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## Syllabus MAT 122 Intermediate Algebra

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### Course Information

Course Prefix/Number: **MAT 122 Section 1**  
Semester: **Fall 2017**  
Course Title: **Intermediate Algebra**  
Credit Hours: **3**

Class Days/Times: **MW 1:05P - 2:20P**  
Place: **Main Campus, Gewkdag Şon Ki: A3**

### Instructor Information

Name: **Isaac M. Furlonge**  
Phone/Voice mail: **520.383.8401 ext 1085**  
E-mail: **ifurlonge@tocc.edu**

Office location: **Ha-Maşcamdam Ha-Ki: RM 118**  
Office hours: **MW 10:45A - 11:15A**  
**4:05P - 4:45P**  
**TR 11:00A - 11:55A**  
**Other times by appointment**

### Course Description

Basic algebraic functions. Includes the language of sets, lines in the plane, systems of linear equations, rational expressions and equations, radical expressions and equations, quadratics, exponents, and logarithms.

### Course Objectives

Upon successful completion of the course, the student will be able to:

- Calculate the slopes of lines; determine equations of lines, and graph lines.
- Given two points in the plane, find the distance and midpoint between them.
- Solve systems of linear equations in three variables algebraically.
- Solve compound inequalities in one variable and graph linear inequalities in two variables.
- Solve absolute value equations and inequalities.
- Factor polynomials using advanced techniques and solve related equations.
- Simplify rational expressions, including complex rational expressions.
- Solve rational equations involving quadratic equations.
- Simplify radical expressions, convert between radicals and rational exponents, and solve radical equations.
- Solve quadratic equations using completing the square and the quadratic formula; interpret the discriminant.
- Graph parabolas.
- Solve literal equations.
- Convert between exponential and logarithmic forms.
- Evaluate exponential expressions and logarithmic expressions.
- Graph elementary exponential equations.
- Define and identify a function and use function notation.

### Student Learning Outcomes

After completion of the course students will be able to:

- Solve linear, absolute value, quadratic, rational, and radical equations, linear and absolute value inequalities, and linear systems in two and three variables.
- Graph linear, quadratic, and elementary exponential equations, and linear inequalities.
- Solve problems involving real world applications.

### Course Structure

This course will be operating on a combination of traditional lecture, group activity, and discussions that will enhance the student's knowledge of mathematical concepts.

### Text and Materials

- [Required] Registration in the *EducoSoft* website ([www.educosoft.com](http://www.educosoft.com)). An access code must be purchased through the college's bookstore.
- [Required] A calculator that is NOT on a cell phone or electronic device.

### Evaluation and Grading & Assignments

Attendance	5%
Homework	30%
Quizzes	10%
Exams	30%
Comprehensive Final Exam	25%
<b>Total</b>	<b>100%</b>

Points	Grade
90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 59%	D
0 - 59%	F

### 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

### Student Conduct

- Please be respectful of myself and other students in the class. Disruptive behavior may result in you being asked to leave the class. This includes but is not limited to talking, eating, rustling papers, clicking on electronics, texting or playing with your phone, late arrival and early departures (late arrival to class disrupts the learning activities and is unprofessional and disrespectful towards fellow classmates), any abusive or indecent language. Collegial behavior is required at all times. Turn off cell phones, PDAs, iPods, laptops, and other electronic devices not related to the course before entering the class.
- Cheating in my class is unacceptable. If you are caught cheating, you will be given a zero on that exam or quiz and may result in my filing an Academic Honesty Incident Report which could result in suspension or expulsion from the college.

### E-mail Requirement

- 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 reply to any non-TOCC e-mail address the student uses to contact him.

### Attendance

- For each class meeting that you attend you will earn 5 points for being on time, 3 points if you are reasonably tardy (i.e. 10 minutes), and if you stay in the classroom for the entire class meeting. Not eligible for points if more than 15 minutes late. (5% of course grade)
- No participation points are awarded for an absence (excused or unexcused).
- The student is responsible for any work missed during an absence.

### Homework

- As you might expect, homework is the essential ingredient in a math grade (30% of course grade) and will be assigned daily. It is due the day after unless otherwise specified.
- Assignments should be written clearly and stapled if there are multiple pages with your name, instructor's name and the class (MAT 086 Section 1). Put the problems in the order they were assigned.
- You are permitted to work together on the homework, but you must write up your own solutions to be turned in. They should not be identical to your study partner's.
- Absolutely **no late homework** will be accepted.
- Each homework assignment is worth 8 points - all work must be shown. In order to get the full 8 points, all problems must be attempted, not necessarily correct. (I can tell if you made an effort or not). If most of the work is done, you get a 6, NOT an 8. If few problems are attempted, you get a 4 or 2.

### Quizzes

- There will be daily **in-class quizzes** given at the start of class.
- Quiz problems will consist of no more than three (3) problems similar to ones done in class and those assigned as homework.
- Each quiz will be worth 10 points (10% of course grade).
- There will be **no make-up quizzes**. Your four lowest quiz scores will be dropped.

### Exams

- There will be three exams (30% of course grade) during the semester given on Wednesday September 13<sup>th</sup>, Monday October 23<sup>rd</sup>, and Monday November 27<sup>th</sup>, 2017.
- There will be no make-up exams. Should an exam be missed then the final will replace that exam, if two exams are missed then one will be posted as a "0".

### Final Exam

- The final exam (25% of course grade) will be held in class on Monday, December 4<sup>th</sup> from 1:05P - 2:20P.
- The final exam will be a comprehensive test over all the material covered during the semester.

### Important Dates

- Drop/Full Refund deadline is Monday August 28<sup>th</sup>, 2017.
- Withdrawal deadline is Thursday October 26<sup>th</sup>, 2017.

### 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, if you have completed  $\frac{3}{4}$  of the course and specifically request it, I may consider it. Please call before final exams to assure enough time to consider your request.
- In handing out an incomplete:
  - I am assuming that the student will finish this course on his/her own time.
  - You will receive the form with the "I" grade filled in, with a request as to what *must* be done to complete the course.
  - You have one year to complete the work, else the grade will revert to an F.

### 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.)

**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.