



Walters State Community College Course Syllabus

Course Information

Course Number and Name: MATH 1630 Finite Mathematics

Section ID: 80634.202380

Semester and Year: Fall 2023

Credit Hours: 3

Start Date: August 21, 2023

End Date: December 08, 2023

Course Format: CON - Conventional Methodology

Catalog Course Description: A course in algebraic, logarithmic, and exponential functions. Other topics include systems of linear equations and inequalities, matrices, linear programming, and mathematics of finance. Prerequisite(s): ACT Math score of 19 or higher (or equivalent score as determined by the college placement and assessment procedure) or completion of mathematics learning support requirements. Co-requisite(s): MATH 0030 required for students with ACT math score below (or equivalent score as determined by the college placement and assessment procedure) or have not completed all learning support mathematics requirements. **F, S, Su**

General Education Course Designation: General Education Course

Meeting Details: TR; 09:35AM - 11:00AM; ACAD 229

Course Drop Deadline: October 27, 2023

Instructor Information

Name: Julianna Gregory

Office Location: ACAD 225

Office Hours: See office door (ACAD 225) or use Bookings (in eLearn under Content)

Office Phone: 865-774-5809

Email: julianna.gregory@ws.edu

Supervisor Name: Chris Knight, Dean of Mathematics

Supervisor Phone: 423-585-6879

Secretary Name: Tammy Holt, Executive Aide

Secretary Phone: 423-585-6864

Required Textbook(s) and Materials

No Required Text

Additional Information

TI-83 or TI-84 graphing calculator required for course – discuss with instructor if you own a different graphing calculator

MyOpenMath Software Package (free)

Math 1630 Lecture Guides (in eLearn under Content)

Supplemental or Optional Materials

Optional Text: Mathematical Applications for the Management, Life and Social Sciences, 12th edition, authors Harshbarger/Reynolds, published by Brooks/Cole Cengage Learning

Student Learning Outcomes/Objectives

- Apply the concept of function and mathematical modeling in business, economics, and management applications.
- Graph and use linear and polynomial functions in applications.
- Graph and use exponential and logarithmic functions in applications.
- Calculate interest, present and future value, annuities, and amortization tables.
- Solve and use systems of linear equations and inequalities in two variables in applications.
- Use Gauss-Jordan elimination to solve linear systems of equations with two or more variables in applications.
- Understand the concept of matrices and their usage and perform operations on matrices.
- Formulate and solve linear programming problems graphically and by using the Simplex Method.

- Use calculators and computers in learning and doing mathematics.

Instructional Approach and Methods

1. Regular attendance is mandatory for your success in this course. It is the student's responsibility to contact the instructor BEFORE each planned or school-sponsored absence.

Grading Scale

A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	0 – 59%

Assignments

Grade Composition:

Homework Average 8%

Quizzes Total 14%

Chapter Tests Average 63%

Final Exam 15%

Final Average = $0.08(\text{Homework Average}) + 0.14(\text{Quizzes}) + 0.63(\text{Chapter Test Average}) + 0.15(\text{Final Exam})$

Assessment, Evaluation and Testing Procedures

1. Homework will be administered through MyOpenMath. Homework assignments will have an unlimited number of attempts up to the deadline assigned. If a homework assignment is not taken by the deadline, it will receive a grade of 0.
2. Quizzes missed due to absence cannot be made up with the exception of documented school sponsored events. A quiz missed due to an absence will receive a score of zero. The lowest three quiz scores will be dropped. If a quiz will be missed due to a **documented school sponsored event**, the student must contact Dr. Gregory **before** the scheduled absence and make arrangements for a make-up quiz. Failure to do so will result in a zero score for that quiz.
3. Four chapter tests and a final exam will be given. The lowest of the four chapter tests (excluding the final) will be dropped. In the event of an absence for an in class exam, the first missed exam will be used as the dropped exam. If a second exam is missed, the student may make-up a different version of the exam during the last regular week of classes by appointment during the instructor's office hours. It is the student's responsibility to make the appointment with the instructor before the day of the makeup exam. If an exam will be missed due to a **documented school sponsored event**, the student must contact Dr. Gregory **before** the scheduled absence and make arrangements to take the exam early. Failure to do so will result in a zero on the exam. If an in-class exam is missed for any reason other than a school sponsored event, an exam score of 0 will be assigned and this exam can be used as your one allowable drop.
4. **FINAL EXAM** There will be a comprehensive final exam. For financial aid purposes, students should plan to attend the final exam. The exam schedule is as follows:

For Math 1630-111 (TR): 10:15 a.m. – 12:15 p.m. on Thursday, December 7

Online/Web-Enhanced Course Supplementary Information

Make an online appointment through Bookings:

<https://outlook.office365.com/owa/calendar/JuliannaGregory@ws.edu/bookings/>

Additional Course Requirements/Details/Information

Additional Course Details

Chapter 1 – Linear Equations and Functions

- 1.1 Solution of Linear Equations and Inequalities in One Variable
- 1.2 Functions
- 1.3 Linear Functions
- 1.4 Graphs and Graphing Utilities
- 1.5 Solutions of Systems of Linear Equations
- 1.6 Applications of Linear Functions in Business and Economics

Chapter 2 – Quadratics and Special Functions

- 2.1 Quadratic Equations
- 2.2 Quadratic Functions; Parabolas
- 2.3 Business Applications of Quadratic Functions
- 2.4 Special Functions and Their Graphs
- 2.5 Modeling: Fitting Curves to Data with Graphing Utilities

Chapter 3 – Matrices

- 3.1 Matrices
- 3.2 Multiplication of Matrices
- 3.3 Gauss-Jordan Elimination: Solving Systems of Equations
- 3.4 Inverse of a Square Matrix; Matrix Equations

Chapter 4 – Inequalities and Linear Programming

4.1 Linear Inequalities in Two Variables

4.2 Linear Programming: Graphical Methods

4.3 The Simplex Method: Maximization

Chapter 5 – Exponential and Logarithmic Functions

5.1 Exponential Functions

5.2 Logarithmic Functions and Their Properties

5.3 Solution of Exponential Equations: Applications of Exponential and Logarithmic Functions

Chapter 6 – Mathematics of Finance

6.1 Simple Interest; Sequences

6.2 Compound Interest; Geometric Sequences

6.3 Future Value of Annuities

6.4 Present Value of Annuities

6.5 Loans and Amortization

Academic Honesty

Faculty expect all students to refrain from acts of academic misconduct including but not limited to:

1. Plagiarism - refers to using another person's ideas or writing without giving proper credit to the original source. Indulging in this type of conduct will subject the student to disciplinary sanctions, which may be imposed through the regular institutional procedures of Walters State Community College as outlined in the Student Handbook. Plagiarism will result in a grade of "0" for the paper/exam/presentation. Student Conduct and Disciplinary Sanctions contained in the college Catalog/Student Handbook apply (see policy 04:18:02 Disciplinary Sanctions).

Plagiarism includes, but is not limited to the following:

- a. Using cut/paste tool from original document with no references given.

- b. Copying another student's work and submitting it as one's own.
 - c. Forging or otherwise altering signatures.
 - d. Giving or falsifying academic documents or materials.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
- a. Utilizing old tests, projects, notes or written papers.
 - b. Providing unauthorized information to a fellow student about exam content.
 - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.
 - d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person's paper or electronic device, utilizing headphones, using textbook when the test/quiz is not an open book test/quiz, using textbook test bank etc.).
 - e. Consulting with a classmate or others when taking a computerized test.
 - f. Disregarding other specific policies and procedures outlined for a particular class.
 - g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, or tablets, etc.).
 - h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.
3. The use of any generative artificial intelligence (AI) tool, such as OpenAI's ChatGPT, Google's Bard, or any other pre-trained language model (commonly referred to as "chatbot"), must be cited for any assignment where it has been used and may not be used unless specifically allowed by your instructor. Please see your instructor or the course policies within the syllabus if you have questions.

Student Resources

TUTORING SERVICES

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:

- Morristown Campus - Student Services Building Room L107 - (423) 585-6920
- Niswonger Campus - GRNV 226 - (423) 798-7982
- Sevierville Campus - MMH Room 210 - (865) 286-2787
- Claiborne Campus - Room 123A - (423) 851-4761

Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- Morristown Campus - English Learning Lab - HUM 120 - (423) 585-6970

[Walters State English Learning Lab \(opens in new window\)](https://www.waltersstate.edu/academics/humanities/writing-lab)
[ws.edu/academics/humanities/writing-lab](https://www.waltersstate.edu/academics/humanities/writing-lab)

- Morristown Campus - Mathematics Lab - MBSS 222 - (423) 585-6872

[Walters State Mathematics Learning Lab \(opens in new window\)](https://www.waltersstate.edu/academics/mathematics/learning-lab)
[ws.edu/academics/mathematics/learning-lab](https://www.waltersstate.edu/academics/mathematics/learning-lab)

TECHNOLOGY SUPPORT

Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: (423) 318-2742; Niswonger: (423) 798-8186; or Sevierville: (865) 286-2789 or on-line access.

[Walters State Helpdesk \(opens in new window\)](https://helpdesk.waltersstate.edu)
[helpdesk.ws.edu](https://helpdesk.waltersstate.edu)

STUDENTS WITH DISABILITIES SUPPORT SERVICES

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone (423) 585-6892) if they need any special facilities, services, or consideration.

[Walters State Student Support Services \(opens in new window\)](https://www.waltersstate.edu/student-services/disability/)
[ws.edu/student-services/disability/](https://www.waltersstate.edu/student-services/disability/)

SUICIDE PREVENTION STATEMENT

Walters State is committed to and cares about all students. Support services are available for any person at Walters State who is experiencing feelings of being overwhelmed, hopelessness, depression, thinking about dying by suicide, or is otherwise in need of assistance. For immediate help, contact the National Suicide Prevention Lifeline by calling or texting 9-8-8 or the Trevor Lifeline at 1-866-488-7386. Veterans may also contact the Veterans Crisis Line at 1-800-273-8255 (press 1) or Text 838255.

Walters State has a relationship in place with the following community agencies to provide services (may include crisis referral services, prevention screenings, etc.):

- Cherokee Health Systems 423-586-5032
- Frontier Health 423-467-3600

College Policies

STUDENTS HANDBOOK AS OFFICIAL GOVERNING DOCUMENT

This class is governed by the policies and procedures stated in the current Walters State Community College Student Handbook. All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

[Walters State Catalog \(opens in new window\)](http://catalog.ws.edu/)
catalog.ws.edu/

[Walters State Timetable of Classes \(opens in new window\)](http://ws.edu/admissions/registration/)
ws.edu/admissions/registration/

PURPOSE, LIMITATIONS AND MODIFICATION OF SYLLABUS

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus for the semester/year specified in the Course Information section of the syllabus. This syllabus is only valid for the semester/year specified and course requirements are not guaranteed for future semesters.

COURSE GROUND RULES

- Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.
- Regular class attendance is a student's obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook). If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.
- Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student's grade in the course.
- Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student

information system (MyWS) will not be allowed to remain in class or receive credit for this course.

- Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

FINANCIAL AID

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a student's degree/certificate completion pace and further jeopardize Financial Aid eligibility.

CANCELLATION OF CLASSES AND ACADEMIC CONTINUITY

For information related to the cancellation of classes due to inclement weather or other events, please check the Senators Emergency Text system or the college's Web site at:

[Walters State Homepage \(opens in new window\)](#)

ws.edu/home/

[Walters State Facebook page \(opens in new window\)](#)

<https://www.facebook.com/WaltersState/>

[Walters State Twitter page \(opens in new window\)](#)

<https://twitter.com/waltersstate>

or call the college's student information line, 1-800-225-4770, option 1; the Sevier County Campus, (865) 774-5800, option 7; the Niswonger Campus (423) 798-7940, option 7; or the Claiborne County Campus, 423-636-6200, option 7. Also, please monitor local TV and radio stations for further announcements.

When an event or disaster interrupts the scheduled operations of the college and the ability to proceed with the academic course activities as planned, the college and your instructor may alter the course plan outlined in the syllabus. Should an event occur, students should refer to their course e-Learn pages and/or class materials previously delivered to receive guidance from their instructor. Students should continue to monitor the official college channels of communication listed in the above

paragraph. If you would like to sign up for the Senators Emergency Text system, please go to the following Web site:

[Senator Emergency Text System \(opens in new window\)](#)
ws.edu/set/

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

LEARNING MANAGEMENT SYSTEM

Brightspace (commonly known as eLearn or D2L) is the college's Learning Management System (LMS).

Brightspace is committed to accessibility by "deliver[ing] a learning experience that meets the needs of all people, regardless of age or ability." [Brightspace Accessibility Standard \(opens in new window\)](#)

Brightspace is also committed to guarding student data and privacy. [Brightspace Privacy Policy \(opens in new window\)](#)