

**Naugatuck Valley Community College**  
**STEM Division**  
**Science, Technology, Engineering and Mathematics**

**Common Course Syllabus**  
**Topics in Contemporary Mathematics MAT\*H135**

**COURSE TITLE:** Topics in Contemporary Mathematics, MAT\*H135

**COURSE DESCRIPTION:** A practical course offering an exposure to a wide range of topics with an emphasis on critical thinking, problem solving and the real number system. Topics include number theory, financial management, set theory, metric system and statistics.

**NUMBER OF CREDITS:** 3 credit hours. This course will not satisfy the General Education Mathematics requirement at Connecticut State Universities.

**PREREQUISITE:** Grade of "C" or better in MAT\*H095 (Elementary Algebra) or an appropriate score on a college placement exam.

**COURSE OBJECTIVES:**

1. Complete a semester's study of a variety of math topics relevant to every day life.
2. Interpret solutions to applications involving Venn diagrams, truth tables, bar graphs, line graphs and circle graphs.
3. Further develop analytical reasoning and critical thinking skills that will enhance more advanced problem-solving capabilities.
4. Become active participants in the learning process.

**LEARNING OUTCOMES:** At the end of this course the student will be able to do the following:

1. Know the number system development (natural numbers, integers, rational numbers, irrational numbers, and real numbers)
2. Add, subtract, multiply and divide any two numbers using whole numbers, integers, rational numbers and all real numbers.
3. Recognize and apply the various properties of addition and multiplication including commutative, associative, additive inverse, and multiplicative inverse properties.
4. Determine if a number is prime or composite, and write the prime factorization of a composite number.
5. Calculate the least common multiple of two or more numbers.
6. Illustrate the variety of ways in which sets are denoted.
7. Apply the appropriate set operations including union, intersection, complement, and set difference when solving problems involving sets.
8. Apply and *interpret* Venn diagrams when solving applications involving two or more sets.
9. Apply and calculate the measures of central tendency using the appropriate formula for calculating mean, median, and mode.
10. Apply the appropriate formula to determine the range and standard deviation when analyzing a set of data.
11. Use the formulas to calculate interest rates in credit cards and other consumer credit and understand the hidden cost of consumer credit.
12. Calculate simple and compound interest.
13. Use the APR and APY formulas for calculating payments, refunds and interest.
14. Convert units within the metric system and between the standard and metric systems.

**GRADING SYSTEM:** For the purpose of computing numerical credit point averages, grades are evaluated as follows for each semester hour of credit. Grades on exams, papers, and quizzes, will be based on this grading system.

Numeric Grade	Acceptable Letter Grade Range to be used by the instructor	Description
90 –100	A– to A	Excellent
80 – 89	B–, B, B+	Above Average
70 – 79	C–, C, C+	Average
60 – 69	D–, D, D+	Below Average
Below 60	F	Failing

**CLASS CANCELLATION PROCEDURE:** *If the instructor is late, the class is expected to wait 15 minutes before leaving or until informed of a cancellation by a college official.*

*Information on weather related closings/late openings concerning Naugatuck Valley Community College can be obtained through local radio and television stations, or via the college website (<http://www.nvcc.comnet.edu>). **NOTE:** An alternative assignment may be given if classes are canceled due to weather.*

**ACADEMIC HONESTY STATEMENT:** *At NVCC we expect the highest standards of academic honesty. Academic dishonesty is prohibited in accordance with the Board of Trustee's Proscribed Conduct Policy in Section 5.2.1 of the BOT Policy Manual. This policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism, and other proscribed activities. Plagiarism is defined as the use of another's idea(s) or phrase(s) and representing that/those idea(s) as your own, either intentionally or unintentionally. Anyone who is caught cheating on exams, plagiarizing another's work or published material will fail the course regardless of progress made in the course.*

**CHILDREN ON CAMPUS:** *With permission of the instructor only – Children must be attended at all times by a responsible adult. The student must notify the instructor or supervisor prior to the beginning of the class or activity that a child is present. Instructors and/or supervisors are authorized to ask the student or program participants to leave should the presence of a child be disruptive.*

**CELL PHONE/PAGER USE POLICY:** *Students are hereby notified that cellular phones and beepers are allowed in class only if they are turned off or turned to a silent mode. Under no circumstances are telephones to be answered in class. Students who ignore this policy may be asked to leave class. When there are extenuating circumstances that require that a student be available by phone or beeper, the student should speak to the instructor prior to class, so that together they can arrive at an agreement concerning the device.*

**STUDENTS WITH SPECIAL NEEDS:** *Students who may require accommodations on the basis of a learning disability are encouraged to contact the Coordinator of Learning Disabilities. Students who may require accommodations on the basis of all other disabilities should contact the Coordinator of Disability Services. After providing documentation and completing the disability disclosure process, students are then encouraged to meet with their instructor(s) to discuss the accommodations approved by the appropriate Coordinator and to complete the Accommodations Agreement form. Accommodations are not retroactive, students are therefore encouraged to meet with their instructor(s) at the beginning of each semester. Instructors, in conjunction with appropriate college personnel, will provide assistance and/or accommodations only to those students who have completed the disability disclosure and accommodations process.*