

NEW HAMPSHIRE COMMUNITY TECHNICAL COLLEGE – LACONIA

379 Belmont Road
Laconia, NH 03246
(603) 524-3207

COURSE OUTLINE/SYLLABUS SHEET

- **COURSE NO:** MATH225L

- **COURSE TITLE:** Finite Math

- **CREDIT HOURS:** 4

- **SEMESTER:** Spring 2024

- **INSTRUCTOR:** Julie Morin, email jmorin@ccsnh.edu; phone 366-5233

- **OFFICE LOCATION:** Turner Building, Rm. 208a, (at back of room 208)

- **CONFERENCE HOURS:** Tues & Thurs. 10:30-12:30. Sometimes additional time or one-on-one assistance is needed. The instructor is normally available during the conference hours listed above-or you may make an appointment with the instructor for other times.

- **PREREQUISITES:** MATH142L, MATH210L, or equivalent with a grade of C or better or competence demonstrated on math placement exam.

- **COURSE DESCRIPTION:** Topics in this course include linear, quadratic, exponential and logarithmic functions; financial formulas such as rate of change, growth, compounding, etc.; the use of matrices and linear programming techniques in solving multi-variable problems; basic set and probability theory with Venn diagrams, permutation/ combination formula analysis.

- **TEXT/INSTRUCTIONAL MATERIALS AND EQUIPMENT NEEDED:**

Access to Lumen OHM, a graphing calculator, and technology (laptop or computer) to effectively use OHM. Each are described below:

 - OHM required, text is Business Precalculus; Edition 0.1, by David Lippman. You are required to purchase an access code which is only available from our campus bookstore. Temporary free access is available for 14 days. See Canvas course site for access code details.
 - A **graphing** calculator is required such as TI-83 or higher model (May use free online calculators such as Desmos; although handheld is typically most convenient.)
 - While Canvas and OHM are available on handheld devices, students are expected to have reliable access to a computer with high-speed internet access to complete course work. Lumen OHM is optimized for the latest and second latest version of the major browsers.
 - For technical support with Lumen email support@lumenlearning.com for Canvas or LRCC accounts email LRCCITSupport@ccsnh.edu
Graphing Calculator,

- **GRADING:** The following criteria will determine your grade for the course:

<u>Category</u>	<u>Total Points</u>
Weekly Engagement Assignments	10%
Homework	20%
Quizzes	10%
<u>Exams (5 Unit Exams and Final Exam)</u>	<u>60%</u>
Total	100%

Weekly Engagement Assignments will be part of each weekly Canvas Module. Examples of weekly contact are using OHM Messaging, completing study skills assessments or possibly participating in a Zoom office hour appointment. **No make-up assignments will be given; as weekly engagement is based on consistent and timely participation.**

Homework assignments are given for all sections covered in the text. Specific due dates for each homework assignment are posted in Canvas. You have unlimited attempts on these homework problems up until the due dates. **One low grade will be dropped in this category.**

Quizzes are given for all sections covered in the text. These are set up to provide practice for the exams. Two attempts are allowed and the higher grade is counted in the final course grade. **No make-up assignments will be given for any quizzes; however, 1 low grade will be dropped.**

Exams must be taken on or before the scheduled dates. One attempt is allowed and all exam grades are counted in the final course grade. **All exams are included in final course grade.**

Late Work Policy: Weekly completion of assignments is critical to success. Occasionally, a situation may arise that requires an exception. Each student has been given 5 Late Passes within Lumen OHM. A Late Pass enables access to an assignment past the due date. Late work will only be accepted for two weeks past the due date; after that time has passed a 0 will be entered in the gradebook.

Attendance/Participation Policy: It is my expectation that you will complete work each week according to the schedule posted in Canvas. If an absence is unavoidable, contact me as soon as you possibly can via phone or email. I will do my best to help you determine how best to stay on track in the course.

Extended absence may result in removal from the course. If you miss class for 2 consecutive weeks and do not contact me within that 2-week timeframe I will notify our campus counselor who may reach out to you. If after 2 weeks you do not contact me, I will remove you from the course and record a grade of AF (Academic Failure). Note that an AF may affect financial aid. Therefore, it is critical for you to maintain communication with the instructor so that if you encounter difficulties, I can help you to make an informed decision regarding withdrawal or participation.

Final course grades are assigned on the following basis:

	A	93 -100	A-	90 - 92	
B+	87 - 89	B	83 - 86	B-	80 - 82
C+	77 - 79	C	73 - 76	C-	70 - 72
D+	67 - 69	D	63 - 66	D-	60 - 62
F	< 60				

NEED FOR ASSISTANCE: It is the student's responsibility to be aware of their progress and initiate a request for help. The instructor is normally available during the conference hours listed above, or you may request an appointment with the instructor for other times. Free tutoring is available for students enrolled in courses at LRCC. Students needing tutoring services should email Paula Kochien, pkochien@ccsnh.edu to request a tutor.

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Extended absence may result in your removal from the course. If you miss class for 2 consecutive weeks and do not contact me within that 2-week timeframe I will notify our campus counselor. If after 2 weeks you do not contact me, I will remove you from the course and record a grade of AF (Academic Failure).

Diversity, Equity and Inclusion Statement

The content of this course is designed to challenge your viewpoints and perspective as part of your learning experience. It is my intent that students from all backgrounds and perspectives are well-served by this course. Students' learning needs will be addressed both in and out of class, and the diversity of students will benefit the class and will be considered a resource and strength. Materials and activities presented in class will respect diversity including gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture.

- Discuss privately with me if you feel your success in the class is being impacted by experiences outside of class. I am always open to listening to students' experiences and want to find acceptable ways to process and address the issue.
- If you feel that something offensive occurred regarding DEI topics in class (by anyone) that made you feel uncomfortable, please let me know.
- Please make me aware if you have a name and/or set of pronouns that are different from those appearing on your official records.
- I encourage you to seek out other resources, such as an academic advisor or another trusted faculty member, if you feel more comfortable addressing issues with these individuals. Anonymous feedback can be submitted [here](#).

It is my hope that this course meets your every expectation as a challenging, engaging, and respectful learning experience. If you find this not to be the case, I will welcome the opportunity to address your concerns. This is not only a courtesy, but also a matter of process and procedure. Should we fail to arrive at a mutually satisfactory understanding, you should take the matter to my Program Coordinator, Matthew Simon, msimon@ccsnh.edu.

COURSE OUTCOMES

- Graph linear functions and in "real-world" applications using a calculator graphing function.
- Use financial formulas to calculate simple interest, compound interest, present values, future values, annuities and amortization.
- Solve systems of equations graphically and with matrix operations
- Solve and interpret systems of linear inequalities
- Determine theoretical and empirical probabilities through the use of various probability formulas
- Create and use probability distributions to analyze data
- Analyze data using graphical analysis and descriptive statistics
- Recognize normal distributions and how to use their properties in real-life applications

COURSE COMPETENCIES

1. Solve linear equations and inequalities in one variable.
 2. Use the slope/y-intercept form in graphing straight lines and linear inequalities.
 3. Apply the concept of the linear function, $f(x) = ax + b$ in "real-world" situations.
 4. Calculate simple interest, future & present value, for single investment situations.
 5. Calculate future value, effective rate & present value of compounded dollars.
 6. Calculate future & present value of ordinary annuities.
 7. Apply the financial formulas in "real-world" situations.
 8. Graph systems of linear inequalities.
 9. Solve systems of linear equations using standard elimination method.
 10. Graphically determine minimum and maximum values in linear programming exercises.
 11. Solve systems of equations in 3 variables using the Gauss-Jordan method.
 12. Add, subtract, & multiply matrices.
 13. Apply matrix operations in "real-world" situations.
 14. Solve matrix equations.
 15. Use basic set operations of intersection, union and complement.
 16. Construct Venn diagrams.
 17. Determine probabilities of various simple events.
 18. Determine the conditional probability of dependent events.
 19. Evaluate factorials, permutations & combinations.
 20. Use permutations & combinations operations in "real-world" situations.
 21. Construct bar, pie, line graphs from data sets.
 22. Analyze data sets using measures of central tendency and dispersion.
 23. Normalize data and display it in a normal distribution graph
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Proposed Course Schedule (Spring 2024)

Instructor may announce changes to this schedule; students are expected to stay informed of schedule changes.

	CLASS TOPIC	HOMEWORK ASSIGNMENT
Week 1 1/16-1/19	Course Introduction- Set up Lumen OHM access Chapter 1, Functions and Lines Sections 1.1-1.3	Canvas-Week 1 Module- Complete OHM Student Assignment Tutorial, Homework 1.1-1.3, Quiz 1.1-1.3, Week #1 Contact
Week 2 1/20-1/26	Chapter 1, Functions and Lines Sections 1.4-1.5; Section 3.1, Inequalities and Absolute Value Functions	Canvas-Week 2 Module – Homework 1.4, 1.5, 3.1, Quiz 1.4, 1.5, 3.1, Week #2 Contact
Week 3 1/27-2/2	Chapter 1, Functions and Lines Sections 1.6-1.7; Section 2.1, Systems of Equations	Canvas-Week 3 Module – Homework 1.6, 1.7, 2.1, Quiz 1.6, 1.7, 2.1, Week #3 Contact
Week 4 2/3-2/9	Exam #1 (Ch. 1, Sections 2.1, 3.1)	Canvas-Week 4 Module - Exam #1, Week #4 Contact
Week 5 2/10-2/16	Chapter 2, Systems of Equations and Matrices, 2.2-2.4	Canvas-Week 5 Module- Homework 2.2-2.4, Quiz 2.2-2.4, Week #5 Contact
Week 6 2/17-2/23	Chapter 3, Linear Programming. 3.2- 3.5	Canvas-Week 6 Module - Homework 3.2-3.5, Quiz 3.2-3.5, Week #6 Contact
Week 7 2/24-3/1	Review & Exam #2 (Chapters 2 & 3)	Canvas-Week 7 Module - Exam #2, Week #7 Contact
Week 8 3/2-3/8 3/11-3/15	Chapter 4, Polynomial and Rational Functions, 4.1-4.3 SPRING BREAK	Canvas-Week 8 Module - Homework 4.1-4.3, Quiz 4.1-4.3, Week #8 Contact
Week 9 3/16-3/22	Chapter 5, Exponential and Logarithmic Functions, 5.1-5.3	Canvas-Week 9 Module – Homework 5.1-5.3, Quiz 5.1-5.3, Week #9 Contact
Week 10 3/23-3/29	Review & Exam #3 (Chapters 4 & 5)	Canvas-Week 10 Module - Exam #3, Weekly Contact #10
Week 11 3/30-4/5	Chapter 6, Finance, 6.1-6.4	Canvas-Week 11 Module - Homework 6.1-6.4, Quiz 6.1-6.4, Week #11 Contact
Week 12 4/6-4/12	Exam #4 (Chapter 6) Chapter 7: Sets, 7.1-7.2	Canvas-Week 12 Module – Exam #4; Homework 7.1-7.2, Quiz 7.1-7.2, Week #12 Contact
Week 13 4/13-4/19	Chapter 8, Probability, 8.1, 8.2,8.4	Canvas-Week 13 Module –Homework 8.1, 8.2, 8.4, Quiz 8.1, 8.2, 8.4, Week #13 Contact
Week 14 4/20-4/26	Exam #5 (Chapters 7 & 8)	Canvas-Week 14 Module - Exam #5, Week #14 Contact
Week 15 4/27-5/3	Final Exam	Canvas-Week 15 Module – Final Exam

