Syllabus: *Math 142 H College Mathematics*

Course Information	
Course Prefix/Number: MAT 142 H	**Credit Hours:** 4
Semester: Fall 2018	**Course Title**: College Mathematics
Class Days/Times: Monday & Wednesday 2:00 PM to 4:30 PM	**Room:** GSK 3

Instructor Information:	**Phone/Voice Mail:** (520) 383-0101
Name: Jorge Guarin	**E-mail**: jguarin@tocc.edu (Prefered)
	Office location: Main Campus, Ed. Bld. Room 104
	Office hours: To Be Determined

Course Description:

Basic algebraic functions, including the language of sets, lines in the plane, systems of linear equations, expressions and equations in rational, radical, quadratic, exponential and logarithmic form. This course will also include a survey of real-life topics in the social sciences and management, along with an introduction to probability and statistics.

Course Objectives:

During this course students will

1. Add, subtract, multiply and divide numbers in the real number system.
2. Solve (linear, rational, radical, quadratic, exponential and logarithmic) equations and inequalities. Realize that some equations and inequalities may have no solution – or infinitely many of them.
3. Graph Equations
4. Add, subtract, multiply and divide expressions. Apply the principles of counting in problem solving situations.
5. Compute theoretical and empirical probabilities. **(in** percentages and in fractions)
6. Compute the mean, median, mode and standard deviation for a data set.
7. Use descriptive statistics to analyze data.
8. Solve interest problems using interest formulas for simple, compound and continuous interest.
9. Analyze and solve problems using linear and exponential growth.
10. Analyze exponential models of real world situations to find and estimate solutions, including growth and decay models beyond financial concepts.
11. Describe the patterns and behavior of exponential models using words, algebraic symbols, graphs, and tables.
12. Identify when an exponential model or trend is reasonable for given data or context.
13. Explain the impact of changing parameters.
14. Interpret visualizations for exponential models.
15. Perform basic logarithmic operations to address questions arising in exponential models.
16. Critically evaluate statistics presented in media

17. Explain hypothesis testing, including the purpose of and differences between experiments and observational studies.
    • Interpret study conclusions, including P-values.
    • Compute and interpret Z-scores.
18. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.
19. Rewrite expressions involving radicals and rational exponents using the properties of exponents.
20. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
21. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

Student Learning Outcomes (SLOs) :

After completion of the course students will be able to

- Analyze and solve problems using linear and exponential growth..
- Describe the patterns and behavior of exponential models using words, algebraic symbols, graphs, and tables.
- Use descriptive statistics to analyze data.

Himdag Cultural Component:

Mathematics faculty's interpretation of what Nahban said in the "Desert Smells Like Rain" is this: While the Himdag discourages direct, exact answers, in the mathematical world, my students are expected to be able to come up with a precise answer for the situation. As a community college closely associated with the Tohono O'odham Nation, TOCC encourages growth of students' cultural knowledge and my class takes steps to transmit learning mathematics in a way that respects the Tohono O'odham Himdag.

Texts and Materials: An iPad is required for this class**. Checking out and returning an Ipad from the Library is a requirement to obtain a grade in this class.**
Required Text: Quantway College, Version 2.7. Publisher: XanEdu. It will be provided, free of charge, the first day of classa with ihe Access Code. To enter to tthe Carnegie Pathways site, students need to have rhis **ACCESS CODE**.
APPS: The "Free GraCalc 2" and "My script calc" apps can be downloaded from the Apple store..

Evaluation and Grading & Assignments:

Attendance:
The attendance policy for this class is simple and it gives you 10% of your grade. You are all adults who have in some form paid for this class. If you do not wish to come to any session, you do not have to attend. However, you are still responsible for completing work on time. If you are late for class, enter quietly and sit down. You will not be allowed to make up any quiz you miss because of tardiness. In case of a valid emergency, email your instructor using the information given on the first page. After receiving the email, the instructor will decide whether or not can give you an excused absence.

Academic Integrity: Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Mathematics Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure.
[***a***] All homework can be done independently or with other students. The purpose of homework is to develop critical thinking skills and also to develop specific skills related to teaching mathematics

by repeated practice of these skills. Without this practice most students find it impossible to perform well in this class. No collaboration is tolerated during exams in-class exams.
[***b***] Students are expected to abide by the Student Code of Conduct and the Scholastic Code of Conduct found in the Tohono O'odham Community College Student Handbook. Copies are available at the main student bookstore.

Course Feedback:
Homework by Sections, Module Tests, abd Final Exam have been posted on the Carnegie Pathways site https://portal.carnegiemathpathways.org. All materials submitted will be graded and their scores returned inmediately after they are submitted. Students can take up to 3 times any homework, Module Test or Final Exam. Higher score will be recorded. Datelines for every assignment is on the site. Once the assignment expires, it is removed and you can not continue taking it..

Homework Policy:
Homework has been assigned and it is posted on the Carnegie Pathways site: Each one comes with its own dateline. You mist submit the homework before its dateline.

Withdrawals:
Please be sure to withdraw yourself by **November 2, 2018** if you do not expect to complete the class, otherwise you may receive an "F" grade.

Workload:
Students are expected to spend an average of 18 hours per week attending class sessions, doing assignments and preparing for exams. The standard Carnegie Unit of college credit assigns one credit hour for each 15 hours of class time and assumes that students spend two hours working outside the classroom for each hour of classroom instruction. For a three-credit semester course, this translates to an average of 6 hours spent outside of class weekly for 16 weeks.

Grading System/Policies:

Your final grade will be calculated as follows:		Grading Scale	
Attendance	100 points	A =	800 - 720 points
Homework assignments	300 points	B =	719 - 640 points
Chapter Tests	300 points	C =	639 - 560 points
Final Exam	100 points	D =	549 –480 points
Total possible	800 points	F =	less than 480 points

Incomplete (I) grade:
To receive an " I " grade, you must have finished at least 3/4 of the course requirements and specifically request the grade. Please call before the last week of class to be sure that there is sufficient time to consider your request. An incomplete grade generally implies that a student has shown sufficient initiative to complete the course on his or her own. You will receive a copy of the standard "I" form filed with the grade. This form details specifically what must be done to complete the course. A student has one year to complete the required work, after which the grade automatically reverts to an "F."

Make-up Assignments:
No make-up assignments will be given and no late assignments will be accepted unless the student has made arrangements with the instructor.

Extra Credit Opportunities: Do not ask for extra credit opportunities until you have completed all of the required assignments to date. The instructor will occasionally give extra credit homework, quiz, and exam questions that test critical thinking skills.

Final Grades: Students will receive a grade transcript from the college mailed to the address given with registration materials at the end of the semester when all grades have been recorded. At any time, at the Carnegie Pathways site, youare able to see your grade.

SPECIAL NOTE TO STUDENT: For privacy and security reasons, instructors are advised **NOT** to give grades over the telephone.

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.

#	Day	Date	Sections	Hw Due	Test
1	Monday	8/20/2018	Class Overview		
2	Wednesday	8/22/2018	N.1		
3	Monday	8/27/2018	N.2	N.1	
4	Wednesday	8/29/2018	N.3	N.2	
NC	**Monday**	**9/3/2018**	**Labor Day - No Clas**		
5	Wednesday	9/5/2018	N.4	N.3	
6	Monday	9/10/2018	N.5	N.4	
7	Wednesday	9/12/2018	N.6	N.5	
8	Monday	9/17/2018	N.7	N.6	
9	Wednesday	9/19/2018	N.8	N.7	
10	Monday	9/24/2018	N.9	N.8	
11	Wednesday	9/26/2018	Review Test 1	N.9	
T1			**Test 1: N.1 - N.9**		**Module N**
NC	**Monday**	**10/1/2018**	**Fall Break - No Class**		
NC	**Wednesday**	**10/3/2018**	**Fall Break - No Class**		
12	Monday	10/8/2018	M.1		
13	Wednesday	10/10/2018	M.2	M.1	
14	Monday	10/15/2018	M.3	M.2	
15	Wednesday	10/17/2018	M.4	M.3	
16	Monday	10/22/2018	M.5	M.4	
17	Wednesday	10/24/2018	M.6	M.5	
18	Monday	10/29/2018	M.7	M.6	
19	Wednesday	10/31/2018	M.8	M.7	
20	Monday	11/5/2018	Review Test 2	M.8	
T2			**Test 2: M.1 - M.8**		**Module N**
21	Wednesday	11/7/2018	S.1		
22	Monday	11/12/2018	S.2	S.1	
23	Wednesday	11/14/2018	S.3	S.2	
24	Monday	11/19/2018	S.4	S.3	
25	Wednesday	11/21/2018	S.5	S.4	
26	Monday	11/26/2018	S.6	S.5	
27	Wednesday	11/28/2018	Review Test 3	S.6	
T3			**Test 3: S.1 - S.6**		**Chap 5**
28	Monday	12/3/2018	Review Final Exam		
29	Wednesday	12/5/2018	Review Final Exam		
30	Monday	12/10/2018	Review Final Exam		
FE	**Wednesday**	**12/12/2018**	**N.1 - S.6**		**Final Exam**

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Acknowledgment of Receipt of Syllabus

Date: August 20, 2018

Please read, sign and return the following acknowledgment to me in class, *or* return to me at the following address:

Jorge Guarin
Tohono O'odham Community College
P.O. Box 3129
Sells, AZ 85634

☐ I have received my MAT 142 H syllabus (including course objectives, policies, requirements and schedule) and have read and understood all the enclosed materials

☐ I have no objection to receiving an occasional call from the instructor at the number given with my registration materials.

☐ I prefer that the instructor not call or contact me by phone anytime during the semester.

My reason(s) for taking this course:
_____
_____
_____

My background in this area includes:
_____
_____
_____

☐ I would like to be contacted by the instructor regarding the following concerns:
_____
_____
_____
_____

_____
Print Name Clearly Here — Sign Name Here

_____
Student ID Number — Telephone Number

_____
Current Mailing Address/City/State/Zip — E-mail Address