South Texas College
Department of Mathematics
Division of Math, Science & Bachelor Programs
Math 1414 - College Algebra
Syllabus: Fall 2018

Instructor's Information:

Instructor Name: *Noe Gamez*
Office Location: *SPHS – 235*
Telephone #: *956-271-1600 Ext 4165*
Office Hours: *Monday - Friday (8:05 am – 9:37am)*
e-mail: *ngamez@sharylandisd.org*
Department Web Page: *https://ms.southtexascollege.edu/math/index.html*

Tutorials:
Tues/Thurs
4:15 pm-5:15 pm

Department Chair Information:

Name of Chair: *Mario J. Morin*
Office Location: *Pecan Campus Bldg. J Room 2.804-B*
Telephone #: *956-872-7258*
Fax #: *956-872-6774 Math Department*
e-mail: *mjmorin@southtexascollege.edu*

Course Information:

Course Name: *College Algebra*
Course #: *MATH 1414 (S50, S86)*
Room Location: *SPHS-235*

Course Description:

This course is the study of quadratic, polynomial, rational, logarithmic, and exponential functions and includes the study of systems of equations, matrices. The focus of the course is the discovery and application of algebraic techniques, including graphing, to solve related equations. Additional topics may include sequences and series.

Prerequisite: *Meet TSI college-readiness standard for Mathematics; 288 Course Descriptions or completion of MATH 0090 or MATH 0200 or MATL 0020 with a grade of "P" or "C" or better, or equivalent.*

Program Learning Outcomes:

- Demonstrate in-depth knowledge of Mathematics, its scope, application, history, problems, methods, and usefulness to mankind both as a science and as an intellectual discipline.
- Demonstrate a sound conceptual understanding of Mathematics through the construction of mathematically rigorous and logically correct proofs.
- Identify, formulate, and analyze real world problems with statistical or mathematical techniques.
- Utilize technology as an effective tool in investigating, understanding, and applying mathematics.
- Communicate mathematics effectively to mathematical and non-mathematical audiences in oral, written, and multi-media form.

Course Learning Outcomes:

Upon successful completion of this course, student will:

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.

Required Core Objectives:

CRITICAL THINKING SKILLS: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

COMMUNICATION SKILLS: to include effective development, interpretation and expression of ideas through written, oral and visual communication.

EMPIRICAL AND QUANTITATIVE SKILLS: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

TEAMWORK: to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

SOCIAL RESPONSIBILITY: to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities.

PERSONAL RESPONSIBILITY: to include the ability to connect choices, actions, and consequences to ethical decision-making.

Evaluation:

Grading Criteria:			
5 tests @..... 100 points each **(lowest score will be dropped)**	A	≥	90%..... (540-600)
Term Project.. 50 points	B	=	80%-89%.. (480-539)
Final Exam..... 150 points **(Mandatory)**	C	=	70%-79%.. (420-479)
	D	=	60%-69%.. (360-419)
Total Points…600 points	F	≤	59%..... (<360)

- All exams are in-class closed-book exams – No Make-ups!
- Exam results will be given within one week from the exam day
- Use of cell phones, cell phone calculators, iPod, or electronics is not allowed during exams or class time.
- Check with the instructor for the kind of calculator allowed

Required Textbook & Resources:

College Algebra –11th Edition by Lial/Hornsby/Schneider

Developmental Studies Policy Statement:

The College's Developmental Education Plan requires TSI Liable students who have not met the college readiness or exemption standards in reading, writing, and/or mathematics to enroll in Developmental Studies courses including College Success. Failure to attend these required classes may result in the student's withdrawal from ALL college courses.

Equal Education and Equal Employment Opportunity:

South Texas College is an equal education and equal employment opportunity/affirmative action employer. As an equal opportunity employer, the College does not discriminate on the basis of race, color, national origin, religion, age, sex, sexual orientation, gender, gender identity, disability, genetic information, or veteran status. Discrimination is prohibited and the College will comply with all applicable College policies, and state and federal legislation. This policy extends to individuals seeking employment with and admission to the College.

Title IX Statement:

Title IX of the Education Amendments of 1972 protects individuals from discrimination based on sex in any educational program or activity operated by recipients of federal financial assistance. Sexual harassment, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. Questions or requests for information regarding Title IX, including complaints of sexual harassment, sexual assault, sexual violence, or other sexual misconduct should be directed to the Title IX Coordinator or Deputy Title IX Coordinators as listed at http://www.southtexascollege.edu/about/notices/title-ix.html

Pregnant and Parenting Students:

South Texas College does not discriminate against any student on the basis of pregnancy, parenting or related conditions. Pregnant or parenting students seeking accommodations should contact the Conflict Resolution Center immediately at 956-872-2180 or crc@southtexascollege.edu.

Alternative Format Statement:

This document is available in an alternative format upon request by calling (956) 872-8327.

ADA Statement:

Individuals with disabilities requiring assistance or access to receive services should contact disABILITY Support Services at (956) 872-2173.

Veterans Statement:

The STC Office of Veterans Affairs provides support services to our military veterans and their dependents, and assists them in applying for and obtaining their educational benefits. Contact the Office of Veterans Affairs at 956-872-6723 for questions or to set an appointment.

South Texas College Board Policy 3335 - Student Attendance:

Class attendance and participation are essential to student success. Regular and punctual class attendance is expected at South Texas College. Student absences will be recorded from the first day the class meets. It is imperative that students attend on the first day of class. This is when the course syllabus, schedule, deadlines, and class expectations will be discussed. In case of absence, it is the

student's responsibility to contact the instructor prior to the absence. The student is expressly responsible for any work missed regardless of the cause of the absence. The student must discuss such work with the instructor and should do so immediately on returning to school. Communication between the student and faculty member is most important, and it is the student's responsibility to initiate such communication. The faculty member will determine, based on policies outlined in the course syllabus, whether the student will be permitted to make up work and will decide on the time and nature of the makeup. If a student does not appear at the prearranged time or meet the prescribed deadline for makeup work, they forfeit their rights for further makeup of that work. A student who stops attending class for any reason should contact the faculty member and the Admission's office to officially withdraw from the class. Failure to officially withdraw may result in a failing grade for the course.

Departmental Course Requirements: Required Sections & Recommended Exercises:

MATH 1414 – College Algebra		
Chapter 1	**DESCRIPTION**	**RECOMMENDED PROBLEMS**
1.3	Complex Numbers	Assigned by Instructor
1.4	Quadratic Equations	
1.5	Applications & Modeling w/Quad. Equations	
1.6	Other Types of Equations & Applications	
1.7	Inequalities	
1.8	Absolute Value Equations & Inequalities	
----------TEST 1----------		
Chapter 2	**DESCRIPTION**	**RECOMMENDED PROBLEMS**
2.1	Rectangular Coordinates & Graphs	
2.2	Circles	
2.3	Functions	
2.4	Linear Functions	
2.5	Equations of Lines and Linear Models	
2.6	Graphs of Basic Functions	
2.7	Graphing Techniques	
2.8	Function Operations and Composition	
----------TEST 2----------		
Chapter 3	**DESCRIPTION**	**RECOMMENDED PROBLEMS**
3.1	Quadratic Functions and Models	
3.2	Synthetic Division	
3.3	Zero of Polynomial Functions	
3.4	Polynomial Functions: Graphs, App. & Models	
3.5	Rational Functions: Graphs, App. & Models	
----------TEST 3----------		
Chapter 4	**DESCRIPTION**	**RECOMMENDED PROBLEMS**
4.1	Inverse Functions	
4.2	Exponential Functions	
4.3	Logarithmic Functions	
4.4	Evaluating Logarithms and Change of Base Theorem	
4.5	Exponential & Logarithmic Equations	
4.6	Applications & Models of Exponential Growth & Decay	
----------TEST 4----------		
Chapter 5	**DESCRIPTION**	**RECOMMENDED PROBLEMS**
5.1	Systems of Linear Equations	
5.2(*)	Matrix Solution of Linear Equations	
5.3	Determinant Solutions of Linear Equations	
5.7	Properties of Matrices	
5.8	Matrix Inverses	
----------TEST 5----------		
Departmental Comprehensive Final Exam over Chapters 1, 2, 3, 4, and 5.		
Sections with (*) are optional and covered if time permits		

Syllabus Disclaimer:

Information contained in this syllabus is, to the best knowledge of this Instructor, considered correct and complete when distributed to the student. The Instructor reserves the right, acting within policies and procedures of South Texas College, to make necessary changes in course content or instructional techniques without prior notice or obligation to the student. Any changes made would be communicated accordingly.