th edition by Blitzer

Lecture Notes and Homework Assignments: You are responsible to print and bring lecture notes to class each week. The last page of the lecture note is the homework assignment. These can be accessed on Blackboard. (Class Homepage → Handouts → Unit 1...)

Course Specific Instructions: There are video tapes of many topics available in the room M116 in the math building at the Levelland campus. These tapes can be viewed in the lab, or checked out and taken home for viewing. These videos can also be viewed online. Go to Blackboard, for the log in name and password type “mvideos”. You can then find the appropriate course and the topic in which you are interested.

Tutoring: Students can obtain tutoring at no charge in Room 116 on the South Plains Campus in Levelland and in RC212 at the Reese Center, Building 2.

Course Description: A standard course in college algebra. Quadratic equations; ratio and proportion; variation; binomial theorem; inequalities; complex numbers; theory of equations; determinants and matrices.

Course Purpose/Rational/Goal: The purpose of the course is to provide a fundamental background in algebra to meet the mathematics requirement for the core curriculum and to provide a basis for further study in mathematics.

Course Requirements: To maximize the potential to complete this course, a student should attend all class, take notes and participate in class, complete all homework assignments and examinations including final examination.

Course Evaluation: Your grade will be determined by the 4 in-class tests (100 points each), weekly grades (200 points total), and the comprehensive final (200 points). There will be no makeups for any test. If you miss a test by a valid reason/documentation, your final exam grade will replace your missed test after being converted to a 100-point scale. For those students with good attendance and good class participation (turning in homework assignments regularly, no cell phone*, unnecessary talking, eating, etc. during class), the lowest in-class test grade will be replaced with your final test grade after being converted to a 100-point scale. (if it is higher than the in-class test.) (*including other electronic devices)

Homework: Homework will be assigned each day, **All of your work will be shown on the homework, or it will be counted as not done.** No late homework will be accepted.

Weekly Grades: You may use your homework assignments for quizzes.

- 20 points each week, given almost every week and consisting of quizzes similar to the homework problems
- You will work on your quiz alone for about 20 minutes either at the beginning of class or at the end of class.
- You turn in your homework assignments with your quiz. A quarter of your quiz grade will be from your assignments.
- As your semester weekly grades, the top 10 weekly grades will be picked as your semester weekly grades.

Binder Organization (Bonus points to Final Exam Grade): Your binder will be collected twice during the semester; the day of Test 2 and Test 4 for the instructor to grade while you are taking the test. 10 maximum bonus points each will be added to your final exam grade. Your binder should include: the syllabus with the course schedule, the lecture notes (filled by you), supplemental handouts, any graded papers such as homework assignments, tests, class work sheets, etc. All of them should be in order either chronologically or by topic. Your name, course and section number should be clearly written either on the front of the binder or the inside cover. Your binder is not organized if it contains loose papers. You are welcome to bring your binder to me during the office hours for an advice anytime.

Assessment Procedures: The summary assessment of students' mastery of the skills and concepts as specified in the expected learning outcomes will occur, with appropriate course grades assigned as follows:

| | | | |
|-----------|---|--------------------------|-----------|
| 720 – 800 | A | In-class tests (4 x 100) | 400 |
| 640 – 719 | B | Weekly grades (10 x 20) | 200 |
| 560 – 639 | C | | |
| 480 – 559 | D | Final exam | 200 |
| below 480 | F | | <hr/> 800 |

Attendance Policy: A student who misses two consecutive weeks of class or a total of five absences may be dropped from the class. You are encouraged to come to my office during the office hours to catch up with the class. Any time you miss a class, you will receive a zero for that day's lab grade.

Student Learning Outcomes/Competencies:

Upon completion of this course and receiving a passing grade, the student will be able to:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.

Core Objectives:**Communication Skills:**

effective development, interpretation, and expression of ideas through written, oral, and visual communication.

- Develop, interpret, and express ideas through written communication
- Develop, interpret, and express ideas through oral communication
- Develop, interpret, and express ideas through visual communication

Critical Thinking:

creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

- Generate and communicate ideas by combining, changing, and reapplying existing information
- Gather and assess information relevant to a question
- Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills:

the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

- Manipulate and analyze numerical data and arrive at an informed conclusion
- Manipulate and analyze observable facts and arrive at an informed conclusion

Academic Honesty: You are expected to uphold the ideas of academic honesty. All work that is graded must be your own. This policy applies to all work attempted in this course. If this policy is violated, the student will receive an **F** for the assignment and will be dropped with an **F**.

Equal Opportunity: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability, or age.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric or learning disabilities, who wish to request accommodations in this class should notify the Special Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his or her disability to the Special Services Coordinator, located in the Student Services Building, (806) 894-9611 ext. 2529) 2530 on the Levelland Campus and in rooms 809 and 811, Reese Center Building 8, (806) 885-3048 ext. 4654 on the Reese Campus.

Classroom Civility: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Please be respectful of your fellow classmates. **Turn off all cell phones, pagers, and electronic devices (Ipods, Mp3 players, CD players, etc.) before entering the room** and refrain from reading newspapers, chewing tobacco products, or otherwise being disruptive in class.

“Your cellphone cannot be seen or heard.”

(Consequence: a loss of 5 points from the upcoming test)

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at: (http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php) Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

Religious Holy Days: In accordance with Section 51.911, Texas Education Code, South Plains College will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within seven (7) calendar days after the absence. Students are required to file a written notification of absence with each instructor within the first fifteen (15) days of the semester in which the absence will occur. Forms for this purpose are available in the Student Services Office along with instructions and procedures. “Religious holy days” means a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code.

School Sponsored Events: If a student misses class because of participation (being a spectator at any sporting event does not qualify) in a school sponsored event (athletics, choir, etc.), it is the student’s responsibility to:

1. Inform the instructor about the absence **prior** to the date;
2. Hand in assignments due during planned absence **prior** to the absence (unless specifically granted permission to do otherwise);
3. Arrange with instructor to take any exams that will be missed during the period of absence.

Disclaimer: The instructor reserves the right to alter any class policies as deemed necessary by the instructor, and will announce any changes in class. If a student has any questions about a change in policy ask the instructor for clarification.

Recording Lectures: To improve the teaching method, the instructor may record the lecture with or without a notice.

Dropping a Course: You have to return a completed official drop form to the Admissions and Records office, if you decide to drop the course, by:

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|-----------------------|---------------------------|
| Thursday, November 15 | Last Day to Drop a Course |
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Then, a student will receive a W (no grade penalty).

Holiday:

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| Monday, September 3 (Labor Day) | No Classes |
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Fall Break:

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| Friday, October 12 | No Classes |
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Thanksgiving Holiday:

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| November 21 - 23 | No Classes |
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Final Examinations:

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|----------------------|-----------------|----------------------------------|
| Tuesday, December 11 | 8:00 – 10:00 PM | In our regular classroom (RC220) |
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Tentative Course Schedule (MATH1314 Fall 2018)

| Week (Date) | Section Title |
|-----------------------------|--|
| 1 (8/28) | Syllabus, Review |
| | §1.1: Summary of Factoring Techniques (Brief Lecture) |
| | §1.2: Linear and Rational Equations |
| 2 (9/4) | §1.3: Complex Numbers |
| | §1.4: Quadratic Equations |
| 3 (9/11) | §1.5: Other Types of Equations |
| | §1.6: Linear Inequalities and Absolute Value Inequalities |
| 4 (9/18) | §1.6: Linear Inequalities and Absolute Value Inequalities |
| | Test 1 (Unit 1) |
| 5 (9/25) | §2.1: Basics of Functions and Their Graphs |
| | §2.2: Combination of Functions; Composite Functions |
| | §2.3: Inverse Functions |
| 6 (10/2) | §2.4: Linear Functions and Slope |
| | §2.5: Parallel and Perpendicular Lines; Average Rate of Change |
| | §2.6: Distance and Midpoints Formulas; Circles |
| 7 (10/9) | §2.7: Quadratic Functions |
| | §3.1: Polynomial Functions and Their Graphs |
| 8 (10/16) | Test 2 (Unit 2) |
| | §3.1: Polynomial Functions and Their Graphs |
| 9 (10/23) | §3.2: Dividing Polynomials; Remainder and Factor Theorems |
| | §3.3: Zeros of Polynomial Functions |
| 10 (10/30) | §3.4: Rational Equations and Their Graphs |
| | §3.5: Polynomial and Rational Inequalities |
| 11 (11/6) | Test 3 (Unit 3) |
| | §4.1: Exponential Functions |
| | §4.2: Logarithmic Functions and Properties of Logarithms |
| 12 (11/13) | §4.2: Logarithmic Functions and Properties of Logarithms |
| | §4.3: Exponential and Logarithmic Equations |
| 13 (11/20) | §4.5: Gauss-Jordan Elimination |
| | §4.4: Systems of Nonlinear Equations |
| 14 (11/27) | §4.4: Systems of Nonlinear Equations |
| | Test 4 (Unit 4) |
| 15 (12/4) | §4.6: Determinants and Cramer's Rule |
| | Review for the Final Exam |