



Math 120 - CONTEMPORARY MATHEMATICS OER Initiative Course

COURSE SYLLABUS

INSTRUCTOR: _____

COURSE SECTION: _____

OFFICE: _____

MEETING PLACE: _____

OFFICE HOURS: _____

OFFICE PHONE: _____

E-MAIL ADDRESS: _____

COURSE NAME: Contemporary Mathematics - OER Initiative Course

COURSE PREFIX AND NUMBER: MATH 120

COURSE DESCRIPTION: Introduction to topics in contemporary mathematics. Topics may include the theory of finance, perspective and symmetry in art, formal Aristotelian logic, graph theory, probability and odds, statistics, elementary number theory, optimization, numeracy in the real world, and historical topics in mathematics that have influenced contemporary mathematics. (Topics will vary)

PREREQUISITE: Grade of "C" or better in MATH 098 or Math 114; 18-21 on the ACT; 65-120 on the Elementary Algebra ACCUPLACER Placement Test or 20-44 on the College Level ACCUPLACER Placement Test.

Students are required to adhere to these prerequisites. It is **YOUR** responsibility to be sure that you are in the correct math course. The college may drop you from your math class at any time during the semester if your transcript indicates that prerequisites have not been met or if your official transcript has not been received by the college. You are encouraged to discuss your math background with your instructor to ensure that you are in the correct class.

COURSE GOAL: The student who completes this course will have experienced a general introduction to many aspects of mathematics and will have acquired the skills generally found in a math course for non-science majors.

COURSE OBJECTIVES:

Upon completion of Math 120, the student should be able to:

1. Perform set operations such as union, intersection, and Complement.
2. Construct Venn Diagrams with eight or less regions to verify set statements, to solve certain practical problems.
3. Define and identifying connectives to construct truth tables. Such connectives will include the conjunction, the disjunction, the conditional, and the biconditional.
4. Validate or invalidate logical arguments by using symbolism and the interpretation of truth tables.
5. Define and use the terms: counting principle, permutation, combinations, odds, and expected value. Solve problems pertaining to these terms.
6. Calculate the compound probability of event A, given that event B has already occurred.
7. Calculate the probability of an event and compound events which use the terms "and" and "or". Compute expectation.
8. Define and calculate four Measures of Central Tendency: mean, median, mode, and midrange.
9. Define and calculate two Measures of Location: percentile and quartile.
10. Define and calculate two Measures of Dispersion: range and standard deviation.
11. Given data, construct a frequency distribution, and graph a histogram and a frequency polygon; and discuss the normal curve.
12. Calculate z-scores and the percent of data below, above, and between scores using the standard normal distribution chart.

COURSE OUTLINE: Suggested Schedule (For summer session, each two week block becomes **one** week.)

Week 1	Chapter and Content
1	2-1 Introduction to Set Theory
2	2-2 Subsets and Set Operations
	2-3 Using Venn Diagrams to Study Set Operations
3	2-4 Using Sets to Solve Problems
	Test 1

4	3-1 Statements and Quantifiers
5	3-2 Truth Tables
6	3-3 Types of Statements
7	3-4 Logical Arguments Test 2
8	10-1 Basic Concepts of Probability 10-2 The Fundamental Counting Principle and Permutations
9	10-3 Combinations Test 3
10	10-4 Tree Diagrams, Tables, and Sample Spaces 10-5 Probability Using Permutations and Combinations 10-6 Odds and Expectation
11	10-7 The Addition Rules for Probability 10-8 The Multiplication Rules and Conditional Probability Test 4
12	11-1 Gathering and Organizing Data 11-2 Picturing Data
13	11-3 Measures of Average 11-4 Measures of Variation
14	11-5 Measures of Position 11-6 The Normal Distribution 11-7 Applications of the Normal Distribution Test 5
15	Comprehensive Review

PRIMARY TEXT: The primary textbook for this course is Math in Society by David Lippman is licensed under CC-BY-SA. Portions were adapted and remixed by Kiel Ellis and are licensed under CC-BY-SA. The chapter on Normal Distribution was contributed by James Sousa from Phoenix College, and use materials from MITE (Monterey Institute for Technology and Education) and is licensed under CC-BY or materials from CK-12 and is licensed under Creative Commons Attribution-NonCommercial-ShareAlike.

CALCULATOR: TI-30X IIS

SOFTWARE: Lumen OHM, by Lumen Learning

ASSESSMENT:

- A. Progress in this course is measured by the successful completion of online assignments, written tests, and a comprehensive departmental final exam.

Face-to-Face and Hybrid classes:

The average of the test grades will count for no more than 65% and no less than 40% of the final semester grade. Each class has a required online component which will count for no less than 10% and no more than 25% of the final semester grade. Specific required assignments will vary among instructors. Instructors must use a minimum number of assignments from ALEKS for the online component grade which will be determined by the number of sections covered in the e-book/textbook. Instructors have the option of also using additional quizzes, assignments, and grades either from ALEKS or other forms of assessment as part of that average. The final exam will count for no less than 25% and no more than 50% of the final semester grade.

Online Classes:

Specific required assignments will vary among instructors. Instructors have the option of using unproctored tests, quizzes, assignments, and grades either from ALEKS or other forms of assessment as part of the test grade average. The Mid-Term Exam will count for 25% of the final semester grade. The Final Exam will count for 35% of the final semester grade. All online courses are accessed through Canvas.

Online students are required to take **proctored online Midterm and Final exams.**

B.	<u>GRADING SCALE:</u>	90 - 100 = A
		80 - 89 = B
		70 - 79 = C
		60 - 69 = D
		Below 60 = F

Policies on quizzes, and make-up tests may vary at the instructor's discretion.

C. FINAL EXAMS

College Wide - The final exam is a departmental exam given in group sessions, not according to when the class meets. It may be necessary for you to make special arrangements to attend the exam at the scheduled time.

8:00A.M.- 10:00A.M. (Day Sections - Wednesday of Exam Week)
6:00P.M.- 8:00P.M. (Night/Saturday Sections - Wed. of Exam Week)
3:30P.M.- 5:30P.M. (Summer Session)

Check the Class Schedule or ask your instructor for the specific date.

Online students must schedule their proctored exam times and locations. Your online instructor will provide additional information concerning midterm and final exams.

There are no acceptable excuses for missing the final exam and **no exemptions** are given. A grade of "0" will be recorded and averaged for anyone missing the exam. There are **no retakes**. Grades are not posted or given out at the division office. You may check the Delgado website at www.dcc.edu.

COLLEGE AND CLASSROOM POLICIES:

A. INSTRUCTIONAL LEARNING ACTIVITIES

1. The primary learning activity will be **practice**. It is expected and necessary that you study AT LEAST two hours outside of class for every hour in class. The more you **practice**, the better your grade will be.
2. You are encouraged to seek assistance from the instructor to clarify further any difficult concepts. When you go to see your instructor it is advisable to bring your notebook, homework, and any other materials you might feel are relevant.
3. The Math Lab offers tutoring in all levels of mathematics. This support service is offered free of charge to all students with a valid Delgado ID. The Math Lab has computers available to use for working online homework.

Math Lab Locations

City Park - The Math Lab is located in **Building 2 Room 217**, 504-671-6424.

West Bank - The Math Lab is located in **Building 1 Room 107**, 504-762-3172.

4. Calculators **will be required** in all classes.

B. ABSENCES AND DROP/ADDS

Student Attendance Policy (Drop Responsibility)

In accordance with the New Delgado Attendance Policy:

1. **YOU, THE STUDENT** are responsible for dropping/withdrawing from the course before the drop deadline.

2. Faculty **CANNOT** drop students after the 14th day (7th in summer). If you want to be dropped from a course, **YOU MUST WITHDRAW YOURSELF.**

3. Any student that has not dropped himself/herself after the 14th day (7th in summer) and **BEFORE THE DROP/WITHDRAWAL DEADLINE** will receive a **GRADE** for the semester.

You may DROP/ADD to a lower level (or higher level with verification) **during the first week of class (first two days during the summer session)**, space permitting. Consult your instructor **immediately** if you wish to challenge your placement.

C. CLASSROOM ETIQUETTE

1. Students are expected to be present and alert in all class sessions.
2. Phones must be set to silent or must be turned off during class. **Texting is not allowed.**
3. Only registered Delgado students may attend classes. This prohibits class attendance by children and guests.

D. DISABILITY SERVICES STATEMENT

It is the general policy of Delgado Community College to assure equal opportunity for all qualified persons. Reasonable accommodation for qualified persons with disabilities will be made provided the students have self-identified with the Office of Disability Services and have provided required documentation.

Individual instructors will modify the methods, requirements, and procedures of courses and examinations appropriately to accommodate the special needs of students with disabilities, provided the academic integrity of the course or examination is not violated, and the health and welfare of all students are safeguarded.

For additional information contact the Office of Disability Services.

City Park, Collier - City Park, Bldg 2 Room 102, 504-671-5161.

West Bank - WBLR Room 145, 504-762-3229.

E. ACADEMIC HONESTY STATEMENT

Delgado Community College requires that students adhere to the highest standards of academic integrity. Students are entrusted to be honest in every phase of their academic life and to present as their own work only that which is genuinely theirs. Cheating, plagiarism, violation of test conditions, complicity in dishonest behavior, or other falsification of academic work is a serious breach of College standards.

Plagiarism is defined as any attempt to represent the work of another as one's own original work. More specifically, plagiarism is the direct appropriation of the language, thoughts, or ideas of another - either literally or in paraphrase - without appropriate notation on the source and in such fashion as to imply that the work is one's own original work.

Depending upon the nature of the case, a student guilty of academic dishonesty may receive penalties ranging from a grade of "F" for the work submitted to expulsion from the College. Such penalties may be of both an academic and disciplinary nature. Please see the College Catalog for additional information.