

Clarendon College

Course Syllabus

MATH 1332 – Contemporary Mathematics Online
Fall 2024

Instructor: Dr. Jeremy Sain

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Office Hours: I will check my email 3 to 4 times a day.

Required Text: MathXL account. See grading policy section below.

Optional Text: Thinking Mathematically, 7e., Robert F. Blitzer, ISBN # 9780134682713

You **DO NOT** really need the physical textbook for this class, because you can access it on MathXL while working on homework, or by going to the “Study Plan.” Of course, having a physical textbook is always convenient, but it is by no means necessary to have one.

Recommended Readings: These books don't really have to do with the class, but they are fun and give either some nice mathematics history or show you what mathematics is about from a bigger picture standpoint:

- Number: The Language of Science, Tobias Dantzig. Gives a very comprehensive history of number systems up to our own and beyond, as well as a history of 16th to 19th century mathematics.
- Mathematics From the Birth of Numbers, Jan Gullberg. A mathematics overview book. Is fun to flip through and look at all the pictures.
- Flatland, A Romance of Many Dimensions. Edwin Abbott. A whimsical book designed to help people imagine a world with more than three dimensions.
- The Language of Mathematics, Making the Invisible Visible, Keith Devlin. One of any number of “popular math” books, which are written to give the reader a sense of higher mathematics and its relationship to the world, without the rigorous diction of a regular mathematics text.
- Anything by Lewis Carroll. While most famous for his two books about Alice, Lewis Carroll's primary vocation a mathematician. He wrote many logic puzzle books that are quite challenging.
- Democracy, the God that Failed, Hans Herman Hoeppe. This is a political science book, but is an excellent example of deductive reasoning at its finest.

Supplies: Internet access and MathXL account (see below)

Purpose of the Course: Contemporary Mathematics partially satisfies the requirements for the Associates Degree at Clarendon College and is designed for transfer to a senior college.

Course Description: This course covers topics which include introductory treatments of sets, logic,

number systems, number theory, relations, functions, probability and statistics. Appropriate applications include math of finance, compound interest, annuities and amortizations, statistical reasoning, data exploration and regression

Prerequisites: Student must be TSI complete in mathematics.

Core Objectives:

Critical Thinking Skills

- to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information

Communication Skills

- to include effective development, interpretation and expression of ideas through written, oral and visual communication

Empirical and Quantitative Skills

- to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Learning Outcomes:

Upon successful completion of this course, students will:

1. Apply the language and notation of sets. (Assesses EQS and CT with Quiz for Student Understanding of THECB Learning Outcome One)
2. Determine the validity of an argument or statement and provide mathematical evidence. (Assesses CT, EQS, and COM with Quiz for Student Understanding of THECB Learning Outcome Two)
3. Solve problems in mathematics of finance. (Assesses CT, and EQS with Quiz for Student Understanding of THECB Learning Outcome Three)
4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems. (Assesses EQS, and COM with Quiz for Student Understanding of THECB Learning Outcome Four)
5. Interpret and analyze various representations of data. (Assesses EQS with Quiz for Student Understanding of THECB Learning Outcome Five)
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement. (Assesses CT, EQS, and COM with Quiz for Student Understanding of THECB Learning Outcome Six)

Methods of Instruction:

1. Online video lectures.
2. Problem assignment.
3. Discussion of problems.

Grading Policies:

All assignments must be completed on MathXL at www.mathxl.com.

I will send you login information for MathXL when you send me a moodle message.

Notice, this is the course ID. It is not what MathXL calls an “access code.” I will give you an access code individually.

Homework: 50%	Math takes practice, and the importance of homework cannot be exaggerated. Since this course is topical and each topic is important, no homework assignments will be dropped.										
Quizzes: 30%	There is a quiz covering each of the homework assignments. Of the 12 quiz grades, the top 9 of them will contribute to your overall grade. If for some reason you miss one of the quizzes or just have a bad day, it will simply count as one of the dropped ones.										
Practice Quiz: 8%	A Practice Quiz is available for each of the homework quizzes. They are generated with the exact same parameters as the real quiz, and you can take them as many times as you wish. If you take each practice quiz at least once (and score higher than a zero), you will get these 8 points on your overall grade.										
Practice Final: 2%	Likewise, there is a practice final exam you can take as many times as you wish to help you prepare for the final exam. If you take it at least once (and score higher than a zero), you will get these 2 points.										
Final Exam: 10%	There will be a comprehensive final exam.										
Grading Scale:	<table> <tr> <td>90-100</td><td>A</td></tr> <tr> <td>80-89</td><td>B</td></tr> <tr> <td>70-79</td><td>C</td></tr> <tr> <td>60-69</td><td>D</td></tr> <tr> <td><60</td><td>F</td></tr> </table>	90-100	A	80-89	B	70-79	C	60-69	D	<60	F
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80-89	B										
70-79	C										
60-69	D										
<60	F										

All work is to be turned in on time. All assignments except the final exam are already open. If you know you are going to be busy around the due date of an assignment, then do the assignment a few days early.

Academic Integrity

Clarendon College is committed to a philosophy of honesty and academic integrity. It is the responsibility of all members of the Clarendon College community to maintain academic integrity at

Clarendon College by refusing to participate in or tolerate academic dishonesty. Any act of academic dishonesty will be regarded by the faculty and administration as a serious offense.

Academic dishonesty violations include, but are not limited to:

- (1) obtaining an examination, classroom activity, or laboratory exercise by stealing or collusion;
- (2) discovering the content of an examination, classroom activity, laboratory exercise, or homework assignment before it is given;
- (3) observing the work of another during an examination or providing answers to another during the course of an examination;
- (4) using an unauthorized source of information during an examination, classroom activity, laboratory exercise, or homework assignment ;
- (5) entering an office, classroom, laboratory, or building to obtain unfair advantage;
- (6) taking an examination for another person;
- (7) completing a classroom activity, laboratory exercise, homework assignment, or research paper for another person;
- (8) altering grade records;
- (9) using any unauthorized form of an electronic communication device during an examination, classroom activity, or laboratory exercise; and/or,
- (10) plagiarism. (Plagiarism is defined as the using, stating, offering, or reporting as one's own, an idea, expression, or production of another person's work without proper credit. This includes, but is not limited to, turning in a paper purchased or acquired from any source, written by someone other than the student claiming credit, or stolen from another student.)

Students are responsible for reporting known acts of academic dishonesty to a faculty member, the program coordinator, the associate Vice President, and/or Executive Vice President of Academics and Student Affairs. Any student with knowledge of a violation who fails to report it shall him/herself be in violation and shall be considered to have committed an act of academic dishonesty. Additionally, any student who reports him/herself in violation of this code before it is likely that another might consider this possibility will be understood as repentant and acting in good faith. Though the confession will not excuse the student for the violation, the confession will be considered and the violation should not result in suspension from school except in the most extreme cases.

While academic integrity and honesty are the responsibility of the individual student, each individual faculty member, teaching assistant, and/or laboratory instructor is responsible for classroom management and for maintaining ethical behavior within the classroom and/or laboratory. Faculty who discover or suspect a violation should discuss the matter with the suspected violator(s) and attempt to resolve the case at that point. In cases of convincing evidence, the faculty member should take appropriate action. The faculty member and student should complete a Counseling Sheet regarding the violation. (The Counseling Sheet should contain at a minimum the date and time of the violation, the course, the instructor's name, the student's name, an explanation of the infraction or facts of the case, and the resolution to the incident.) This form should be signed by the student, faculty member, program coordinator, and the Executive Vice President of Academics and Student Affairs. The Executive Vice President of Academics and Student Affairs. will maintain a file on all violations. If a faculty member prefers to report the case directly to the Executive Vice President of Academics and Student Affairs., it remains his/her prerogative to do so. Additionally, if the faculty member and the accused student cannot reach a resolution or if the faculty member believes that suspension from school is the only fair

sanction, the case should immediately be reported by the faculty member, in writing, to the Executive Vice President of Academics and Student Affairs.. If the Executive Vice President of Academics and Student Affairs. observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Executive Vice President of Academics and Student Affairs. is responsible for notifying all faculty members involved, for contacting the student(s) involved, and after consultation with the faculty member(s) involved for taking the appropriate action. The Executive Vice President of Academics and Student Affairs. is responsible for the timely notification (normally within two weeks) to all parties of an action taken.

Students wishing to appeal a disciplinary decision involving academic integrity or acts of academic dishonesty may do so through the Student Appeals and Grievance Procedure.

Classroom Policies:

1. **Online Attendance Policy:** Weekly attendance is mandatory in all online courses. Specific activities will be identified each week that must be completed in order for students to be considered “in attendance.” Students are expected to log into their online course(s) at least twice a week. Progress towards satisfactory completion of weekly assignments is expected on a weekly basis. No progress could jeopardize good standing and financial aid.

My Policy: For this course, I will submit an attendance report each *Wednesday morning*. I will mark as student “present” if they completed at least 30% of the HW assignment due for the previous week. Students can be placed on academic probation or lose financial aid for non-attendance or failure to work through the course assignments.

2. **Final Exams:** Students must take a final exam for each of their academic courses. The schedule of final exams times is published at the beginning of the semester. Do not make plans to leave school before your scheduled final exam. I will not give any early finals except in extreme emergencies after students have provided documentation of said emergency.
3. **Scholastic Honesty:** I adhere to a strict policy regarding academic honesty. Anyone who is dishonest in any way will receive a zero on that assignment or exam with no opportunity to make up the zero and may be dropped from the course with a grade of F. That student, if allowed to remain in the course, will not be allowed to receive any extra credit points from the time of the infraction through the remainder of the course. Furthermore, that student will not be allowed to drop their lowest quiz grade or exam grade. A second act of dishonesty will result in an F for the course. Students who commit an act of academic dishonesty will not be allowed to withdraw from the course with a “W.” Note that dishonest behavior includes both the act of copying someone else's work as well as allowing someone to copy your work. Both students are equally guilty and will be equally punished.
4. **Withdrawal:** If you decide that you are unable to complete this course or that it will be impossible to complete the course with a passing grade, you may drop the course and receive a “W” on your transcript instead. Withdrawal from a course is a formal procedure that you must initiate. If you do not go through the formal withdrawal procedure, you will receive a grade of “F” on your transcript. A student is permitted to drop a course if he/she obtains an official drop slip from the office and has the instructor sign the slip before the 12th class week. **Remember, a student is only allowed to drop the same class twice before he/she will be charged up to triple the tuition amount for taking the class a third time or more. Furthermore,**

beginning with the Fall 2007 semester, students in Texas may only drop a total of 6 courses throughout their entire undergraduate career. After the 6, he/she will no longer be able to withdraw from any classes. If you think you need to drop this course, please talk with me about it first. It is possible that there is something you can do to still pass the course. Don't hurt your chances for a passing grade in the course by not attending labs or taking exams before we have discussed your situation.

5. **Grievance/Appeals:** If you have a dispute concerning your grade or policies in this class, it is the student's responsibility to contact the instructor to discuss the matter. Should things remain unresolved, please follow the procedures described in the Clarendon College Student Handbook or College Policy Manual.

6. **Accommodation Statement** REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT:

In accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, any student who feels that he or she may need any special assistance or accommodation because of an impairment or disabling condition should contact the Associate Dean of Enrollment Services at 806-874-4837 / janean.reish@clarendoncollege.edu or visit the Clarendon campus at Clarendon College. It is the policy of Clarendon College to provide reasonable accommodation as required to afford equal educational opportunity. It is the student's responsibility to contact the Associate Dean of Enrollment Services.

7. **Nondiscrimination Policy**

Clarendon College, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. It is the policy of Clarendon College not to discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation. Harassment of a student in class, i.e., a pattern of behavior directed against a particular student with the intent of humiliating or intimidating that student will not be tolerated. The mere expression of one's ideas is not harassment and is fully protected by academic freedom, but personal harassment of individual students is not permitted.

The full details of **Student Rights and Responsibilities** policies can be viewed on Clarendon College's website at:

<http://www.clarendoncollege.edu/Resources/Student%20Services/StudentRightsResponsibilities.pdf>.

Course Schedule:

August 29	Last day to Add/Drop
September 6	HW 1 due
September 8	Quiz HW 1 and Practice Quiz due
September 13	HW 2 due

September 15	Quiz HW 2 and Practice Quiz due
September 20	HW 3 due
September 22	Quiz HW 3 and Practice Quiz due
September 27	HW 4 due
September 29	Quiz HW 4 and Practice Quiz due
October 4	HW 5 due
October 6	Quiz HW 5 and Practice Quiz due
October 11	HW 6 due
October 13	Quiz HW 6 and Practice Quiz due
October 18	HW 7 due
October 20	Quiz HW 7 and Practice Quiz due
October 25	HW 8 due
October 27	Quiz HW 8 and Practice Quiz due
November 1	HW 9 due
November 3	Quiz HW 9 and Practice Quiz due
November 8	HW 10 due
November 10	Quiz HW 10 and Practice Quiz due
November 14	Last day to drop with a “W”
November 15	HW 11 due
November 17	Quiz HW 11 and Practice Quiz due
November 22	HW 12 due
November 24	Quiz HW 12 and Practice Quiz due
December 4	Final Exam Available
December 11	Final Exam and Practice Exam due

Course Outline:

Unit 1: Ratios Basics
(Sections 9.1 and 9.2 in textbook)

Unit 2: Ratios In Finance
(Sections 8.1 thru 8.3 in textbook)

Unit 3: Ratios In Nursing

(Online Only “Nursing” Chapter in textbook)

Unit 4: Compound Interest and Annuities
(Sections 8.4 and 8.5 in textbook)

Unit 5: Cars, Houses, and Credit Cards
(Sections 8.6 thru 8.8 in textbook)

Unit 6: Reasoning
(Sections 1.1 and 1.3 in textbook)

Unit 7: Set Theory Part 1
(Sections 2.1 and 2.2 in textbook)

Unit 8: Set Theory Part 2
(Sections 2.3 thru 2.5 in textbook)

Unit 9: Displaying and Summarizing Data
(Sections 12.1 and 12.2 in textbook)

Unit 10: Probability Basics
(Sections 11.1 and 11.4 in textbook)

Unit 11: Permutations and Combinations
(Sections 11.2, 11.3, and 11.5 in textbook)

Unit 12: Conditional Probability
(Sections 11.6 and 11.7 in textbook)