MTH 1314 – College Algebra – FALL 2023

INSTRUCTOR: Danielle Johnson  Department: Mathematics and Statistics  Office: Math 349

Email:  drjohnson@sfasu.edu  Phone: 936-468-1521
Class meeting time and place: 1314.001 – MWF 9:00 –9:50 am, Math 214,
                          1314.004 – MWF 11:00 –11:50 am, Math 216
                          1314.005 – MWF 12:00 –12:50 pm, Math 216

Office Hours: These hours have been set aside specifically to help students.

MW: 1:00 PM – 2:30 PM  and TR: 2:00 PM – 3:00 PM . Additional times are available by appointment. Please email me if you would like to schedule office hours other than the office hours listed above.

Course description: Topics include mathematical models; solving equations; creating, interpreting and graphing functions. Particular focus is given to polynomial, exponential, and logarithmic functions.

Text and Materials: The required textbook for this course is College Algebra (3rd Edition) by Julie Miller and Donna Gerken. The e-book is free and comes with a subscription to ALEKS homework system.


Online homework will be required using ALEKS homework system. The class codes are as follows:

Section 1314.001 (9 am MWF):  FRPUF-NKY96
Section 1314.004 (11 am MWF):  FMGCV-GYVHT
Section 1314.005 (12 Pm MWF):  D6VDT-JW4Y4

1.  Student registration resources: https://www.mheducation.com/highered/support/aleks/first-day-of-class/standalone.html
2.  Requesting a temporary access code for classes: See D2L news feed.

Calculator: When you are doing your homework and knowledge checks in ALEKS, a calculator option will be provided in ALEKS if you are supposed to use a calculator. If you are not supposed to use a calculator on a particular problem in ALEKS, then ALEKS will not provide you a calculator option. You will be allowed to use a calculator on your exams and will need to provide your own calculator for exams. You will need a scientific calculator for this class. Graphing calculators may be used, but are not required. Calculators that include a solver such as the TI-89 or TI-Nspire or calculators that have a QWERTY keyboard are not allowed. The calculator function of a cell phone smart watch, or tablet will not be permitted during tests. (Look for more helpful information about ALEKS in a news feed on the homepage of our course in D2L).

You will need a laptop computer for this class. You will need to bring your fully CHARGED laptop to class some days (which will be announced in advance.) You must make a commitment to attend every class, to 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. Most importantly, ask for help when you need it.

Fill in the blank notes for this class will be provided in D2L under the Content tab. You should print these notes and bring them to class and be ready to fill them in during class.

Course Requirements:

Exams: There will be three exams and a final exam. The final exam is comprehensive and mandatory. Your final exam grade can be used to replace a low or missing exam grade, except in the case of receiving a zero on an exam because of
cheating on that exam. **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. Your final exam grade must count towards your overall average but could count twice towards your overall average if it replaces a lower exam grade or missing exam grade.

**Homework:** Homework will be required and will be done online using the ALEKS homework system. See D2L news feed for more information.

Please note that the dates for our in-class exams in the calendar below are **subject to change.** The final exam is university scheduled and cannot be taken at a different time without permission of the Dean of the College of Sciences and Mathematics.

**Grading Policy:**

Your final grade will be determined as follows:

- **20% Daily Average**
  - 90% - 100% A
  - 80% - 90% B
- **60% Tests (3 @ 20% each)**
  - 70% - 80% C
- **20% Comprehensive Final Exam**
  - 60% - 70% D
- **100% Final Course Grade**
  - 0% - 60% F

20% of your grade will be determined by your daily average. This will include ALEKS homework average and other possible daily grades. **In-class assignments cannot be made up.**

**Attendance Policy:** Attendance will be recorded each class day. Although your attendance is not part of your overall class average, it is very important to attend class each class period, pay careful attention to the lectures, take good notes, and ask questions when you have them.

More information about absences can be found of the Dean of Student’s website: [https://www.sfasu.edu/thehub/sos/notification-request](https://www.sfasu.edu/thehub/sos/notification-request)

**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.

**A note about cheating:** Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**A few words about academic integrity**—I may opt to ask for an in-person oral examination if I have any reason to suspect that work that you present is not your own. Possession of materials that can be used to cheat, whether or not they are used, is considered academic dishonesty. Consequences for academic dishonesty will be determined in accordance with university policy at the time of the violation.

**General Policies and Information**

- **You earn your grade by communicating** your understanding of the material through the homework, and tests. Clearly communicating mathematics will be essential in this course.

- I will send e-mails to the entire class during the semester, often through D2L. Make sure you have your personal D2L settings set to forward email notifications. Watch for important class announcements on the D2L newsfeed.

- Students are expected to respect the learning environment of their fellow students. Behavior that disrupts this environment will not be tolerated. **Please silence your phone and remove it from the table.**
Testing, Grading, and Make-up Policies

- If you miss an exam for any reason, you will receive a zero for the missed exam. The zero exam grade will be replaced by your final exam grade. If more than one exam is missed, the final exam grade will replace only one of the missed exams.

- You must bring and display either your SFASU Student ID or a valid driver’s license before you will be permitted to take each test and the final exam. I must be able to recognize you from the photo on the ID.

- You may use your (approved) calculator on exams.

- Students **may not share calculators during an exam.** Students **may not use cell phone calculators or smart watches during an exam.**

- Since you have a full semester to arrange any travel plans, they are not an excuse for missing the final exam.

**Course contact hours and Study hours:**

MTH 1314 is a 3 hour credit course. This means that you should spend **at least 6 hours per week** outside of class studying for this class. Studying should include, but is not limited to completing assignments. Please refer to the excerpt from SFA Policy 5.4 below.

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.

See [https://math.sfasu.edu/docs/syllabi/MATH1314Syllabus.pdf](https://math.sfasu.edu/docs/syllabi/MATH1314Syllabus.pdf) for elements common to all sections.

**Additional Help:** Free tutoring is available from the AARC. They offer the Math Walk-in Table and one-on-one tutoring. For more information, visit the AARC website at [www.sfasu.edu/aarc](http://www.sfasu.edu/aarc).

**Withheld Grades Semester Grades Policy (5.5)**

For information, go to [https://www.sfasu.edu/policies/course-grades-5.5.pdf](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 promptly 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)
- johCrisis Text Line: Text HELLO to 741-741
**Course Calendar:** The following is a **tentative** calendar for MTH 1314 for this semester.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
</table>
| Aug. 28-Sept. 1  | Syllabus
WEEK 1 and WEEK 2 (See ALEKS)                                       |
| Sept. 4 -Sept. 8 | WEEK 3 (See ALEKS)                                                    |
| Sept. 11- Sept. 15 | WEEK 4 (See ALEKS)                                                |
| Sept. 18- Sept. 22 | Review objective (See ALEKS)
**Exam 1 – Fri. Sept. 22**                               |
| Sept. 25- Sept. 29 | WEEK 5 (See ALEKS)                                                    |
| Oct. 2- Oct. 6   | WEEK 6 (See ALEKS)                                                    |
| Oct. 9- Oct. 13  | WEEK 7 (See ALEKS)                                                    |
| Oct. 16- Oct. 20 | WEEK 8 (See ALEKS)                                                    |
| Oct. 23- Oct. 27 | Review Objective (See ALEKS)
**Exam 2 -- Fri. Oct. 27**                               |
| Oct. 30 – Nov. 3 | WEEK 9 (See ALEKS)                                                    |
| Nov. 6 – Nov. 10 | WEEK 10 (See ALEKS)                                                   |
| Nov. 13 – Nov. 17 | WEEK 11 (See ALEKS)                                                   |
| Nov. 27 – Dec. 1 | Review Objective (See ALEKS)
**Exam 3 -- Fri. Dec. 1**                               |
| Dec. 4 – Dec. 8  | WEEK 12 (See ALEKS)                                                   |
| **FINAL EXAMS**  | **1314.001 (9 MWF): Final Exam is Wed. Dec. 13th at 8:00 am – 10:00 am** |
| Dec. 11- Dec. 15 | **1314.004 (11 MWF): Final Exam is Wed. Dec. 13th at 10:30 am – 12:30 pm** |
|                 | **1314.005 (12 MWF): Final Exam is Mon. Dec. 11th at 1:00 pm – 3:00 pm** |
Math 1314 – College Algebra
Course Syllabus

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]  
  - 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  

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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](https://www.sfasu.edu/policies/course-grades-5.5.pdf).
Students with Disabilities
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- 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.

Date of document: 08/23/2023

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