NHTI Concord's Community College	**Course Number:** MATH 120C Quantitative Reasoning
	Credits: 4.0
	Prerequisite(s): ACCUPLACER QAS score of 249 or below
	Term: Spring 2020 (1/21/2020 – 5/8/2020)
	Faculty: Alisa Kadenic-Newman
	Email: akadenic@ccsnh.edu
	Office Hours: By appointment
	As this is an online course, the student is encouraged to contact the instructor by e-mail and/or via Canvas with questions or concerns
This syllabus is to be used as a guide; it contains information about the course, how it will be taught, what will be required of the student and assessment methods that will be used. All information is subject to change at any time.	

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Course Description

This course is designed to expose the student to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved in solving applied problems. Topics include: number theory and systems; functions and modeling; finance; geometry; measurement; probability; statistics; selected subtopics related to the student's major field of study. The course emphasizes the use of the TI-84 graphing calculator as a learning tool and as a means to obtain solutions. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved in solving applied problems. Topics include: historical numbering systems; finance; geometry and trigonometry; measurement; probability; statistics; selected subtopics related to the student's major field of study. A TI-84 graphing calculator is required.
(Prerequisite: MATH 092C with a grade of "C" or higher or the high school equivalent with a grade of "C" or higher.)
[Note: Students who have received credit for MATH 120C may not also receive credit for MATH 120XC.]

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Learner Outcomes

Upon completion of this course, the student will be able to:

- Understand the properties of real numbers.
- Convert between number systems that use different bases.
- Work with numbers expressed in scientific notation.
- Understand and calculate percent, sales tax, and discounts.
- Understand and calculate ending balance and interest for simple interest and compound interest accounts.
- Understand and calculate annuities, including retirement accounts, mortgages, and loans.
- Work with standard and metric systems of measurement (area, volume, weight, temperature).
- Measure angles using geometric and trigonometric relationships.
- Calculate volume and area of two- and three-dimensional objects.
- Understand and apply the Fundamental Counting Principle and fundamentals of probability.
- Understand and calculate measures of central tendency and dispersion.
- Understand sampling, frequency distributions, and statistical graphs.
- Work with the normal distribution.
- Generate a scatterplot, calculate the correlation coefficient, and produce and interpret a regression line.
- Understand voting methods and apportionment.

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Required Course Materials and Resources

- **REQUIRED: *Lumen OHM Generic Course Activation Code* (ISBN: 9781640871632)**
  The Lumen OHM access code is required to gain access to all coursework (online Exercises and Tests). Students not enrolled in Lumen OHM by **Monday February 3 2020** (which is the last day to withdraw from a full-semester course with a tuition refund) will be dropped from the course with a grade of AF.
- **RECOMENDED: TI-84 Calculator**
  The calculator is used extensively in MATH 251C Statistics, the course that follows MATH 120C. Although formula-based solutions to Exercise questions will occasionally be demonstrated, the emphasis will be on calculator-based solutions.

Textbooks, materials and software are available online at eFollet unless specified by your instructor.

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Canvas Orientation and Technical Support

If you are new to Canvas watch the short Canvas Overview tutorial video available in the *Getting Started* module.

You also have access to 24/7 technical support services, tutorials, live chat, and phone frequently asked questions regarding online learning, Student Information System (SIS) and student e-mail.

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Faculty Communication Policy

The student is expected to regularly check the CCSNH Student E-mail account and the Canvas Inbox for messages from the instructor.

Email Response Time

You can expect a response within 12 hours of sending an e-mail.

Grade Posting

Grades are continually kept up-to-date automatically in Canvas. Scores on *Lumen OHM* Exercises and Tests will automatically be transferred to Canvas Grades.

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Assessment of Learning (Course Grade Calculation)

Category	% of Final Course Grade
Exercises	14%
Discussions	10%
Tests	36%
Midterm Exam	15%
Final Exam	15%
Total	***100%***

Grading Schema	
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

Assignment and Assessment Descriptions

The primary source of instruction for this course comes in the form of independent and interdependent learning that occurs in our online classroom, when you complete the required reading and work on assignments with classmates, tutors, or the instructor.

The course is divided into twelve modules, with one module to be completed each week (except as noted in the course schedule). The online assignments in each module include required **reading**, **exercise**, **discussion** and a **test** on the topic covered in the weekly module.

The reading assignment should be done before you attempt to work on the exercise and the discussion assignment. You may find doing some outside research might be helpful if you need more clarification on the topic. Several videos are provided in each module to supplement the reading material.

Additional assessments include a **Midterm Exam** and a **Final Exam**, both of which will be taken online.

These assignments and assessments are described below:

- **Exercises (20% of final grade)**

  Exercises must be completed online by the due date specified in *Canvas*. Each Exercise will contain questions similar to those covered in reading and/or discussions. If you are unable to come up with the correct answer to a question after two tries, the correct answer will show. You can enter this answer for half credit and move on to the next question or you can ***Try a similar problem*** to attempt to get full credit for the question. If after repeated attempts you cannot figure out how to get the correct answer, use the ***Ask my instructor about this question*** link at the bottom of the question, visit the online tutoring center provided by Smarthinking (free to NHTI students) or in person visit the NHTI Math Lab tutoring center in the Academic Center for Excellence (ACE) (free to NHTI students).

- **Discussions (10% of final grade)**

  Discussions are intended to strengthen the skills needed to successfully complete online assignments. Students may complete the problems on their own or in small groups.

  At the end of each week, students are expected to turn in their work on the discussion assignment, which will be scored and weighted as part of the final grade. Failure to turn in the discussion assignment at the end of the week results in a score of 0 for that assignment. **Missed discussions cannot be made up**. At the end of the semester, the two lowest lab assignment scores will be dropped.

- **Tests (40% of final grade)**

  Each of the twelve modules contains a Test to be completed online. Each test counts as 3% of the overall final grade (for a total of 36%). The online Test should be taken after you've done all the questions in the corresponding Exercise. Tests are timed, and there is no *Try a similar problem* option. You will, however, be allowed two tries at each test question. If you get the question wrong after two tries, you can send the instructor an e-mail showing the work you did to get that wrong answer. If your approach is correct, the instructor will manually give you partial credit for the problem.

  Test dates are of the utmost priority; students are expected to take each Test by the scheduled due date. Test due dates are shown in the **Course Schedule** on page 5.

- **Midterm Exam (15% of final grade)**

  Students will complete a Midterm Exam covering all material to date. The Midterm Exam has a time limit.

  Any student who misses the Midterm Exam – *unless acceptable, documented evidence can be produced to excuse the student's absence* – receives a score of 0 for the exam. If the student is ill, the student must notify the instructor ***prior*** to the time at which the Midterm Exam is being scheduled. The student is then responsible for arranging with the instructor to make up the midterm exam within one week of the original exam date.

- **Final Exam (15% of final grade)**

  Students will complete a Final Exam covering the material from the midterm exam through the end of the course. The Final Exam has a time limit. In accordance with institute policy, all students are required to take the Final Exam, regardless of their academic standing at the end of the semester.

  Any student who misses the Final Exam – *unless acceptable, documented evidence can be produced to excuse the student's absence* – receives a score of 0 for the exam. If the student is ill, the student must notify the instructor ***prior*** to the time at which the Final Exam is being scheduled. The student is then responsible for arranging with the instructor to make up the Final Exam by no later than May 7 2020.

No additional assignments other than online exercises, discussion assignments, online tests, and the midterm and final exams will be offered for credit.

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Course Schedule

This schedule is subject to change at the discretion of the instructor. Reading assignments include any supplemental material posted in Canvas.

WK	Start Date	Topics	Assignments	Due Date
1	1/21	**Problem Solving**	Reading / Exercises / Discussion	1/27
2	1/27	**Historical Counting Systems**	Test 1 Reading / Exercises / Discussion	2/3
3	2/3	**Measurement**	Test 2 Reading / Exercises / Discussion	2/10
4	2/10	**Geometry and Introduction to Trigonometry**	Test 3 Reading / Exercises / Discussion	2/17
5	2/17	**Finance**	Test 4 Reading / Exercises / Discussion	2/24
6	2/24	**Sets**	Test 5 Reading / Exercises / Discussion	3/2
7	3/2	**Mid-term Review**	Test 6 Review/Discussion	3/9
	3/9	**MIDTERM EXAM (Modules 1 – 6)**		3/16
8	3/16	**Probability**	Reading / Exercises / Discussion	3/23
9	3/23	**Statistics: Describing Data**	Test 7 Reading / Exercises / Discussion	3/30
10	3/30	**Statistics: Normal Distribution**	Test 8 Reading / Exercises / Discussion	4/6
11	4/6	**Statistics: Correlation and Regression**	Test 9 Reading / Exercises / Discussion	4/13
12	4/13	**Voting Theory**	Test 10 Reading / Exercises / Discussion	4/20
13	4/20	**Apportionment**	Test 11 Reading / Exercises / Discussion	4/27
14	4/27	**Final-exam Review**	Test 12 Review/Discussion	5/4
15	5/4	**FINAL EXAM (Modules 7 - 12)**		5/8

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Other Course Information

Enrolling in Lumen OHM

All Exercises in this course are to be completed as homework in Canvas after enrolling in Lumen OHM. Students are expected to enroll in Lumen OHM via the NHTI Canvas course with permanent (not temporary) access by **no later than September 9, 2019** (which is the last day to drop the course for a full refund). To enroll, simply click the link for any Exercise in Canvas. Students who fail to meet the enrollment deadline will be dropped from the course with an AF grade. Complete instructions for enrolling in Lumen OHM are provided in the *Getting Started* module in Canvas.

Attendance Policy

Class attendance is a significant factor leading to satisfactory completion of the course, as long as the student is actively participating and is not engaged in side conversation with classmates, cell phone use, or any other distraction.

Any student who misses more than four (4) hours of class time – for any reason, whether excused or not – is subject to being dropped from the course with a grade of AF. A student who is absent from class for two consecutive weeks without contacting the instructor will be dropped from the course and will receive an AF grade.

A student who misses class is still required to complete the weekly exercises (missed labs cannot be made up) with the expectation that the student will take each test when scheduled. (See **Assessment of Learning (Course Grade Calculation)** for more information.) All course work (except the final exam) must be completed by **Monday, May 4 2020.**

Computing Devices Policy

Use of laptops, personal computers, tablets, mobile phones, or other computing devices is permitted only to access course materials or work on assignments. Any other use is not permitted during class time unless authorized by a Reasonable Accommodation Plan obtained through Disabilities Services or at the discretion of the instructor.

At no time is the unauthorized use of any electronic device (not necessarily limited to the list in the previous paragraph) allowed during a test. Any student who is caught using an unauthorized electronic device during an examination will be subject to penalties for cheating as set forth in the Student Handbook.

Late Assignment Policy

Missed assignments receive a score of 0; this includes Exercises and Tests in Lumen OHM and graded lab worksheets assigned during class (which cannot be made up). Individual exercise questions completed after the due date receive a late penalty of 50%. The student is allowed a maximum of 5 Late Passes that can be used to extend the due date on individual Exercise assignments for up to 4 days. If a student uses up all 5 Late Passes, the student must contact the instructor to request an extension on an Exercise due date.

Where to Get Help

- **Instructor:** Students are invited to drop by during office hours (see page 1), no appointment necessary.
- **Math Lab Tutoring Center:** Help from qualified math tutors is available on a drop-in basis, free of charge, at the Math Lab in the Academic Center for Excellence (ACE). For hours of operation, check the posting in your classroom or in Canvas.
- **Online Tutoring:** Smarthinking online tutoring service that is available to students 24 hours a day, 7 days a week.
- **Canvas Resources:** In addition to the eBook, Canvas modules include videos and other resources as learning aids.
- **Lumen OHM Videos:** Once you have enrolled in Lumen OHM, online resources including videos and the eBook are available, including instructional videos, animated lessons, practice tests, and more. When having difficulty getting the correct answer to an Exercise question, the student is encouraged to use the ***Ask my instructor about this question*** link at the bottom of the question.
- **Other Services at the ACE:** The ACE can help with study skills, time management, test anxiety, and other college student concerns. There is no additional charge for any of these services; costs are covered by tuition. If you have any questions about accessibility services, contact Accessibility Services in the ACE. See *Academic Affairs Notices* on the *Syllabus* page in Canvas for more information.

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