Clarendon College Course Syllabus

MATH 1332 – Contemporary Mathematics Fall 2025

Instructor: Dr. Jeremy Sain

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Office Hours: MWR 1:30-2:30

MWRF 11:00-12:00 in library

TR 9:30-11:00

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:

- <u>Number: The Language of Science</u>, 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.
- <u>Mathematics From the Birth of Numbers</u>, Jan Gullberg. A mathematics overview book. Is fun to flip through and look at all the pictures.
- <u>Flatland, A Romance of Many Dimensions</u>. 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.
- <u>Democracy, the God that Failed,</u> 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)

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

<u>Course Description:</u> 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, or consent of instructor.

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. Reading assignments.
- 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.

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 guizzes 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: 90-100 A

80-89 B

70-79 C

60-69 D

<60 H

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.

STUDENT ACADEMIC INTEGRITY AND CLASSROOM ETHICS

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 an 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, class-room activity, or laboratory activity; 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 vice president, and/or dean. 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.

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 Vice President of Academic Affairs. The Vice President of Academic Affairs will maintain a file on all violations. If a faculty member prefers to report the case directly to Vice President of Academic 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 Vice President of Academic Affairs. If the Vice President of Academic Affairs observes any trends in student behavior which involve more than one violation or act of academic dishonesty, the Vice President of Academic 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 Vice President of Academic 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. Final Exams: The schedule of final exams times is published at the beginning of the semester. You can find the schedule for final exams at: https://www.clarendoncollege.edu/insideCC. Do not make plans to leave school before your scheduled final exam. Faculty members cannot on their own authorize a student to take a final exam early. In exceptional circumstances if a student needs to take a final exam early, he/she may request early final exams by filling out the form at: https://www.clarendoncollege.edu/Resources/Admin/Request%20for%20Early%20Final%20Exams.pdf.
- 2. **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.
- 3. **Electronic Communication/Entertainment Devices:** Are not allowed. Any students seen with their phone out (on desk, in hand, in lap) or with headphones on will be counted absent. Exceptions can be made for students who have a compelling reason to need to have their phone in class (for example, they have young children and therefore need to be accessible).
- 4. **No food, alcohol, or tobacco in the classroom:** Clarendon is a tobacco-free campus, so do not chew during class. Also, the presence of food is distracting to other students.
- 5. **Be respectful:** Arrive on time. Stay awake during class. Participate in classroom activities and discussions. Don't distract from the class. Do not use profane or inappropriate gestures and/or language.
- 6. **It's a face-to-face course:** It is the policy of the Health and Science / Agriculture Division at Clarendon College that any student enrolled in a face-to-face Health and Science / Agriculture course must remain in the scheduled face-to-face course through the end of the semester unless the student chooses to drop the course. No student may choose to transition from face-to-face to

remote or online. Extenuating circumstances that warrant a transition to online learning can override this policy if determined by the Vice President of Academic Affairs in consultation with the Division Chair and the course instructor. This transition will be communicated in writing to all parties: student, instructor, Division Chair, and Vice President of Academic Affairs.

7. **Course Withdrawal**--Students desiring to make schedule changes after their initial registration each semester must do so during the designated "Drop and Add" period as scheduled in the College Catalog. Students will be required to pay tuition and fees applicable to any class(es) added to their schedule.

Official withdrawal from a course is initiated in the Office of the Registrar. However, each student should consult with his/her academic advisor or the Associate Dean of Enrolment before officially withdrawing from a course. A student who stops attending a class without officially dropping it may receive a grade of "F" for that class.

- 8. **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.
- 9. <u>Accommodation Statement</u> 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.

10. 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.

<u>Clarendon College Campus Carry Policy</u>: Please click the following link to become informed about our campus carry policy: http://www.clarendoncollege.edu/CampusCarry</u>

The full details of **Student Rights and Responsibilities** policies can be viewed on Clarendon College's website at: www.clarendoncollege.edu/Resources/Legal/24-25/FLA(LEGAL).pdf

Course Schedule

August 28

All assignments are due at 11:59pm **Central Time**. Notice that the "due date" does not mean the day that you are supposed to submit an assignment. The "due date" is the last possible day to submit an assignment.

I encourage you to stay a few days ahead of the due dates. You never know when computers/internet will crash or when life situations will prevent you from being able to work on an assignment. If you are a few days ahead of the due dates, you won't be stuck with the possibility of missing an assignment due to unforeseen issues.

Last day to Add/Drop

August 28	Last day to Add/Drop
September 5	HW 1 due
September 7	Quiz HW 1 and Practice Quiz due
September 12	HW 2 due
September 14	Quiz HW 2 and Practice Quiz due
September 19	HW 3 due
September 21	Quiz HW 3 and Practice Quiz due
September 26	HW 4 due
September 28	Quiz HW 4 and Practice Quiz due
October 3	HW 5 due
October 5	Quiz HW 5 and Practice Quiz due
October 10	HW 6 due
October 12	Quiz HW 6 and Practice Quiz due
October 17	HW 7 due
October 19	Quiz HW 7 and Practice Quiz due
October 24	HW 8 due
October 26	Quiz HW 8 and Practice Quiz due
October 20	Quiz 11 W o una 1 fuence Quiz que
October 31	HW 9 due
November 2	Quiz HW 9 and Practice Quiz due
November 7	HW 10 due
November 9	Quiz HW 10 and Practice Quiz due
November 13	Last day to drop with a "W"
November 14	HW 11 due
November 16	Quiz HW 11 and Practice Quiz due

November 21 HW 12 due

November 23 Quiz HW 12 and Practice Quiz due

December 10 Final Exam and Practice Exam due, Final at 10:30am

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)