



# MATH0314.05L College Algebra Co-requisite

Fall 2024

**Instructor:** Dr. David Villalobos

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**Class meeting:** TR 7:00- 8:15 PM

**Classroom:** Central Academic 218

**Office hours:** Tues and Thurs 8:15 – 9:00 PM  
Other times available by appointment

**Credit hours:** 3 credits MATH, 3 credits support

**Course Overview:** In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included. This course meets the standards for the Mathematics category of courses under the core curriculum. **Prerequisites:** Evidence of math equivalent to High School Algebra II (“C” or higher) or placement. This course is specifically intended for students that have not yet passed TSIA Math.

## Course Materials

**REQUIRED:** Online access code for *College Algebra* by Robert F. Blitzer (8<sup>th</sup> edition) with MyMathLab, Pearson Publishing, ISBN 9780134469164 (E-book included with access code).

**OPTIONAL:** Students can purchase a loose-leaf version of text for a low cost if desired (check bookstore).

**Binder** for class handouts, notes, etc.; **colored pens/highlighters** recommended.

**Calculators:** A scientific **non-graphing, non-programmable calculator** is required and allowed on all exams. No cell phone or graphing calculator will be allowed, and online math utilities (e.g., Desmos) are also not allowed. **A TI-30XIIS scientific calculator is highly recommended.**

## GRADING POLICY

| Graded Course Elements                                | Percentage |
|---|------------|
| Weekly Participation & Attendance                     | 5%         |
| Written Homework                                      | 10%        |
| Quizzes / Homework (Completed on MyMathlab)           | 10%        |
| 4 Unit Tests (12.5% each)                             | 55%        |
| <b>Exam #1 – Thursday, Sept. 19</b>                   |            |
| <b>Exam #2 – Tuesday, October 15</b>                  |            |
| <b>Exam #3 – Tuesday, November 5</b>                  |            |
| <b>Exam #4 – Thursday, November 21</b>                |            |
| Final Exam – <b>Tuesday, Dec. 10</b> (6:00 PM – 8 PM) | 20%        |

**Grade Scale for MATH 1314:** 90 – 100% = A; 80 – 89% = B; 70 – 79% = C; 60 – 69% = D Below 60% = F  
**Grade Scale for MATH support portion:** 60 – 100% = CREDIT; Below 60% = NO CREDIT

\*No late homework or quizzes will be allowed, and individual make-up exams will be given in rare cases and only with instructor approval. **All Homeworks are submitted on blackboard.**

\*The final examination is a comprehensive exam and is required of all students. The final exam may also replace a low or missing test grade.

\*The grading policy may be amended during the semester at the instructor's discretion.

### Final Exam – Thursday, Dec. 10 (6:00 PM – 8 PM)

**Final Exam:** In order to pass this class students must take a comprehensive final exam scheduled during Finals Week. Final exams cannot be rescheduled or missed (for dire and unforeseen medical or family emergencies, students must consult with me). The final exam will also be taken online with work submitted to justify your solutions. The final exam may be used to replace your lowest regular exam grade. **The final exam must be completed by the announced due date. No exceptions.**

### Student Learner Objectives

Upon completion of this course, students will:

1. Demonstrate understanding and 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 and explain related equations.
3. Interpret and apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve, apply and explain systems of linear equations using matrices

MATH 1314 helps students develop critical thinking, communication, and empirical and quantitative skills by focusing on student understanding of key algebraic concepts and appropriate applications related to everyday experience.

**List of Topics:** Topics to be covered include but are not limited to the following:

1. Solving linear equations and applying models (Sections 1.2~1.3)
2. Complex numbers (Section 1.4)
  - Factoring techniques (Section P.5)
3. Solving quadratic, rational, and radical equations (Sections 1.2~ 1.5~1.6)
4. Solving linear and compound inequalities (Section 1.7)
5. Solving absolute value equations and inequalities (Sections 1.6~1.7)
6. Distance formula and circles (Section 2.8)
7. Functions and their graphs (Sections 2.1 ~ 2.2)
9. Linear functions and slope (Sections 2.3 ~ 2.4)
10. Transformations of functions and graphing (Section 2.5)
11. Combinations and compositions of functions (Section 2.6)
12. Inverse functions (Section 2.7)
13. Quadratic functions and graphing (Section 3.1)
14. Polynomial functions and graphing (Section 3.2)
15. Zeros of polynomial functions (Sections 3.3 ~ 3.4)
16. Rational functions and graphing (Section 3.5)
17. Introduction to polynomial and rational inequalities (Section 3.6)
18. Direct, inverse, and combined variation (Section 3.7)
19. Exponential and logarithmic functions (Sections 4.1 ~ 4.2)

20. Properties of logarithms: solving exponential and logarithmic equations (Sections 4.3 ~ 4.4)
21. Modeling with log and exponential functions (Section 4.5)
22. Systems of linear and non-linear equations and matrices (Sections 5.1 ~ 5.2, 5.4 and 6.1)
23. More on solutions of systems of linear equations (Sections 6.2 and 6.5)
24. Properties of matrices (Section 6.3)
25. Introduction to sequences and series (Sections 8.1~8.3)

*The instructor reserves the right to modify/update the topics as appropriate.*

## **Course Requirements and Expectations**

**Class Attendance: Class attendance will be taken every class meeting.**

A student *might* be dropped from the course for excessive absences.

Students should spend a significant amount of time at home working on problems.

Withdraw from the course: **It is the student's responsibility to drop a course.**

**Participation tasks:** Each week you will have an attendance/participation grade, which is based on you completing tasks that you are asked to do that week. This is an easy grade if you just follow directions and stay checked in from week to week. Participation tasks may include but are not limited to the following: HW, quizzes, and/or tests; other assigned tasks.

**Regular participation and attendance is VERY IMPORTANT in this class!**

You are enrolling in a SIX HOUR math course, so expect to work on your Math work very frequently. Waiting to work on one day at the end of the week would be disastrous for this six-hour course!!

## **IMPORTANT UNIVERSITY POLICIES AND RESOURCES**

University Email Policy and Course Communications: All correspondence between professors and students must occur via University email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at [helpdesk@tamusa.edu](mailto:helpdesk@tamusa.edu) or at 210-784-HELP (4357). If you don't hear back within 48 hours, contact them again. They have a lot of requests during the first part of the semester, so you may need to follow up with them.

**Academic Accommodations for Persons with Disabilities:** The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodation of their disability. If you have a diagnosed disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. The phone number for DSS is (210) 784-1335 and email is [dsupport@tamusa.edu](mailto:dsupport@tamusa.edu).

**Academic Learning Center:** The Academic Learning Center provides free course-based tutoring to all currently enrolled students at Texas A&M University-San Antonio. Students wishing to work with a tutor can make appointments through the Brainfuse online tutoring platform. Brainfuse can be accessed in the Tools section of Blackboard. You can contact the Academic Learning Center by emailing [tutoring@tamusa.edu](mailto:tutoring@tamusa.edu), calling (210) 784-1307, or visiting the Central Academic Building, room 202.

**Counseling/Mental Health Resources:** As a college student, there may be times when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you are experiencing emotional difficulties or mental health concerns, support is available to you through the Student Counseling Center (SCC). To schedule an appointment call 210-784-1331 or visit Modular C, Room 166 (Rear entrance). All mental health services

provided by the SCC are free and confidential (as the law allows). The Student Counseling Center provides brief individual and group therapy, crisis intervention, consultation, case management, and prevention services.

**Crisis support** is available 24/7 by calling the SCC at 210-784-1331 (after-hours select option '2'). For more information and self-help resources, please visit [www.tamusa.edu/studentcounseling](http://www.tamusa.edu/studentcounseling)

**Emergency Preparedness:** JagE Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email with instructions and updates. To register or update your information visit:

<https://tamusa.bbcportal.com/>.

More information about Emergency Preparedness and the Emergency Response Guide can be found here:

<https://www.tamusa.edu/uploadfile/folders/sdbowen23/pdf/pdf-635073426137928167-10.100.20.116.pdf>

**Financial Aid and Verification of Attendance:** According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

**Jaguar Writing Center:** The Jaguar Writing Center provides writing assistance to graduate and undergraduate students in all three colleges. Writing tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. Students can make individual or group appointments with a writing tutor. The Writing Center is located in the Central Academic Building, Suite 208. Appointments can also be made through JagWire under the services tab.

**Meeting Basic Needs:** Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students ([DOS@tamusa.edu](mailto:DOS@tamusa.edu)) for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources they may possess.

**Military Affairs:** Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person room 202, or to contact the Office of Military Affairs with any questions at [military@tamusa.edu](mailto:military@tamusa.edu) or (210)784-1397.

**Religious Observances:** Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

**Respect for Diversity:** We understand that our students represent diverse backgrounds and perspectives. When we are equity-minded, we are aware of differences and inequalities and are willing to discuss them so we can act to resolve them. The University is committed to building cultural competencies, or the attitudes, skills, and knowledge that enable individuals and organizations to acknowledge cultural differences and incorporate these differences in working with people from diverse cultures. Respecting and accepting people different than you is vital to your success in the class, on campus, and as a future professional in the global community. While working together to build this community we ask all members to:

- Share their unique experiences, values, and beliefs.
- Be open to the views of others.
- Honor the uniqueness of their colleagues.
- Value each other's opinions and communicate respectfully.
- Keep confidential discussions that the community has of a personal (or professional) nature.
- Use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the A&M-San Antonio community.

**The Six-Drop Rule:** Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

**Statement of Harassment and Discrimination:** Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation, gender identity, or gender expression. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Texas A&M University-San Antonio faculty are committed to providing a safe learning environment for all students and for the university as a whole. If you have experienced any form of sex- or gender-based discrimination or harassment, including sexual assault, sexual harassment, domestic or dating violence, or stalking, know that help and support are available. A&M-San Antonio's Title IX Coordinator can support those impacted by such conduct in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. The university strongly encourages all students to report any such incidents to the Title IX Coordinator. Please be aware that all A&M-San Antonio employees (other than those designated as confidential resources such as counselors and trained victims advocates) are required to report information about such discrimination and harassment to the university. This means that if you tell a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the university's Title IX Coordinator (titleix@tamusa.edu, 210-784-2061, CAB 439K). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact the Student Counseling Center at (210) 784-1331, Modular C.

**Students' Rights and Responsibilities:** The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

### **Students' Rights**

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.

4. Each student subject to disciplinary action arising from violations of university student rules shall be assured a fundamentally fair process.

### **Students' Responsibilities**

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and administration.
  2. A student has the responsibility to be fully acquainted with the published University Student Rules found in the Student Handbook, Student Code of Conduct, on our website, University Catalog and to comply with them, as well as federal, state, and local laws.
  3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
  4. A student has the responsibility to recognize the University's obligation to provide an environment for learning.
  5. A student has the responsibility to check their university email for any updates or official university notification.
- We expect that students will behave in a manner that is dignified, respectful, and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

Students are expected to exhibit a high level of honesty and integrity in their pursuit of higher education. Students engaging in an act that violates the standards of academic integrity will find themselves facing academic and/or disciplinary sanctions. Academic misconduct is any act, or attempt, which gives an unfair advantage to the student. Additionally, any behavior specifically prohibited by a faculty member in the course syllabus or class discussion may be considered as academic misconduct. For more information on academic misconduct policies and procedures please review the Student Code of Conduct.

**No Use of Generative AI Permitted:** College Algebra 1314 assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

**Electronic Devices:** The use of phones or other electronic devices for non-class related activities is not allowed. Anyone who is observed text messaging or using an electronic device during class for a non-class related purpose will be given a warning, and as a further action that person will be asked to drop the class. Devices should be turned off and put away during exams and quizzes.

### **Important Dates:**

|                |   |
|----------------|---|
| August 26      | First day of class  |
| September 2    | Labor Day Holiday   |
| November 11    | Last day to drop with an automatic "W"                    |
| November 19    | Last day to drop a course or withdraw from the University |
| November 27    | Study Day – No Classes                                    |
| November 28-30 | Thanksgiving Holiday – No classes                         |
| December 5     | Last day of classes                                       |
| December 6     | Study Day – No Classes                                    |
| December 7-13  | Final exams   |

*The complete academic calendar is available online: <https://www.tamusa.edu/academics/academic-calendar/index.html>*

## No Use of Generative AI Permitted

Math 1314 assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools like ChatGPT. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

## COVID-19 Syllabus Addendum:

COVID-19 is a real and dangerous illness. First and foremost, your health and safety are in our concerns. The best estimates now are that 20-40% of people infected with the virus have no symptoms. In order to ensure the continued health and safety of all members of the university community, students and faculty in each classroom, and the support staff, it is essential to adhere to the health and safety guidelines established by the university.

In compliance with "return to campus" safety practices, students are required to complete the (COVID-19 student training course). Upon completion, you will receive a certificate with your name and date of completion for your records. If you have yet to complete the (COVID-19 student training course), please do so immediately, as completion is required to return to campus and participate in the Fall 2020 academic semester.

*(Note: if you do not complete this training, you will have a Dean of Students hold on your records which will prevent adds, drops, and registration procedures.)*

Students are required to conduct a self-assessment each day before coming to campus to determine if they are exhibiting any signs or symptoms of COVID-19 or have been exposed to COVID-19. Your presence on campus means that you certify that you are not exhibiting any signs or symptoms of possible COVID-19 illness.

### CHECKLIST: If any of the following apply to you stay at home!

1. Has a diagnosis or suspected case of coronavirus;
  2. Is currently exhibiting any of the symptoms associated with COVID-19 as listed on the CDC "Symptoms of Coronavirus" web page (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>) - **even one symptom** (e.g., a cough or a headache);
  3. In the past 14 days have had close (less than six feet) contact with a person who has a lab-confirmed case of COVID-19;
  4. In the past 14 days have had close (less than six feet) contact with a person who is awaiting results of a COVID-19 test because of COVID-19 symptoms or exposure;
  5. In the past 14 days have returned from travel or traveled through an area with state or local travel restrictions that mandate quarantine upon arrival home.
- Fever or chills (feeling feverish or a measured temperature greater than or equal to 100.0 degrees Fahrenheit)
  - Cough
  - Shortness of breath or difficulty breathing
  - Fatigue
  - Muscle or body aches
  - Headache
  - New loss of taste or smell
  - Sore throat
  - Congestion or runny nose
  - Nausea or vomiting
  - Diarrhea
- <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

**When in doubt, stay at home!**

If any of the above apply to you, do NOT come to campus and contact your professor and the Dean of Students Office ([dos@tamusa.edu](mailto:dos@tamusa.edu)), office phone: (210) 784-1354),

All components of this class, including all assessments, can be completed virtually (through Blackboard or other platform used in this class). Office hours will be held via Webex (or other platform provided by the instructor) for the foreseeable future.

**For lecture classes which include a face-to-face meeting component:**

Accommodation for missing class if you meet one of the criteria on the checklist or do not feel comfortable physically attending will be made without penalty to the student. Visitors are not allowed, and students can only attend class on their designated day for in person attendance. All students have a responsibility to ensure they are always contributing to a safe learning environment by following all health and safety protocols.

**For laboratory classes which include face-to-face hands-on meeting component:**

Unlike lecture classes with face-to-face components, laboratories are designed to provide hands-on experience and training in particular skills that are difficult to attain online. Thus, if a student is registered for a laboratory course with a face-to-face component, it is expected that they physically attend on their scheduled day. However, if a student has a documented health issue, is in another high-risk category, or feels uncomfortable attending in person, they may be able to enroll in a section of the course that is designated OLC (on-line class). If no such section exists (which may occur in upper-division courses), it is imperative they contact their instructor immediately and accommodations will be handled on a case-by-case basis (Note: it may be decided that postponing the course until a later time might be the best course of action). Once enrolled in either a hybrid or a fully on-line section, students may not switch between in-person and on-line learning without instructor approval due to the unique nature of preparing for hands-on activities in a laboratory environment as well as tight regulations on the number of students physically allowed in the laboratory space. Accommodation for missing class if you meet one of the criteria on the checklist or do not feel comfortable attending will be made without penalty to the student.

While in the classroom:

1. Sanitize your hands upon entering the class.
2. Students must always maintain at least six feet of distance from any other person (including the instructor and other students).
3. Front row seating shall not be used.
4. Sit in the designated seats.
5. Students must always wear a cloth face covering or surgical mask fully covering their mouth and nose while in the classroom (even if you are alone).
6. Students must observe and conform with any markings on the floor indicating appropriate spacing and may not sit in any location that has been marked as off limits.
7. Students who have questions may ask those questions by raising their hand during class or by emailing the instructor outside of class. Do not approach the instructor before or after class to ask a question or to attempt to hand the instructor any document or item, as this does not facilitate social distancing.

While in the laboratory: Special laboratory safety instruction will be provided on the course-specific syllabus and appropriate training will be provided.

Students who do not live up to these responsibilities will not be permitted to physically attend class (in person in the classroom). Failure to comply with these health and safety protocols is a violation of the Student Code of Conduct. A student who is not in compliance with these health and safety protocols will not be allowed to remain in the classroom and will be reported to the student conduct office, which may result in the student



being barred from the classroom for the remainder of the semester and may also lead to expulsion from the university.

Due to COVID-19 the University reserves the right to make classes completely on-line if public health conditions necessitate a transition to fully online classes for the safety of our students and faculty. Additionally, certain classes may transition to fully online classes for a period when necessary for health and safety (e.g., if a class member tests positive for COVID-19, if necessary, for disinfection or to follow health and safety protocols, etc.).

## Tentative Weekly Schedule

### MATH 1314 COREQUISITE COLLEGE ALGEBRA

| Week | Date        | Topic  | Assignments |
|------|-------------|--|-------------|
| 1    | T. Aug. 27  | Introduction.<br>1.1 Coordinate Plane, Graphing, x and y intercepts<br>1.2 Solving Linear Equations  | Homework 1  |
|      | R. Aug. 29  | 1.3 Models and Applications<br>REVIEW: Simplify Radicals, Operations (Add, Subtract, Multiply, Divide)<br>1.4 Complex Numbers<br><b>No Coreq Class</b> | Homework 2  |
| 2    | T. Sept. 3  | REVIEW: P.5 Factoring - all types  | Homework 3  |
|      | R. Sept. 5  | 1.5 Solving quadratic equations by factoring, square root property, completing the square, quadratic formula   | Homework 4  |
| 3    | T. Sept. 10 | 1.6 Solving Rational & Radical Equations   | Homework 5  |
|      | R. Sept. 12 | 1.7 Inequalities – Linear, Compound / Absolute value equations and inequalities<br><b>No Coreq Class</b>   | Homework 6  |
| 4    | T. Sept. 17 | <b>Review</b>  |             |
|      | R. Sept. 19 | <b>TEST #1: Chapters 1 (1.1 – 1.7)</b>   |             |
| 5    | T. Sept. 24 | 2.1 Basics of Functions and graphs<br>2.2 More on Functions – increasing, decreasing, constant   | Homework 7  |
|      | R. Sept. 26 | 2.2 More on Functions – odd/even, symmetry, piecewise (evaluating) / Graphing Piecewise Functions  | Homework 8  |
| 6    | T. Oct. 1   | 2.2 Difference Quotient<br>2.3 Linear Functions and Slope<br>2.4 More on Slope – Parallel and Perpendicular Lines                                      | Homework 9  |
|      | R. Oct. 3   | 2.5 Parent Functions, transformations  | Homework 10 |
| 7    | T. Oct. 8   | 2.6 Operations on Functions, composite Functions<br>2.7 Inverse Functions  | Homework 11 |
|      | R. Oct. 10  | Review   |             |
| 8    | T. Oct. 15  | <b>TEST #2: Chapters 2 &amp; 3 (2.1-2.7)</b>   |             |
|      | R. Oct. 17  | 3.1 Quadratic functions; graphing<br><b>No Coreq Class</b>   | Homework 12 |

|    |            |   |                    |
|----|------------|---|--------------------|
| 9  | T. Oct. 22 | 3.2 Polynomial Graphs<br>3.3 Synthetic division; remainder and factor theorems  | <b>Homework 13</b> |
|    | R. Oct. 24 | 3.4 Zeros of polynomials<br>3.5 Rational Graphs   | <b>Homework 14</b> |
| 10 | T. Oct 29  | 3.6 Polynomial and Rational Inequalities<br>3.7 Variation   | <b>Homework 15</b> |
|    | R. Oct. 31 | <b>NO CLASS TEST #3 Review</b>  | <b>Homework 16</b> |
| 11 | T. Nov. 5  | <b>TEST #3: Chapter 3 (3.1 – 3.7)</b>   |                    |
|    | R. Nov. 7  | REVIEW: P.3 Rational Exponents and Exponent Rules<br>4.1 Exponential Functions  | Homework 17        |
| 12 | T. Nov. 12 | 4.2 Logarithmic Functions<br>4.3 Properties of Logs, change of base rule  | <b>Homework 18</b> |
|    | R. Nov. 14 | 4.4 Exponential and Logarithmic Equations<br>4.5 Applications with Logs and Exponential Functions                                 | <b>Homework 19</b> |
| 13 | T. Nov. 19 | 5.1 Linear Systems in 2 Variables<br>6.5 Determinants and Cramer's Rule<br>Review   | <b>Homework 20</b> |
|    | R. Nov. 21 | <b>TEST #4: Chapters 4 (4.1 – 4.5)</b>  |                    |
| 14 | T. Nov. 26 | <b>NO CLASS</b><br>5.2 Solving systems with 3 Variables<br>5.4 Non-linear systems<br>6.1, 6.2 Solving systems with matrices       |                    |
|    | R. Nov. 28 | Thanksgiving Holiday  |                    |
| 15 | T. Dec. 3  | 6.3 Matrix properties, operations & Review<br>8.1, 8.2, 8.3 Sequences / Sums / Sigma Notation & Review<br><b>Review for Final</b> |                    |
|    | R. Dec. 5  | <b>Review for Final</b>   |                    |
| 16 | T. Dec. 10 | Final Exam<br>6:00 PM – 8:00 PM   |                    |

*This schedule is tentative and will most likely change as the semester progresses. It is provided so that you have a general idea of the order and speed with which we will be covering the material.*