Math 1314 College Algebra Course Policy – Spring 2024

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Office: MATH 347
Phone: 936-468-1440 (office)
936-468-3805 (Math Dept.)

Class meeting information: Classes are held in the Bush Mathematical Sciences Building on the SFASU campus
Section 003 - MWF 10:00 – 10:50 in room 212
Section 004 – MWF 12:00 – 12:50 in room 212
Section 011 – MW 1:00 – 2:15 and TTh 12:30 – 1:45 in room 204

Office Hours: in MATH 347

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Course Description: Topics include properties of real numbers; techniques of algebraic simplification; solving equations and inequalities; sets; functions; graphs; rational expressions; mathematical models; creating, interpreting and graphing functions. Particular focus is given to polynomial, exponential, and logarithmic functions. Discussion and instruction in proper mathematical organization, communication, and math-specific study skills is incorporated throughout the course.

Required Materials:
ALEKS: This program will be used for your learning, homework assignments, and knowledge checks. Get your ALEKS account by:
2. Register using your SFA email and course code: 9R6Q4-L3GHK

The required textbook for this course is College Algebra (2nd Edition) by Julie Miller and Donna Gerken. The ebook comes with a subscription to ALEKS system.

Calculator: You will need a scientific calculator for this class. Graphing calculators may be used, but are not required. The calculator function of a cell phone or tablet will not be permitted during tests or quizzes. There is a great free scientific and graphing calculator at desmos.com.

Course Requirements:
Attendance (physical and mental) is expected of all students. Being physically present while looking at phone or sleeping is not being present for class. Please do not have phones out during class. Missing in-class activities, instruction, quizzes, etc., will lower your daily average. You must make a commitment to attend every class, arrive on time, and to stay the entire time. Bring all necessary materials to each class, be attentive to the task at hand, take notes, and be prepared to participate in class discussions.

Exams: There will be three exams and a final exam each worth 20% of your grade. Please note that the dates for our in-class exams are subject to change, but the final is university scheduled and cannot be taken at a different time. The final exam is comprehensive and mandatory. Your final exam grade can be used to replace a low or missing exam grade. Therefore, there will be no make-up exams. If you miss an exam, your final exam grade will be substituted in place of the missing exam grade.

Daily Work: 20% of your grade will be determined by your daily average. This will include in-class quizzes, homework assignments in ALEKS, etc. You must make additional commitments of doing work outside of class and asking for help when you need it. The general rule of thumb regarding college studying is, that for each class, students should spend approximately 2-3 hours of study time for each hour that they spend in class. These assignments will not be accepted late and cannot be made up, but I will drop the three lowest daily grades at the end of the semester.
Grading:
Your overall grade will be determined using the following:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Component</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% - 100%</td>
<td>Course Grade</td>
<td>A</td>
</tr>
<tr>
<td>20%</td>
<td>Daily Work Average</td>
<td>B</td>
</tr>
<tr>
<td>60%</td>
<td>Exams (3 at 20% each)</td>
<td>C</td>
</tr>
<tr>
<td>20%</td>
<td>Final Exam (Comprehensive)</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 60%</td>
<td></td>
<td>F</td>
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Additional Help: Tutoring is available to you through the AARC and the math department. More information can be found here [http://www.sfasu.edu/aarc/tutoring](http://www.sfasu.edu/aarc/tutoring). Set up a tutoring schedule early for best results! A low score on exam 1 may result in required tutoring.

Tentative Course Calendar: I will do my best to adhere to what is in this course policy, but at any time I may have to change something. If this happens, I will inform you in class and in D2L. For those working ahead of this schedule, meet with me individually if you’d like to take exams earlier and finish early.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Jan 18-19</td>
<td>Introduction</td>
<td></td>
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<tr>
<td>Jan 22-26</td>
<td>1.1 Basic Review</td>
<td></td>
</tr>
<tr>
<td>Jan 29-Feb</td>
<td>1.2 Functions and Their Graphs</td>
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<td></td>
<td>1.3 Linear Functions</td>
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<td>Feb 5-9</td>
<td>1.4 Transformations</td>
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<td></td>
<td>1.5 Combining Functions</td>
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<tr>
<td>Feb 12-16</td>
<td><strong>Exam 1 - Wednesday, February 14</strong></td>
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<tr>
<td></td>
<td>2.1 Quadratic Functions</td>
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<tr>
<td>Feb 19-23</td>
<td>2.1 Quadratic Functions</td>
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<tr>
<td></td>
<td>2.2 Polynomial Functions</td>
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<tr>
<td>Feb 26-Mar</td>
<td>2.3 Rational Functions</td>
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<tr>
<td>Mar 4-8</td>
<td><strong>Exam 2 - Wednesday, March 6</strong></td>
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<tr>
<td>Mar 11-15</td>
<td>Spring Break</td>
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<tr>
<td>Mar 18-22</td>
<td>3.1 Inverse Functions</td>
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<tr>
<td></td>
<td>3.2 Exponential Functions</td>
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<tr>
<td>Mar 25-27</td>
<td>3.3 Logarithmic Functions</td>
<td>Easter Break Th/F</td>
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<tr>
<td>Apr 1-5</td>
<td>3.4 Solving Exponential Functions</td>
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<td>Apr 8-12</td>
<td><strong>Exam 3 - Wednesday, April 10</strong></td>
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<tr>
<td>Apr 15-19</td>
<td>4.1 Systems of Equations</td>
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<tr>
<td>Apr 22-26</td>
<td>4.2 Matrices</td>
<td></td>
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<tr>
<td>Apr 29-May</td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>6-May</td>
<td>Final Exam - Section 003 - 10:30</td>
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<td></td>
<td>- Section 004 - 1:00</td>
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<tr>
<td>8-May</td>
<td>Final Exam - Section 011 - 1:00</td>
<td></td>
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</tbody>
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See [https://math.sfasu.edu/docs/syllabi/MATH1314Syllabus.pdf](https://math.sfasu.edu/docs/syllabi/MATH1314Syllabus.pdf) for elements common to all sections.
Course description: Topics include mathematical models; solving equations; creating, interpreting and graphing functions. Particular focus is given to polynomial, exponential and logarithmic functions.

Core Objectives (CO):
1. Critical Thinking [CO 1]: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. Communication Skills [CO 2]: to include effective development, interpretation and expression of ideas through written, oral and visual communication
3. Empirical and Quantitative Skills [CO 3]: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Credit hours: 3

The following is an excerpt from SFA Policy 5.4:
The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

Course Prerequisites and Corequisites: See general course prerequisites.

General Education Core Curriculum: This course has been selected to be part of SFA’s core curriculum. The Texas Higher Education Coordinating Board has identified six objectives for all core courses: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives. Assessment of these objectives at SFA will be based on student work from all core curriculum courses. This student work will be collected in D2L, the assessment management system selected by SFA to collect student work for core assessment.

By enrolling in MATH 1314 College Algebra you are also enrolling in a Core Curriculum Course that fulfills the Mathematics Core Objective requirement.

The chart below indicates: (a) The core objectives that are required to be taught in this course per the Texas Higher Education Coordinating Board (THECB), (b) How the required core objectives will be addressed.
Core Curriculum Objective Table

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>How the Core Objective Will be Addressed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>In studying transformations of functions, students will evaluate graphs to determine the function rule.</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication.</td>
<td>Students will communicate algebraic thinking by writing solutions in both interval and function notation.</td>
</tr>
<tr>
<td>Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>Students will be presented with information regarding exponential functions and will draw conclusions based on the information/data.</td>
</tr>
</tbody>
</table>

Course outline:

- Making Mathematical Models [CO 1, 2, 3]  
  - Linear Equations, Functions and Models [CO 1, 2, 3]  
    - Review of Coordinate Geometry  
    - Graphs of Equations  
    - Lines and Linear Modeling  
    - Systems of Equations  
  - Quadratic Equations, Functions and Models [CO 1, 2, 3]  
    - Graphs of Quadratic Equations  
    - Techniques for Solving and Optimizing Quadratic Equations  
    - Applications of Quadratic Functions  
- Functions [CO 1, 2, 3]  
  - Graphs of Functions  
  - Algebra of Functions  
  - Inverses of Functions  
  - Special Functions  
  - Polynomial Functions  
  - Division of Polynomials and Factorization  
  - [Rational Functions]  
- Exponential and Logarithmic Functions and Models [CO 1, 2, 3]  
  - Exponential Functions  
  - Logarithmic Functions  
  - Logarithmic Identities and Equations  
  - Exponential Equations and Applications  
  - Modeling with Exponential and Logarithmic Functions  
- Solving Equations [CO 1, 2, 3]  
  - Field Properties: Associativity, Commutativity, Identity, Inverses, Distributivity  
  - Review Rules for Exponents  

Approximate time spent:

- Making Mathematical Models [CO 1, 2, 3]  5%
- Linear Equations, Functions and Models [CO 1, 2, 3]  20%
- Quadratic Equations, Functions and Models [CO 1, 2, 3]  20%
- Functions [CO 1, 2, 3]  20%
- Exponential and Logarithmic Functions and Models [CO 1, 2, 3]  20%
- Solving Equations [CO 1, 2, 3]  10%
Incorporating Exponents and Logarithms in the Order of Operations

- Explicit instruction in Critical Thinking, Communication and Empirical and Quantitative Reasoning is in addition to implicit instruction, modeling and practice that occur daily in the discussion of college algebra. This explicit instruction includes explanation of solving mathematical problems by thinking critically, communicating logically ordered solutions with complete and correct notation, and applying empirical or quantitative skills as appropriate to the problem.

Student Learning Outcomes (SLO): At the end of MTH 138, a student who has studied and learned the material should be able to:

1. Employ independence of thought and innovation in order to obtain solutions to typical algebraic problems. [CO 1]
2. Create, manipulate, analyze and solve algebraic equations and expressions, especially linear, quadratic, polynomial, rational, exponential and logarithmic expressions. [CO 1,3]
3. Connect graphical properties with those of associated functions or equations, and use these connections to communicate graphical or physical properties in algebraic language. [CO 2,3]
4. Read, interpret, and communicate written mathematics, both in prose and in its graphical or visual forms. [CO 2]
5. Use functions to model and solve real-world problems. [CO 1,3]

There are no specific program learning outcomes for this major addressed in this course. It is a general education core curriculum course and/or a service course.

Academic Integrity

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

Withheld Grades Semester Grades (SFA Policy 5.5)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.
Students with Disabilities
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices.

Student Wellness and Well-Being
SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
- Wellness Coaching
- Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:
- Burke 24-hour crisis line: 1.800.392.8343
- National Suicide Crisis Prevention: 9-8-8
- Suicide Prevention Lifeline: 1.800.273.TALK (8255)
- Crisis Text Line: Text HELLO to 741-741

Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy 10.4). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom.

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