

**Texas A&M University--San Antonio**  
at One University Way, San Antonio, TX 78224  
Department of Computational, Engineering, &  
Mathematics Sciences  
**Spring 2024**



**MATH 2312: Pre-Calculus**  
**Section: 600; MWF 9:00 – 9:50 am**  
**Online course**  
**Credit Hours: 3 credits**

**Instructor:** Craig McCarron, Ph.D.  
**Office:** Hall 314V **Office Phone:** (210) 784-2648  
**Mobile Phone:**

**e-mail:** Craig.McCarron@tamusa.edu  
**Office hours:** TR 11-12:15pm, W 10-11:30 (virtual)  
**Do not hesitate to make arrangements to see me outside of office hours.**

### **COURSE DESCRIPTION & MATERIALS:**

**Catalog Description:** In-depth study & applications of polynomial, rational, radical, exponential & logarithmic functions, & systems of equations using matrices. Additional topics such as sequences, series, probability, & conics may be included. This course meets the standards for the Mathematics category of courses under the core curriculum. This course meets the standards for the Mathematics category of courses under the core curriculum.

**Prerequisite:** Evidence of math equivalent to High School Algebra II ('C' or above) or placement.

**Required Textbook:** Pre-Calculus Essentials by Robert F. Blitzer, 6<sup>th</sup> Ed., with MyMathLab, Pearson Publishing, 2022, ISBN 9780136906551. (E-book package as part of course registration). Note: Students can purchase a loose-leaf version of text for a low cost if desired (check bookstore). The course ID is accessible through Blackboard.

**Calculator Policy:** A scientific non-graphing, non-programmable calculator is required; **TI-30XIIS is recommended**. Calculators may not be shared. **NOTE:** Laptops, cell phone, & other mobile devices are NOT acceptable calculators.

**Student Learning Outcomes:** MATH 2312 helps students develop critical thinking, communication, and empirical and quantitative skills by focusing on student understanding of key mathematical concepts required for calculus readiness to include recognizing, identifying, solving, analyzing and explaining appropriately model applicable real -world situations.

Upon completion of this course, students will:

1. Demonstrate understanding and knowledge of properties of functions from graphical, tabular, symbolic, or verbal representations.
2. Identify and apply appropriate strategies for solving equations involving algebraic, transcendental, and trigonometric functions.
3. Interpret and apply graphing techniques to algebraic and transcendental functions.
4. Compute and apply the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
5. Prove and apply trigonometric identities.
6. Interpret and solve applications related to right and oblique triangles.

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

1. Functions and relations
2. Inverse functions
3. Exponential and logarithm functions, and their properties
4. Exponential and logarithmic equations with applications
5. Angles and their measures
6. Trigonometric functions and right triangle trigonometry
7. Trigonometric functions of any angle
8. Graphs of sine and cosine and other trigonometric functions
9. Inverse trigonometric functions

- 10. Trigonometric identities
- 11. Trigonometric equations
- 12. The laws of sines and cosines

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

**COURSE WORK & GRADE DISTRIBUTION:**

**Participation:** Active participation & cooperation in class is essential for your success as an individual student & our success as a class. If you miss class, you are responsible for finding out what you missed on that day. You are welcome to ask questions on the topics that you missed; however, it is your responsibility to learn the material.

**Homework:** Homework will be in MyMathLab (MML). All due dates are listed in MML. You can complete the assignments until 10:59 pm of the due date listed (normally the Sunday after each lecture is completed). The homework may be attempted multiple times in order to increase your homework grade.

**Reading Quizzes:** A Reading Quiz will be assigned approximately 24 hours prior to each lecture. The quiz will be over a specific section of the Blitzer textbook. Reading quizzes are open book and open notes. Each reading quiz is worth 5 points.

**Cumulative Review Exercises:** Approximately every other week there will be a cumulative review exercise assigned in MML. Each review exercise is worth 20 points.

**Exams:** There will be two in class exams. All exams are closed books and closed notes to be completed during class time. There may be a random check of calculators. If the student is found with inappropriate material on the calculator they are using, the student will receive a 0 on the test.

**Final Exam:** In order to pass this class, students *must* take a comprehensive final exam scheduled during Finals Week. Finals cannot be rescheduled or missed (for dire & unforeseen medical or family emergencies, students must consult with the instructor). **The final exam must be completed by the announced due date. NO EXCEPTIONS.**

**All examinations must be taken on the Texas A&M – San Antonio campus. There will be blocks of time on the exam date when the exam can be taken. Details will be disseminated the week of the examination.**

Exam Schedule:

|            |             |
|------------|-------------|
| Exam       |             |
| Exam 1     | Friday 2/23 |
| Exam 2     | Friday 4/5  |
| Final Exam | TBD         |

(The above dates are subject to change at the discretion of the instructor. Every effort will be made to give students at least one week of warning if an exam date must be changed.)

**Note:** All review exercises and exams are *cumulative*. You can expect questions to cover material from the first day of the course to the day before the quiz or exam.

## GRADING POLICY

### Scoring:

| category                   | number | points each | drops | total |
|----------------------------|--------|-------------|-------|-------|
| Homework (in MML)          | 18     | 5           | 3     | 75    |
| Reading Quiz               | 18     | 5           | 3     | 75    |
| Cumulative Review Exercise | 8      | 20          | 1     | 140   |
| Hour Exams                 | 2      | 100         | 0     | 200   |
| Final Exam                 | 1      | 200         | 0     | 200   |
|                            |        |             | Total | 695   |

(All numbers above are approximate and subject to adjustments.)

Grade Scale for MATH 1332: 90 – 100% = A; 80 – 89% = B; 70 – 79% = C; 60 – 69% = D Below 60% = F

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

### COURSE REQUIREMENTS & EXPECTATIONS

**Class Attendance:** Attending class is **mandatory**. To be counted present, the student must be in class and must have submitted all due assignments.

**Gradebook:** The official gradebook will be a spreadsheet in a Blackboard folder, NOT the Blackboard My Grades link.

**Make-up Policy:** There are no make-ups, however low scores in each category except exams will be dropped. You are expected to always be present for exams. Exams must be taken on the date specified. **No make-up exams will be given.**

**Dropping the Course:** It is the student's responsibility to drop a course. The instructor may not automatically drop you. Please check the academic calendar webpage of TAMU-SA for the last day to drop a course or withdraw from the university. Please contact the Welcome Center at 784-1300 if you desire to drop the course.

**Blackboard:** Students are responsible for checking Blackboard regularly for announcements, assignments, & other support materials posted there. However, students are also responsible for all announcements & assignments which are given in the classroom. Please use the professor's TAMUSA e-mail if you need to communicate with the instructor.

**NOTE:** There will NOT be an extra credit assignment, please DO NOT ask for it at the end of the semester. Start studying today! You have enough time to get the perfect grade. To be successful in this course, take responsibility for your learning & plan to study at least 2 hours for each class hour. Do not get behind; do not hesitate to ask for help. Make good use of the resources that are available to you, especially your book & your instructor. Save all your graded assignments, exams & quizzes until you receive your final grade.

**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 & quizzes.

### **CLASS RULES:**

1. Regular participation and attendance is VERY IMPORTANT in this class! You are enrolling in a THREE 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 three hour course! Failure to complete work will result in lower grades.
2. You should be doing homework, worksheets, and/or quizzes daily. Optional activities such as study plan or videos do not satisfy the participation requirement. To be counted as “present”, you must attend class and complete all assigned work.
3. If you need additional help, please ask! Your instructor is available to help both in-class & during office hours, and students also have access to free online tutoring through Jaguar Tutoring in the ALC.

### **IMPORTANT UNIVERSITY POLICIES & 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 many 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. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in suite 210. The phone number for DSS is (210) 784-1335 and email is [dsupport@tamusa.edu](mailto:dsupport@tamusa.edu).

Academic Learning Center: All currently enrolled students at Texas A&M University-San Antonio can utilize the Academic Learning Center for subject-area tutoring. The Academic Learning Center is an appointment-based center where appointments are made through the Navigate platform. Students access Navigate through Jagwire in the Student Services tab. The Center is active on campus outreaching to students to highlight services offered. You can contact the Academic Learning Center by emailing [tutoring@tamusa.edu](mailto:tutoring@tamusa.edu) or calling (210)-784-1332. The ALC is located on the second floor of Central Academic Building (CAB) in room 202. Online tutoring is also available for after hours and weekend assistance.

While tutoring hours may change based on tutor schedules and availability, the current tutoring hours for MATH in the ALC are as follows:

|           | <b>Appointments available</b> | <b>Walk in Tutoring – No appointment needed</b> |
|-----------|-------------------------------|---|
| MONDAY    | 9 am – 6 pm                   | 11 am – 6 pm                                    |
| TUESDAY   | 8 am – 6 pm                   | 10 am – 6 pm                                    |
| WEDNESDAY | 8 am – 4 pm                   | 8 am – 6 pm                                     |
| THURSDAY  | 8 am – 6 pm                   | 8 am – 6 pm                                     |
| FRIDAY    | 11 am – 3 pm                  | 11 am – 3:30 pm                                 |

Counseling Resources: As a college student, there may be a time when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you or someone you know is experiencing life stressors, emotional difficulties, or mental health concerns at A&M-SA, please contact the

Office of Student Counseling & Wellness Services (SC & WS) located in Modular C Room 166 (Rear entrance) or call 210-784-1331 between the hours of 8:00 AM and 5:00 PM. All mental health services provided by SC & WS are free, confidential (as the law allows), and are not part of a student's academic or university record. SC&WS provides brief individual, couples, and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit [www.tamusa.edu/studentcounseling](http://www.tamusa.edu/studentcounseling). In a crisis, please walk-in to the SC & WS services between 8:00 AM and 5:00 PM to be seen by a licensed clinician. After hours, please contact UPD at 911 or text "HOME" to 741-741 24/7/365 to connect with a trained crisis counselor. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255

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 and/or phone call 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: <http://www.tamusa.edu/riskmanagement/index.html>.

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, Language, and Digital Composing Center (WLDCC): The Jaguar Writing Center provides writing support 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. The Writing Center has both online and in person appointments. Students can schedule appointments with the Writing Center in JagWire under the student services tab. Students wanting to work in realtime with a tutor can schedule an "Online Appointment." Students wishing to receive asynchronous, written feedback from a tutor can schedule an "eTutoring" appointment. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our website at <https://www.tamusa.edu/student-resources/writing-center/index.html>. The Writing Center can also be reached by emailing [writingcenter@tamusa.edu](mailto:writingcenter@tamusa.edu).

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, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

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 University officials.
2. A student has the responsibility to be fully acquainted with the published University Student Rules 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 maintain a level of behavior that is consistent in supporting the learning environment of the institution and to recognize the University's obligation to provide an environment for learning.

No Use of Generative AI Permitted: Math 2312 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:

|             |   |
|-------------|---|
| January 16  | First day of classes                                      |
| March 11-17 | Spring Break – No classes                                 |
| March 29    | Study Day - No classes                                    |
| April 13    | Last day to drop with an automatic “W”                    |
| April 20    | Last day to drop a course or withdraw from the University |
| April 29    | Last Day of Classes                                       |
| April 30    | Study Day – No classes                                    |
| May 1 - 7   | Final exams   |

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

### **COVID-19 SYLLABUS STATEMENT**

The safety of our campus community is paramount to our ability to provide our students, faculty, and staff with a productive and secure learning and working environment. While masks are not required, we do encourage everyone to wear a mask, particularly inside the buildings, in order to reduce the spread of covid-19. The university maintains a covid-19 web-site with current data, safety protocols, and reporting guidelines at <https://www.tamusa.edu/community-safety-together/index.html> .

### **Sources of Help:**

- Ask questions in class & in recitation.
- Work with each other.
- Make an appointment to see me.
- Go to Math Free Tutoring
- Get a private tutor.