Math 21: Finite Mathematics WEB, FALL 2023

Instructor: Walid Tayar
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Office Hours: MW 11:00-11:50am T 9:00-9:50am or by appointment
Virtual Office Hour: TH 9:00-9:50am
Schedule #: 51020

IMPORTANT COMMUNICATION STATEMENT: Make sure to adjust your settings in Canvas to get notified when announcements are posted. This is how I will communicate with you. It is required that you check the announcements in Canvas to stay up to date on deadlines and other important information. Also, when you send me an email, please put Math 21 WEB in the subject line so I know which class you are in.

Course Description:
FINITE MATHEMATICS 3 units, 3 lecture hours PREREQUISITES: Math 103 or equivalent. ADVISORIES: English 1A or 1AH. This course is an introduction to linear functions, systems of linear equations and inequalities, matrices, linear programming, mathematics of finance, sets, Venn diagrams, combinatorial techniques and an introduction to probability. Topics include applications in business, economics and social sciences. (A, CSU-GE, UC, I) (C-ID MATH 130)

Textbook:
Finite Mathematics 12th Edition, Lial, Greenwell, Ritchey

Optional: You can buy the bundled textbook (which includes the textbook and access code for MyLab) at the Reedley College Bookstore or online. Be careful, once you open the kit you will not be able to return the book for a full refund.

Required: You can purchase the access code by itself, without the book. The book is available electronically through the website. All of the work for this class will be done on MyLab for which you will need an access code. Ask for the Math 21 book or MyLab access code for Mr. Tayar's class. **Another option would be to purchase the access code through MyLab. You have the option to buy the 18-week subscription which is cheaper. This will be explained in the next step on Canvas.**

WHEN SETTING UP YOUR ACCOUNT ON MYLAB, USE YOUR 7-DIGIT REEDLEY COLLEGE ID AS YOUR USERNAME (0123456) IF POSSIBLE.

YOU MUST BE REGISTERED ON MYLAB BY THE END OF THE DAY ON WEDNESDAY AUG 7th OR YOU WILL BE DROPPED!

IF YOU ARE USING THE TEMPORARY ACCESS CODE, IT IS YOUR RESPONSIBILITY TO PAY FOR ACCESS BY THE EXPIRATON DATE OR YOU WILL BE DENIED ACCESS AND DROPPED! NO EXCEPTIONS!

Required Course Materials:

- Non-graphing scientific calculator (i.e. TI-30xIIs or TI 30xs and can be checked out from the library)
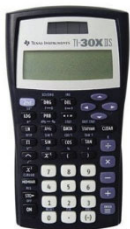
- Pencils/rulers/paper etc.
- **Optional:** Mead Cambridge Quad Wire-bound Notebooks (graph paper) from the bookstore for homework. (See image below)

Online Homework:

After you read through the section in the text, watch my videos, read through my notes, and view the additional resources in the multi-media library you can attempt the homework. You may work ahead if you like. Each assignment has a due date. Homework will not be accepted late, but the two lowest homework scores will be dropped to allow for any tech issues, emergencies or missed assignments. You can complete any past due assignments and earn 70% credit on the past due problems up until the end of the unit which will be the day before the UNIT EXAM. If you do not successfully complete (70% or better) three homework assignments in a row you may dropped. If you are completely inactive online (on Canvas and/or MyLab) for more than 7 days you may be dropped from the course. It is important to stay current to be successful in the course! Note: When working on homework, you do not have to complete an entire assignment during one session. If you need to stop while in the middle of an assignment, you can submit your work and the program will save it for you. You can then come back to the assignment and continue from where you left off at another time as long as you do so before the deadline. By agreeing to take this class you are to be the one doing the work for this class including all homework and exams.

NOTE: The videos assigned on MyLab and the orientation assignment will not count toward your grade. They are to be used as an additional resource. The will be deleted at the end of the semester.

By agreeing to take this class you are to be the one doing the work for this class including all homework and exams.

HOMEWORK WILL ALWAYS BE DUE ON WEDNESDAYS. Keep in mind that if you're working on HW outside of business hours then I may not be able to respond to your email inquiries so plan your time accordingly.

Homework Notebook:
It is recommended that you keep all of your written work from your online homework assignments in a notebook of your choosing. It is important that you work out each problem and show your work. It might be a good idea to use graph paper as we will be graphing throughout the semester. **This will not be collected.** There is an example of what your notebook might look like on the last page of the syllabus.

Attendance:
Your attendance in this class is based on your activity online. If you do not successfully complete (70% or better) three homework assignments in a row you may dropped. If you are completely inactive online (on Canvas and/or MyLab) for more than 7 days you may be dropped from the course. It is important to stay current to be successful in the course!

Covid Related Absence:
If you are absent due to covid, please try to keep up with the class work. You can read the notes and/or watch my videos and keep up with the HW deadlines. If you miss an exam or HW, I will need a doctors note to allow for makeups.

Timed Chapter Exams: There will be an exam at the end of each unit. It is recommended that you complete all of the chapter homework before you attempt the exam. Everything is available to you now so please be careful when selecting/starting the exam. Once you start the chapter exam, it will count as an attempt and you only have one attempt for each exam and one hour to complete it. **Exams will be due on THURSDAYS after the unit is complete and will be due by 5pm. I make the deadline at this time so if any emergencies arise I may be able to respond to emails. You can take the exam anytime or day before the due date so plan your time accordingly. Work, household responsibilities or other activities should not effect your ability to complete the HW because it is due by 5pm. You have an entire week or more to complete the exam. Make sure to set aside days and times that you can devote to the class.**

All of the homework and the exam for the first unit will be available to you from the first day so please make sure you finish them by the set deadlines. Remember, once you start the exams you will only have one attempt and one hour to finish. You cannot start it and finish it a later time like the homework. You are not to receive any outside help.

Final Exam:

A final exam worth 100 points will be given at the end of the semester during finals week and will be similar to the unit exams and is <u>MANDATORY.</u> IT WILL BECOME AVAILABLE FOR A TWO DAY WINDOW ONLY on the THURS/FRI of the 9th week and you will have 2 hours to complete it once you start. You are to receive no assistance of any form during the exams including the internet to search for solutions, text book, or from another person. You will be booted out of the exam if you attempt to access any other resources and will not be granted another attempt.

Grading:

- Online Homework will be worth 30% of your overall grade. I will drop your 2 lowest scores including a 0 for any technical difficulties, missed deadlines, accidental attempts, unforeseen circumstances or just a poor attempt.
- Exams and Final will be worth 70% of your overall grade. I will drop your lowest score including a 0 for any technical difficulties, missed deadlines, accidental attempts, unforeseen circumstances or just a poor attempt and replace it with your score on the final exam. See below to see how this works.

Percent	Grade
90 - 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Here is how the Final can replace a low exam score. You will notice that the Final Exam score will be entered twice at the end of the semester then I will drop your lowest exam score. This is how the grading system allows me to replace a low score. So, no matter what, the final will count toward your grade but here are the scenarios in the example below:

If Final Is higher than lowest Exam Score	If Final Is lowest Exam Score
Exam 1 = 80	**Exam 1 = 80**
Exam 2 = 75 (Gets Dropped, Replaced with 95)	**Exam 2 = 75**
Exam 3 = 87	**Exam 3 = 87**
Final Exam 1 = 95 counts toward grade	**Final Exam 1 = 65 Counts toward**
Final Exam 2 = 95 Counts toward grade since higher than lowest exam	**Final Exam 2 = 65 Gets dropped since not higher than lowest exam**

Student Learning Outcomes:

MATH-3A SLO1: Analyze properties of various types of functions.

MATH-3A SLO2: Synthesize results from the graphs and/or equations of functions.

MATH-3A SLO3: Solve various types of equations and inequalities.

MATH-3A SLO4: Apply appropriate techniques to model real world applications.

MATH-3A SLO5: Use formulas to find sums of finite and infinite series.

Student Learning Outcomes are statements about what the discipline faculty hope you will be able to do at the end of the course. This is NOT a guarantee: the ultimate responsibility for whether you will be able to do these things lies with you, the student. In addition, the assessment of Student Learning Outcomes is done by the department in order to evaluate the program as a whole, and <u>not</u> to evaluate individual faculty performance.

<u>Special Needs Requests</u>:

If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

<u>Academic Dishonesty</u>:

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. **Cheating** is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely. **Plagiarism** is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

Note: This syllabus is subject to change at the discretion of the instructor.

Section 6.1

① Find the greatest commont factor

$77 = 7 \cdot 11$ $GCF = \boxed{7}$
$343 = 7 \cdot 7 \cdot 7$

②
$66 = 2 \cdot 3 \cdot 11$
$78 = 2 \cdot 3 \cdot 13$
$GCF = 2 \cdot 3 = \boxed{6}$

③ $12 = 2 \cdot 2 \cdot 3$
$28 = 2 \cdot 2 \cdot 7$
$24 = 2 \cdot 2 \cdot 2 \cdot 3$
$GCF = 2 \cdot 2 = \boxed{4}$

④ a^6
a^8
$GCF = \boxed{a^6}$

⑤ $a^7 b^2$ $GCF = \boxed{a^7 b^2}$
$a^7 b^6$

⑥ $55 = 5 \cdot 11$ x^3 $GCF = \boxed{5x^3}$
$35 = 5 \cdot 7$ x^7

⑦ $3y - 6 = \boxed{3(y-2)}$

⑧ $14a^2 + 3a = \boxed{a(14a+3)}$

⑨ $315x^2 + 105x + 21$
$315 = 3 \cdot 3 \cdot 5 \cdot 7$
$105 = 3 \cdot 5 \cdot 7$ $GCF = 21$
$21 = 3 \cdot 7$

$\dfrac{315x^2}{21} + \dfrac{105x}{21} + \dfrac{21}{21}$
$\boxed{21(15x^2 + 5x + 1)}$