NEW HAMPSHIRE COMMUNITY TECHNICAL COLLEGE – LACONIA

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

COURSE OUTLINE/SYLLABUS SHEET

- **COURSE NO:** MATH2250L
- **COURSE TITLE:** Finite Math
- **CREDIT HOURS:** 4
- **SEMESTER:** Spring 2020
- **INSTRUCTOR:** Julie Morin, email jmorin@ccsnh.edu; phone 366-5233
- **OFFICE LOCATION:** Turner Building, Rm. 208a, (at back of room 208)
- **CONFERENCE HOURS:** Mon. 11:00-12:30; Tuesday 1:00-2:30 Wednesday 11:00-1:00 or by appointment
- **PREREQUISITES:** MATH1420L, MATH2100L, 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:**
  MyLabMath version of Finite Mathematics; 13th Edition, by Barnett, Ziegler & Byleen, 1999; Prentice Hall. Students are required to use Pearson's MyLabMath online program for all homework and chapter tests. (Maintaining access to MyLabMath is the student's responsibility. Temporary free access is available for 14 days, students must convert to temporary access before the 14 days expires. Students are responsible for resolving technical issues with Pearson Support, https://support.pearson.com/getsupport/)

  Graphing Calculator, such as TI-83 or higher model

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

Category	**Total Points**
Homework	30%
Quizzes	10%
Exams	60%
Total	**100%**

Weekly Homework assignments can be accessed through Canvas. You are expected to complete these according to the schedule on the last page of this syllabus. Specific due dates for each homework assignment are posted in Canvas. Unlimited attempts are available on all homework problems. You are expected to complete these by the due dates; however, the assignments will remain open all semester so that you may still work on them if needed. Late work has a 10% point deduction. **No make-up assignments will be given; however, 1 low grade will be dropped.**

Quizzes must be completed by the due dates otherwise a grade of 0 will be entered. 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. Two attempts are allowed and the higher of the two attempts is counted in the final course grade. Six exams are given in the course.

Each student is assumed to be earnestly working to the best of his or her ability in the course. **It is the student's responsibility to be aware of his/her progress, and initiate a request for help.** The instructor is available during office hours or by appointment to assist students. Students should ask for help as soon as possible, the college has many resources available to assist students.

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:** 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.

Free peer tutoring may be available for students enrolled in courses at LRCC. Students needing tutoring services should go to The Teaching and Learning Center (TLC) Office and request a tutor. Every effort will be made to identify and assign a peer tutor.

- **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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- **ATTENDANCE 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, email, or at an office hour. I will do my best to help you determine how best to stay on track in the course.

  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 3 weeks you do not contact me, I will remove you from the course and record a grade of AF (Academic Failure).

Proposed Course Schedule (Spring 2020)

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

	CLASS TOPIC	HOMEWORK ASSIGNMENT
Week 1 **1/21-1/27**	Course Introduction- Set up MyLab access Chapter 1, Linear Equations and Graphs, Sections 1.1-1.3	Canvas-Week 1 Module-Follow link to set up MyLab Complete Homework Orientation, Reading & Problems
Week 2 **1/28-2/3**	Chapter 3, Mathematics of Finance, Simple & Compound Interest Sections 3.1-3.2	Canvas-Week 2 Module Reading, Problems and Quiz
Week 3 **2/4-2/10**	Chapter 3, Mathematics of Finance, Future and Present Value of Annuities, Sections 3.3 -3.4	Canvas-Week 3 Module Reading, Problems and Quiz
Week 4 **2/11-2/17**	**Exam #1 (Ch. 1 & 3)** Chapter 4, Systems of Linear Equations, Section 4.1	Canvas-Week 4 Module Exam, Reading, and Problems
Week 5 **2/18-2/24**	Chapter 4, Systems of Linear Equations, Augmented Matrices, Section 4.2	Canvas-Week 5 Module Reading, Problems and Quiz
Week 6 **2/25-3/2**	Chapter 4, Systems of Linear Equations, Gauss-Jordan Elimination, Section 4.3	Canvas-Week 6 Module Reading, Problems and Quiz
Week 7 **3/3-3/9**	**Review & Exam #2 (4.1-4.3)** Introduction to Matrix Operations, Section 4.4	Canvas-Week 7 Module Exam, Reading, and Problems
Week 8 **3/10-3/16**	Chapter 4, Systems of Linear Equations, Inverse of Square Matrix and Solving Systems, Sections 4.5-4.6	Canvas-Week 8 Module Reading, Problems and Quiz
3/17-3/23	**SPRING BREAK**	
Week 9 **3/24-3/30**	Review 4.3-4.6 Exam #3 (4.4-4.6)	Canvas-Week 9 Module Complete outstanding homework and Exam
Week 10 **3/31-4/6**	Chapter 5, Systems of Linear Inequalities, Sections- 5.1-5.2	Canvas-Week 10 Module Reading, Problems and Quiz
Week 11 **4/7-4/13**	Chapter 5, Linear Inequalities, Linear Programming- 5.3 Exam #4 (5.1-5.3)	Canvas-Week 11 Module Reading, Problems and Exam

Week 12 **4/14-4/20**	Chapter 7, Logic, Sets and Counting, Sets, Basic Counting Principles, Permutations & Combinations Section 7.2 – 7.4	Canvas-Week 12 Module Reading, Problems and Quiz
Week 13 **4/21-4/27**	Chapter 8, Probability, Sample Spaces, Events, Union, Intersection, Complements of Events, Odds, Conditional Probability, Sections 8.1-8.3	Canvas-Week 13 Module Reading, Problems and Quiz
Week 14 **4/28-5/4**	**Exam #5 (7.2-8.3)** Chapter 11, Data Description and Probability Distributions, Graphing Data, Measures of Central Tendency, Measures of Dispersion, Sections 11.1 – 11.3	Canvas-Week 14 Module Reading, Problems and Quiz
Week 15 **5/5-5/8**	**Exam #6 (11.1-11.3)**	Canvas-Week 15 Module Complete outstanding homework and Exam All work must be submitted by midnight 5/10