



Syllabus MAT 187 1 Precalculus

Course Information

Fall 2020

Credit Hours: 5.00

Course Format: Online (TR 9:00 AM – 11:45 AM)

TOCC Online Login: <https://tocc.instructure.com/>

Instructor Information

Name: Isaac M. Furlonge

E-mail: ifurlonge@tocc.edu

Phone: 520-383-8401 ext. 1058

Zoom Office Hours: **MW** 11:40 AM – 12:30 PM (Pacific Daylight Time, PDT)

TR 8:00 AM – 8:50 AM PDT

R 5:25 PM – 7:05 PM PDT

Other times by appointment

Note: Students still need to contact instructor to schedule appointment during these times.

Zoom Meeting ID: 862 348 2297 (for Office Hours)

Your performance in my class is very important to me. Please feel free to call me or e-mail me to discuss any concerns you may have or to discuss any course topics. I check my voicemail and e-mail regularly, and I will get back to you within 24 hours. Students are expected to interact with the instructor in an appropriate manner.

Course Description

College-level algebra and trigonometry. Includes equations, algebraic functions, inequalities, systems, conic sections, sequences and series, trigonometric functions, polar form, and partial fractions. Also includes intensive preparation for analytic geometry and calculus.

Student Learning Outcomes

After completion of the course students will be able to:

- Solve quadratic, quadratic in form, absolute value, polynomial, rational, literal, and radical equations.
- Define a function by ordered pairs, a graph, and algebraically; use function operations and inverses; use transformations and determine symmetry.
- Graph polynomial and rational functions; predict the nature of the zeros of a quadratic function, and reconstruct a polynomial from its given zeros.
- Solve polynomial, rational, and absolute value inequalities.

- Graph exponential and logarithmic functions; solve exponential and logarithmic equations; and use curve fitting for explanation of arithmetic models.
- Convert between radians and degrees measures; define, graph, and evaluate the six trigonometric functions and their inverses; solve trigonometric equations algebraically; and use trigonometric identities to simplify expressions and solve equations.
- Use the standard equations for conic sections and sketch their graphs; identify types of conic sections and determine their features.
- Graph polar equations; convert between rectangular and polar coordinates; obtain polar form of complex numbers and convert between the polar form and the standard form.
- Solve linear systems algebraically, graphically, and using matrices; solve nonlinear systems graphically and algebraically.
- Find the n th term of a sequence; calculate partial sums of arithmetic and geometric sequences; and use the Binomial Theorem to expand powers of binomials.
- Use a graphing calculator to do matrix computations and to evaluate, graph, and analyze functions.

Course Structure

This is an online course and therefore all of the learning will take place online utilizing the Canvas learning management system (LMS). The course will be a combination of asynchronous online material and Zoom-style (<https://zoom.us/j/99248787621> Zoom Meeting ID: 992 4878 7621) synchronous discussion and problem solving held each Tuesday during scheduled class time (9:00 AM – 11:45 AM).

Text and Materials

- No physical textbook is required for MAT 187. *Precalculus*, by Jay Abramson, (<https://openstax.org/details/books/prec calculus>) 2014 Rice University, will be used in this course. This is a FREE etextbook available as an interactive webpage, downloadable pdf, or print copy (available through OpenStax).
- When participating in distance education courses, it is vital to consider the technology needed in order to have a successful course. It is recommended that students meet the technical requirements below when using the Canvas learning management system (LMS) of the College.

Hardware/Software

- The decision for the student's device (desktop/laptop computer or mobile device such as smartphone/tablet) is a matter of personal preference, but the device needs to be able to run the Google Chrome, Microsoft Edge, or Apple Safari Browser. Devices can run Windows, Mac OS, or Chrome OS as long as the minimum requirements listed here are met:
 - Operating System: Windows 8.1, 10, macOS 10.11 or higher, Chrome Version 78 or higher
 - Battery life: 5 hours
 - Startup time: No longer than 120 seconds
 - Wireless: Integrated
 - Keyboard: Integrated, but can be wireless

- Audio: Headphone jack with headphones/earbuds
- Microphone: Integrated
- Camera: Integrated
- Processor: 1.6 GHZ or faster 64-bit processor
- Memory: 4 GB RAM or higher
- Disk Space: 16gb GB or higher
- Screen Size: 10 inches or larger
- Monitor Resolution: 1024 x 768
- o Adobe Acrobat Reader (latest version) is needed to view some online material.
- o Access to a printer for printing course material and exams is also needed as is a scanner or application such as Adobe Scan or Apple Notes for creating and sharing pdf files.

Internet Connection

- o A stable Internet connection is required.
- o Please consider the following while participating in online courses:
 - Using a shared Internet connection will impact connectivity, such as additional household members use of streaming TV, gaming, and other Internet usage.
 - Wireless connections may be impacted by the distance from the router and interference from microwaves and other electronics. (Wired connections are recommended.)
 - Your Internet Service Provider's performance may vary throughout the day based on community usage.

Internet Browser

- o It is recommended to update to the Google Chrome browser.
- o NOTE: Firefox, Internet Explorer, Opera, and other unlisted browsers will not be supported.
- A calculator is required for this course. An excellent, free online calculator is www.desmos.com. The makers of Mathematica have also created a website called <http://www.wolframalpha.com> where you can do vastly more computational capabilities than any calculator. This is a great free tool. Your goal should be to make technology work for you, not the other way round.

Evaluations and Grading

Grades will be determined using the following scale:

<u>Category</u>	<u>Weight</u>
Attendance	5%
Homework	20%
Quizzes	35%
Midterm Exam	20%
Comprehensive Final Exam	20%
Total	100%

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.

Letter grades will be awarded using the following scale:

A = 90% - 100% **B = 80% - 89%** **C = 70% - 79%** **D = 60% - 69%** **F = 0% - 59%**

Grades will not be curved, skewed, or otherwise inflated.

Himdag Cultural Component

My interpretation of what Nahban said in the *Desert Smells Like Rain* is this: while the *himdag* discourages direct, exact answers, in the mathematical world, one is expected to be able to come up with a precise answer for the situation. That being said, there are a few common issues shared:

- *Baban* (coyotes) are not going to affect your homework or my tests – they didn't write either.
- While one must go through a maze to see *i'itoi*, there was no mention as to how many mazes there were to get to him. Likewise, you will discover in this course that there are many different ways to perform the algebra necessary to see the final answer.
- *I-we:tma*: for your success and the college's and the community's, you should not go work on mathematics alone – it can be a group activity (except on the tests, of course).
- *T-pik elida*: we respect each other and ourselves. We respect and take pride in our own work. We respect each other's abilities, quirks and privacy.

Policies and Expectations

Academic Integrity

- In order to insure fairness and high academic standards, any actions which violate the principles of academic integrity through dishonesty or cheating are given serious consideration. The following are all considered academic dishonesty in this course.
 - Cheating: Intentionally using or attempting to use unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise. Unauthorized materials may include anything or anyone that gives a student assistance such as allowing someone else to do any of your work in the course for you, and has not been specifically approved in advance by the instructor.
 - Complicity: Intentionally or knowingly helping, or attempting to help, another to commit an act of academic dishonesty such as allowing another student to copy your work, on any assignment (homework, quizzes, exams). While studying with other students is appropriate and encouraged, this is not meant to replace individual effort.
 - Plagiarism: The appropriation of another person's ideas, processes, results, or words without giving appropriate credit. Students who attempt to take credit for someone else's work commit a serious offense.
- Any form of academic dishonesty which is observed will be noted. The student will be informed of why their behavior falls under this category and cannot be allowed. Depending on the severity of the circumstances, disciplinary action may be taken and could result in the loss of credit for the assignment (a grade of 0 for the assignment), and these offenses will then be reported under the guidance of college procedure.

E-mail Requirement

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.

- All students must activate and regularly check their Tohono O’odham Community College e-mail account. It is mandatory that students use the TOCC e-mail account for all communications with the instructor.
- The instructor will not communicate with any non-TOCC e-mail address a student uses.

Attendance

- For this class, “attendance” is more than just logging into the course. Attendance is measured by participation in course related activities. This may include, but is not limited to reading announcements, taking quizzes and exams online, submitting assignments and carrying out the requirements set forth by the instructor.
- Four unexcused absences may result in withdrawal and a grade of “W” or “Y” will be recorded.
- An exception to this attendance policy will only be made for adequate cause such as incapacitating illness, death of an immediate family member, religious observances and practices, work-related travel, personal or family emergency or for authorized representation of the college. The instructor will be responsible for judging the adequacy of cause and the student is responsible for providing documentation to the instructor certifying the legitimacy of the absence.

Homework

- As you might expect, homework is a very important part of the course and in order to fully master the topics it is essential that you work carefully on every assignment and try your best to complete every problem.
- We will have two different kinds of homework assignments in this class: online homework and “paper-and-pen” homework.
- Late homework: It is possible to request an automatic extension of the due date, but only for 1 day. Late submissions earn a maximum of 80% of their total score. (This penalty applies only to exercises submitted after the due date and not to those already submitted before the due date.)

Quizzes

- There will be six (6) quizzes given online during the semester.
- All quizzes are “timed quizzes” and will close on the due dates.
- A quiz will consist of problems which are a modified version of the homework problems.
- No make-up quizzes will be given. Your lowest quiz scores will be dropped. It is the student’s responsibility to ensure that a quiz is submitted within the given time limit and by the due date.

Mid-term and Final Exams

- There will be a mid-term exam available on **Thursday, October 15th, 2020** and a final comprehensive exam available on **Thursday, December 10th, 2020**.
- The mid-term and final exams will be open book and open notes and must be completed within the posted time limit. You will be given instructions on how to complete the exams.
- The final exam covers all the topics in the course while the mid-term exam covers the topics covered by the homework assignments and quizzes up to the mid-term exam.

- Problems on an exam will be very similar to the problems in homework assignments and quizzes, but are slightly modified, so it is essential that you organize your assignments so that you can find the appropriate assignment when you need it.
- Absolutely no make-up exam, no deadline extension, and no exam retake will be offered. Should the mid-term exam be missed then the final exam score will replace the mid-term exam score. If the final exam is missed, then the score on both exams will be posted as a "0". Missing the final exam should not be considered an option.

Instructor Withdrawals

Students who have not attended any scheduled online class sessions, not submitted any assignments nor taken any quizzes by the 45th day census report due on Thursday, October 8th, 2020 are assumed NOT to be participating in the class and may be withdrawn at the instructor's discretion.

Student Withdrawals

Students may withdraw from class at any time during the first 2/3 of the semester without instructor permission and without incurring any grade penalty. Please be sure to withdraw yourself by:

Drop/Full Refund Deadline: **Tuesday, September 15th, 2020.**

Withdrawal Deadline: **Monday, November 9th, 2020.**

if you do not expect to complete the class, otherwise you may receive an "F" grade.

Special Withdrawal (Y) Grade

- The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate.
- As your instructor, I will file a form stating the specific rationale for awarding this grade.
- "Y" grades are discouraged since they often affect students negatively and I will not award a "Y" grade without a strong reason.

Incompletes

- Incompletes (I): The nature of this course (where you are learning something new every single class) makes it very improbable for an incomplete to be given. However, per TOCC policy, I can choose to award an Incomplete only if all three of the following conditions are met:
 - The student must be in compliance with the attendance policy.
 - There must be an avoidable circumstance that would prohibit the student from completing the course.
 - The student must have completed over 75% of the course requirements with at least a "C" grade.
- Incompletes are not a substitute for incomplete work due to frequent absences or poor academic performance.
- In handing out an incomplete:
 - Incomplete grades that are not made up by the end of the ninth week of the following semester will be automatically changed to an F if the agreed upon work, as stipulated on the written form signed by the instructor and the student when the I grade is awarded, is not completed.

Final Grades

They will be sent to the address on record. Per FERPA and the Himdag, I will not give grades over the phone and am strongly discouraged from emailing same. (Again, see *t-pik elida* above.)

Reasonable Disability Accommodations (Americans with Disabilities Act)

- Tohono O'odham Community College seeks to provide reasonable accommodations for all qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting documentation of their disability, and being approved for services through the Disability Resources Office (DRO). It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements.
- For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-360-5044 for additional information and assistance.

Title IX

- Tohono O'odham Community College faculty and all staff are dedicated to creating a safe and supportive campus. Title IX and our school policy prohibit discrimination on the basis of sex- this includes sexual misconduct; harassment, stalking, domestic and dating violence and sexual assault.
- Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced any form of sexual misconduct to talk about their experience and seek the support they need.
- Confidential support and academic advocacy can be found with: Student Services.

Conduct: Bias, Bullying, Discrimination and Harassment

Tohono O'odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.