Precalculus, Mathematics 2312, Section 002
Fall 2023

Instructor: Rajat Gupta
Class Room: RBN 4019 (Next to MLC Room)
Email: rgupta@uttyler.edu

Course Schedule: Class meets MoWe: 2:30 PM - 3:55 PM (Including 5 -10 minutes break in-between)

Course Website: You MUST activate your Canvas account. To do so, go to `https://uttyler.edu/canvas`. This is also the address to login. If you are registered in the course, you already have access to the course. All important documents will be posted on Canvas. I also use with my personal notes but only for Trigonometry and I will share these with everyone

Office hours: Everyday (4 pm - 5 pm)

Required Text: Precalculus from OpenStax (Digital ISBN: 1947172069). This is an open-access textbook, meaning it is freely available at the following link: www.openstax.org/details/precalculus You can read the book online, or download PDF, iBooks, or Kindle versions of it. If you prefer to have a print copy, you can purchase one. At the OpenStax website listed above, there is a link to order a print copy.

Course Description: This course is a survey of college algebra, trigonometry, and analytic geometry to prepare students for calculus. Topics include algebraic functions (Polynomials in one and two variables) and their graphs, exponential and logarithmic functions, trigonometric functions and identities, and two and three dimensional (if time permits) analytic geometry. Credit not given for both Math 2312 and Math 1316.

Course Prerequisites: Appropriate score on SAT, ACT, or TSI

Course Outline: Chapters 1-7 of the text and other chapters, in part or in full, as time permits.

Student Learning Outcomes: Upon completion of this course, students should be able to do the following.

- Develop analytical reasoning to solve algebraic problems such as finding the solutions to polynomial, rational, exponential, logarithmic, and trigonometric equations, as well as finding inverse functions
- Represent trigonometric functions by drawing relevant pictures on the unit circle, by writing the correct trigonometric definitions, and by verbal description
- Demonstrate a critical understanding of functions by graphing and analyzing functions, evaluating functions at specific real numbers and at variable values, computing new functions from old functions through algebraic operations, and applying known theory such as the Factor Theorem to factor polynomials and find their zeroes.

- Calculate the values of trigonometric functions based on right-triangular and circular definitions.
- Solve right triangles given appropriate information about sides and angles
- Prove the validity of trigonometric identities.

Grading: Scores will be posted on Canvas. After the end of the semester, final course grades will be available on `my.uttyler.edu`. A final course grade of 90% is guaranteed to be at least an A, a final course grade of 80% is guaranteed to be at least a B, a final course grade of 70% is guaranteed to be at least a C, and a final course grade of 60% is guaranteed to be at least a D. All grades below D will be F. There is also the exception that your course grade cannot exceed your final exam score by more than one letter grade. This means that if you earn a C on the final exam, you cannot receive higher than a B in the class. If you earn an F on the final exam, you cannot receive higher than a D in the class.
The breakdown of your final course grade into categories is given below. However, there is an exception in that you must have a passing homework average to pass the course.

Homework: 10%
Quizzes: 10%
Attendance: 10%
Midterm exams[Three]: 30%
Final exam: 40%

If you have any questions about the grading of a particular quiz or exam, you must contact me no more than one week after the day I return the graded assignment in class, whether you are present during that class or not.

Attendance: It is your responsibility to attend class. Attendance is mandatory. This means, among other things, coming to class on time and prepared. Before class begins, you should turn off cell phones and any other electronic devices. Students are responsible for all announcements made during lecture.

Homework: Homework will be assigned each class period. Working the homework problems thoroughly is an essential part of preparing for quizzes and exams. I will share one homework every week. I upload those in the Canvas page and from there you can access it. Homework will be due on every Monday.

Quizzes: There will be one quiz on each Monday unless it is an exam week. Quizzes will usually be given at the beginning of the class period. If you are tardy on the day of a quiz, you do not get extra time on the quiz. Generally, the quiz will cover the material from the two previous class periods. The three lowest quiz scores will be dropped at the end of the semester. However, I may change the schedule of the quizzes in the case of some unavoidable situations.

Cell Phones: Cell phones are not permitted in class. You must silence them and put them away before class begins.

Calculators: Calculators will not be allowed on quizzes nor on tests in the early part of the semster. You will need to be proficient in fractions and basic computations. Many homework problems will need to be done without calculators. Study accordingly. Towards the end of the semester, calculators may be allowed on some portions of the exams. When allowed, you may use scientific, non-graphing calculators. You may not use your phone. However, all work must be shown. Many different types of calculators will work well, but the TI-30X IIS is recommended.

Absences: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, students participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor. Prior notification is still required. **Under no circumstances will make-ups be granted without prior notification.** Leaving early for a break is NOT grounds for a make-up, so please make your travel plans accordingly. In almost all cases, missed work will be assigned a 0. Keep in mind that the three lowest quiz scores will be dropped at the end of the semester.

Academic Integrity: Your work must be your own. Violations will be processed according to the established guidelines of the department, college, and university. Violations of academic integrity include, but are not limited to, cheating, fabrication, or plagiarizing. A range of academic sanctions may be taken against a student who engages in academic dishonesty. Below are ideas related to academic integrity.

Resources you are encouraged to utilize in this course include the textbook and unassigned problems, notes from class, assigned homework problems, your fellow Math 2312 students, the Math Learning Center, and your instructor. E-mail is the best way to contact me. I reply to email from 9:00 A.M.–4:00 P.M. Monday–Friday.

A note about a resource NOT allowed in this course: while the internet may be a valuable resource, using it to unethically acquire answers for your work will be considered a violation of academic integrity and processed accordingly. Similarly, copying answers from other students' assignments, past or present, violates the idea that your work must be your own.

University Policies: September 1, is this semester's Census Date, the deadline for all registrations, schedule changes, and section changes. October 30 is the

last day to withdraw from one or more courses. For university policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Course Drop Policy, Disability Services, Student Absence due to Religious Observance, Student Absence for University-Sponsored Events and Activities, Social Security and FERPA Statement, please see `https://www.uttyler.edu/academicaffairs/files/syllabuspolicy.pdf`.

Important Covid-19 Information for Classrooms and Laboratories: Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by Procedures for Fall 2020 Return to Normal Operations. The UT Tyler community of Patriots views adoption of these practices consistent with its Honor Code and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff. Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by Procedures for Fall 2020 Return to Normal Operations. The UT Tyler community of Patriots views adoption of these practices consistent with its Honor Code and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home and may join the class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email saroffice@uttyler.edu.

Recording of Class Sessions: Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

Online Proctoring: If classes must migrate online at some point, then online proctoring may be utilized. For online proctoring, students will need high speed internet, access to Zoom, a webcam, and a microphone. Please note that students can use university computer labs or the university library as a place to take an assessment being proctored online.