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## Syllabus: *College Algebra*

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### Course Information

Course Prefix/Number: Mat 151

Credit Hours: 3

Semester: Spring 2020

Course Title: College Algebra

Class Days/Times: MTThF 2:23 -3:15PM

Room: 804

Wed 12:36-1:15PM

### Instructor Information:

Name: Noemi Hubilla

Phone/Voice Mail: 928-475-2378 ext. 5804

Master of Arts in Teaching major in  
Mathematics

E-mail: no.hubilla@scusdaz.org

Office location: San Carlos High School

Office hours: 8:00 – 3:45 PM

**Course Description:** College algebra; algebraic functions. Includes the language of sets, lines, in the plane, systems of linear equations, rational expressions and equations, radical expressions and equations, inequalities, quadratics, exponents, and logarithms.

### Course Objectives:

#### During this course students will

- Calculate the slopes of a lines; determine equations of a lines, and graph lines.
- Given two points in the plane, find the distance and midpoint between them.
- Solve systems of linear equations in three variables algebraically.
- Solve compound inequalities in one variable and graph linear inequalities.
- Factor polynomials using advanced techniques and solve related equations.
- Simplify rational expressions including, including complex rational expressions.
- Solve rational equations involving quadratic equations.
- Simplify radical expressions, convert between radicals and rational exponents, and solve radical equations.
- Solve quadratic equations using completing the square and quadratic formula; interpret the discriminant.
- Graph parabolas

- Solve literal equations.
- Define and identify function and use function notation.

**Student Learning Outcomes (SLOs):**

After completion of the course students will be able to :

- Use the skills of arithmetic and algebra, in isolation and in application, with and without technologies (including but not restricted to calculators and computer programs).
- Express themselves visually (in graphing functions and) in presenting their answers to real-life problems.
- Perform basic matrix operations using calculators.
- Create mathematical models using a variety of functions.
- Employ technology to set up and solve real world situations.
- Solve linear, absolute value, quadratic, rational, and radical equations, linear, absolute value inequalities, and linear systems in two and three variables.
- Graph linear, quadratic, exponential, and linear inequalities.
- Solve problems involving world applications.

**Course Structure:**

This course will be operating on a combination of lecture, group activity, computer activity, and discussions. This course will be delivered through the computer using ALEKS. Students are also expected to submit work in paper based (worksheet).

**Texts and Materials:** Some materials and text are provided by ALEKS online.

**Evaluation and Grading & Assignments:**

Daily Attendance	20%
Homework/Assignment	20%
Quizzes	20%
Final Test	40%

**GRADING SCALE**

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

**Apache Cultural Component:**

San Carlos Apache College is in the process of developing culturally relevant curriculum and coursework in Apache history, culture, and language. Student and community feedback will guide this process. For years, the Apache Nation dreamed of establishing a college that would support their people. As we will learn through our work in class, as is the case with many Indigenous cultures, education on Apache Land has not been fully grounded in the cultures of its people. Many people especially the Elders wish to change that by ensuring that Apache people are preparing the leadership roles in all fields of life through finishing their studies and

learn how to solve math problems and integrate their learning in real world. This course is the continuation of the basic math they have learned from high school. This will develop more their critical thinking.

**Policies and expectations- minimally**

Students are expected to attend class and bring their personal laptop every day. In order for learning to progress, academic honesty is essential. Ask for help when you do not understand. Your teacher is your first resource. The best way to learn math is to do math. The more you log on the faster your skills will grow. The Aleks program will periodically test your skill to assess progress. You may find you are repeating items you have previously covered because you did not pass assessment item. Be patient, you will succeed. Some topics are easy some are hard. The program is presented to each in an individual way depending on your skills and abilities.

Please be respectful of yourself and other students in the class. Disruptive may result in being asked to leave the class. This includes but is not limited to talking, eating, using cell phone, texting or playing the phone, late arrival and early departures, any abusive or indecent language. Turn off cell phones and turn in to the teacher when you arrive in the class.

**DISCLAIMER:** This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.

Approved:

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