

Department of Mathematics and Computer Science

Syllabus Math 0315.034IN Summer 2024 Foundations of Algebra Online Course

Professor:Sheri AajulE-mail:saajul@com.eduPlease include your course & section in the subject line when emailing.

Virtual Student Hours: Four half-hour zoom links to student/office hours are in D2L Brightspace content. Students should feel free to ask MATH 1314 questions during this time frame as well as MATH 0315 questions. My office hours are on Sunday from noon to 2 pm. You are always welcome to send email.

Important Note: Internet is required as is regular reading of College of the Mainland (COM) email.

This course uses Brightspace with integrated MyLab Math and COM email, so please check yout email regularly. You will need access to the internet to gain access to course materials using D2L Brightspace, COM email, and MyLab Math (MML) software. *Some devices like iPads/tablets and cellphones present problems with gaining access to quizzes/tests, so they are not acceptable devices for this class.* If you do not have your own internet access, you can get access on campus in the Innovations Computer Lab, TVB 1324, and the Library computer lab.

1. Required Textbook/Materials

The textbook used in this course is: <u>Intermediate Algebra</u>, 8th edition, by Tobey, Slater, Blair and Crawford, published by Pearson. An electronic copy of the text is integrated into MyLab Math, so no hardcopy text is needed (unless you want one.) Please use the multimedia version of the textbook available online in our D2L Brightspace class using the MyLab Math link followed by the Multimedia Library Tab. Use this schedule found on this syllabus to determine the chapter/section to read. The multimedia textbook has embedded videos and worked examples so it is a huge help to master course material.

A scientific calculator is needed is needed for this course and a graphing calculator is recommended (to be used also in MATH1314.) A Texas Instruments TI 83 Plus or TI 84 Plus is recommended. A TI 89 or higher cannot be used in this course, nor any internet accessing or Computer Algebra System (CAS) calculator. Do not use stored programs beyond what comes pre-packed in the calculator.

MyLab Math (Pearson)

Please access MyLab Math via D2L Brightspace (in the content section of our course). You can access Brightspace directly from the COM homepage <u>http://www.com.edu</u> (scroll down to the bottom of the page and click on the button for D2 Brightspace) or via

http://com.brightspace.com. A document in Course Administration walks you through using the MyLab Math course. The best browsers for MyLab Math are Chrome and Safari. You will need to allow pop-ups. Note that MyLab Math contains course text, multimedia, homework, quizzes, tests and grades so if you opted out of *MyLab Math*, your course grade will be zero.

2. Course Description

This course is designed to develop skills and understanding in the following areas: basic algebra concepts to include exponents, factoring and radicals; relations and functions, inequalities, algebraic expressions, and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. Prerequisites/co-requisites: Prerequisite of TSIA2 Math Diagnostic 4. This course does not transfer.

3. Course Requirements

Homework Assignments

There is an assigned homework for each section to be completed online using MyLab Math. Starting on Test 2 material, most homework allows late submission with a 20% penalty on problems submitted after the due date, except if close to an exam or end of course, then there is no late submission option. Penalty applies to late problems and not necessarily to the entire assignment. Late close dates are as follows: All Exam 1 homework closes on 6/16/24; All Exam 2 homework closes on 6/23/24; All Exam 3 homework closes on 6/30/24; and all Exam 4 homework closes on 7/07/24; Final exam homework closes on 7/28/24.

Quizzes and Exams

There are four quizzes, four chapter exams and a comprehensive final exam. All of the quizzes and exams are to be done online using MyLab Math.

You may use your approved calculator (which does not access the internet or contain other than original stored programs) on all assessments. I suggest that you create a formula/concept sheet which has three columns, one for the name of the formula or concept, one for the formula or concept, and one for an example of the formula or concept. Study this document regularly and commit the formulas and concepts to memory, but keep the formula sheet handy in case you need it to check a problem on an assessment. If you really get stuck, you may use your hardcopy textbook and notes on assessments. No other material or help is allowed. Do your own work.

You can retake each quiz a second time (with its time frame) to improve your score; the higher score will be the one that counts. The quizzes are open until their respective exams close and you can submit during that time frame without late penalty. There are no retakes on exams. Quizzes have time limits of two hours; exam 1-4 as well as the final exam have time limits of two and one half hours. At most 4 percentage points of extra credit will be added to your final exam score (for a max score of 100%) for submitting a course evaluation.

4. Determination of Course Grade/Detailed Grading Formula

Grading Formula:

The course grade will be determined by the following formula:

Final Average = 64% Chapter Exam Average + 16% Final Exam + 10% Homework Average + 10% Quiz Average

The Final Exam score will replace the lowest Chapter Exam Score when it is higher.

Grading Scale:

Grade A: Final Average in [89.5, 100] Grade B: Final Average in [79.5, 89.5) Grade C: Final Average in [69.5, 79.5) Grade D: Final Average in [59.5, 69.5) Grade F: Final Average in [0, 59.5)

5. Make-up policy

If you are unable to make a scheduled exam within days specified in the course outline, you will be allowed to make up the exam provided that you notify the instructor before the end of the scheduled exam period and have a legitimate reason for not be able to take the exam.

6. Attendance Policy

You must log in and be active in MyLab Math each week, preferable at least three times. In addition to time spent in doing homework, taking quizzes and exams it will be necessary to study, using the course materials. Please plan to spend at least 4 hours per week to be successful in the class.

7. Communicating with your instructor

All electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means. I will make every effort to respond to your email within 24 hours of receiving it.

8. Student Learning Outcomes

Upon successful completion of M01315 students will:

- 1. Define, represent and perform operations on real and complex numbers.
- 2. Recognize, understand and analyze features of a function
- 3. Recognize and use algebraic (field) properties, concepts, procedures (including

factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.

4. Identify and solve absolute value and linear inequalities.

5. Model, interpret and justify mathematical ideas and concepts using multiple representations.

6. Connect and use multiple strands of mathematics in situations and problems, as well as to the study of other disciplines.

9. Academic Dishonesty

Do your own work on assessments. College of the Mainland is committed to a high standard of academic integrity. All students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonesty (including cheating, plagiarism, and collusion) will be dealt

with in a manner that is consistent with College Policy and the Student Handbook. Any student found to have been academically dishonest on an assignment, quiz or exam will receive a zero for that assignment, quiz or exam and he or she will be referred to the Office of Student Conduct for further disciplinary action. Please read the sections on *Standards of Student Conduct and Discipline and Penalties* in the on-line Student Handbook.

10. Concerns

If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact the Department Chair, Leslie Richardson, at (409) 933-8329, <u>lrichardson@com.edu</u>.

11. Course Calendar and Pacing

IMPORTANT NOTE: We move through MATH0315 pretty fast as MATH1314 is more abstract and takes more time to master. The material we cover in MATH0315 is needed for success in MATH1314. Note that MATH0315 has a final exam (and a review for final exam homework) towards the end of the semester even though chapter content in covered earlier. SUMMER SESSION: In Shakespeare wrote, "There is a tide in the affairs of men which when taken at the flood leads on to fortune; omitted and all the voyage of life is spent in shallows and in miseries." He just described summer session as it goes so fast that it is hard to catch up if you get behind.

Date Range	MATH0315	Due Date	MATH1314 Assignments/Assessments		
_	Assignments/Assessments		_		
Week 1	Orientation Homework		Orientation Homework		
6/3 - 6/09	1.4 Rules of Exponents (skip scientific				
	notation)				
	1.5 Operations with Variables;				
	Grouping Symbols				
	1.6 Evaluating Expressions/Formulas				
	2.1 First Degree Equations in One				
	Variable				
	2.4 Solving Word Problems				
	Quiz A (Sections 1.5, 1.6 & 2.1)				
	2.6 Linear Inequalities				
	2.3 Absolute Value Equations				
Week 2	2.8 Absolute Value Inequalities		1.1 Introduction to Graphs		
6/10 - 6/16	Test 1 (1.4, 1.5, 1.6, 2.1, 2.3, 2.4, 2.6,				
	& 2.8)				
	3.1 Graphing Linear Equations with				
	Two Unknowns				
	3.2 Slope of a Line				
	3.3 Graphs and the Equations of a Line				
	Quiz B (Sections 3.1, 3.2 & 3.3)				
	4.1 Systems of Linear Equations in 2				
	Variables				
	4.3 Applications of Systems of				

Side-By-Side MATH 0315 – MATH 1314 Course Calendars

	Equations		
	Test 2 (3.1, 3.2, 3.3, 4.1 & 4.3) opens		
	early on 6/16/24 but closes next week		
Week 3	Test 2 (3.1, 3.2, 3.3, 4.1 & 4.3)		1.2 Functions and Graphs
6/17 - 6/23	5.1 Polynomial		1
	5.4 GCF, Factoring by Grouping		
	5.5 Factoring Trinomials		
	Quiz C (Section 5.4, 5.5 & 5.6)		
	5.6 Special Cases of Factoring		
	5.8 Solving Equations by Factoring		
	<i>Test 3 (5.1, 5.4, 5.5. 5.6 & 5.8) opens</i> <i>early on 6/23/24 but closes</i>		
	next week		
Week 4	Test 3 (5.1, 5.4, 5.5, 5.6 & 5.8)		1.3/1.4 Linear Functions and Equations
6/24 - 6/30	5.3 Synthetic Division		The first Different i une tonis und Equations
	6.1 Rational Expressions: Simplifying,		
	Multiplying, Dividing		
	6.2 Add/Subtract Rational Expressions		
	7.6 Complex Numbers		
	3.6 Graphing Functions from		
	Equations Quiz E (Sections 7.6 & 3.6)		
	<i>Guil E</i> (Sections 7.6 & 3.6) <i>Test 4</i> (5.3, 6.1, 6.2, 3.6 & 7.6) opens		
	<i>early on 6/30/24 but closes</i>		
	next week		
Week 5	Test 4 (5.3, 6.1, 6.2, 3.6 & 7.6)		1.5 Zeros of Linear Functions
7/1 - 7/7			Quiz 1: Sections 1.1-1.5 2.1
		7/4/24 Holiday	Increasing/Decreasing Piecewise
			Functions
			2.2 Algebra of Functions2.3 Composition of Functions
			2.5 Transformations of Functions
			Exam 1 (Chapters 1 & 2, excluding 2.4)
			opens early 7/7/24 but closes 7/14/24
Week 6	Review for Final Exam Homework		Exam 1 (Chapters 1 & 2, excluding 2.4)
7/8 - 7/14	(opens early)		3.2 Quadratic Functions
			3.3 Graphs of Quadratic Functions
			4.1 Polynomial Functions
			4.2 Graphs of Polynomial Functions
			4.3 Remainder, Factor Theorems4.5 Rational Functions
			Quiz 2 Finding Zeros (over 3.2, 4.3 &
			4.5)
Week 7	Review for Final Exam Homework		4.6 Inequalities
7/15 - 7/21	(opens early)		Exam 2 (Chapters 3 and 4)
			5.1 Inverse Functions
			5.2 Exponential Functions
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			5.3 Logarithmic Functions Quiz 3 Graphing Techniques (over 5.1-
			5.3)
			5.4 Properties of Logarithmic Functions
Week 8	Review for Final Exam Homework		5.5 Exponential, Logarithmic Equations
7/22 - 7/28			5.6 Modeling with Exponential and
			Logarithmic Functions
			Exam 3 (Chapter 5)
			See TI-84 handouts for Exam 4 material
			6.1/6.3 Solving Linear Systems 2-D
			general as well as via Gaussian/Gauss-
			Jordan Elimination
Week 9	Comprehensive Final Exam opens		6.2 Solving Linear Systems 3-D
7/29 - 8/4	early on 7/29/24 but closes 8/6/24	7/29/24 W-Day	6.4 Matrix Operations
	-	8/3/24 Last Day of	Quiz 4 (over 6.1-6.4)
		Class	Exam 4 (Chapter 6)
			Review for Final Exam Homework
Week 10	Comprehensive Final Exam (due		Comprehensive Final Exam (due
8/5 - 8/7	Tuesday 8/6/24)		Wednesday 8/7/24)
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Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook <u>https://www.com.edu/student-services/docs/Student_Handbook_2023-2024_v2.pdf</u>. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact: Kimberly Lachney, Student Accessibility Services Coordinator Phone: 409-933-8919 Email: AccessibilityServices@com.edu Location: COM Doyle Family Administration Building, Student Success Center

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 5-week session is July 1. The last date to P a g e 6

withdraw from the 10-week session is July 30. The last date to withdraw for the 2^{nd} 5-week session is August 2.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <u>https://www.com.edu/community-resource-center/</u>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at <u>deanofstudents@com.edu</u> or <u>communityresources@com.edu</u>.

Nondiscrimination Statement:

The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.