math 1710-003 syllabus

Instructor: Joshua Oladele. **Email:** joladele@memphis.edu
Office hours: video consultation available by appointment.

Course Description

(3 credit hours) Analysis of functions (linear, quadratic, polynomial, root, rational, exponential, logarithmic); partial fractions; conic sections; theory of equations; inequalities; applications.

Course Objectives

1. Students should be able to solve and graph linear functions on the Cartesian plane as well as solve and graph linear inequalities on a number line.

2. Students should be able to calculate and interpret slope and find equations of lines.

3. Students should be able to perform arithmetic operations with functions and compute (and simplify) difference quotients and compositions of functions.

4. Students should be familiar with symmetry properties, even/odd functions and perform transformations (vertical shifts, horizontal shifts, etc.) of graphs.

5. Students should be able to perform arithmetic operations with complex numbers.

6. Students should be able to factor, use completing the square and the quadratic formula to solve and graph quadratic functions. This includes finding the vertex, axis of symmetry, etc.

7. Students should be able to solve rational, radical and absolute value equations along with absolute value inequalities.

8. Students should be able to graph simple polynomial and rational functions and find vertical and horizontal asymptotes.

9. Students should be familiar with polynomial division (synthetic) and the remainder theorem and factor theorem.

10.Students should be able to use the properties of logarithms and exponents to solve and graph exponential and logarithmic equations.

11.Students should be familiar with applications using exponential and logarithmic properties such as exponential growth and decay and compound interest.

Course Topics

R The Basic Concepts of Algebra
1. Graphs, Functions, and Models
2. More on Functions
3. Quadratic Functions and Equations; Inequalities
4. Polynomial Functions and Rational Functions
5. Exponential Functions and Logarithmic Functions

Specific Course Requirements

MyMathLab: Registration for the MyMathLab course requires an access code. This comes with your copy of the textbook or can be purchased directly when registering for the MyMathLab course. Visit www.mymathlab.com.

MyMathLab plus Tech Support telephone number; (844) 292-7015.

Textbooks, Supplementary Materials, Hardware, and Software Requirements

Required Textbooks

College Algebra: Third Custom Edition for the University of Memphis. Textbooks are available from the University Store.

Call (901) 678-2011 for more information.

The minimum system requirements can be found at UofM Global Technology Requirements.

Assessment and Grading

Testing Procedures

Students will take all the test and the final exam on eCourseware {login to eCourseware, click MATH1710, click Assessment, click Quizzes, click the test}.

Grading Procedure

Students must do all the Homework Assignments. 20% of the average of the Homework Assignments will be counted toward the Final Grade. The student must do all the Tests because 10% of each exam will be counted toward the Final Grade. Missing a single Test will limit student grade to B.
Homework – 25% of Final Grade;
Attendance – 5 % of Final Grade

Exam 1 – 10 % of Final Grade
Exam 2 – 10 % of Final Grade
Exam 3 – 10 % of Final Grade
Exam 4 – 10 % of Final Grade
Comprehensive Final Exam – 30 % of Final Grade

Grading Scale

Grading Policy: The student's grade in the course will be based on the following scale.

90 – 100% - A
80 – 89% - B
70 – 79% - C
60 – 69% - D
Below 60% - F

Assignments

Homework assignments will be completed on the MyMathLab website. Each homework assignment will have a due date assigned. If assignments are not completed by the due date, the student will receive a grade of zero for that assignment.

Attendance:

I STRONGLY suggest that you make every attempt not to miss a single day of lecture. Attendance is part of the grade. Excuse will be verified. Two absences are allowed without penalty. **YOU MUST STAY FOR THE ENTIRE CLASS PERIOD TO BE REGARDED AS PRESENT.** Attendance can be taken any time during the lecture. Joining the zoom only will not be recognized as attendance. You must type your code at the time of the attendance. Failure to take the attendance at the right time means you are not present.

The Course Contents:

Week 1: January 17 -23, 2021
CHAPTER 1: Graphs, Functions, and Models
1.1 Introduction to Graphing

WEEK 2: January 24 -30, 2021
CHAPTER 1: Graphs, Functions, and Models
1.2 Functions and Graphs
1.3 Linear Functions, Slope, and Applications

WEEK 3: January 31 – February 6, 2021
CHAPTER 1: Graphs, Functions, and Models
1.4 Equations of Lines and Modeling
1.5 Linear Equations, Functions, Zeros, and Applications

WEEK 4: February 7 - 13, 2021
CHAPTER 2: More on Functions
1.6 Solving Linear Inequalities
2.1 Increasing, Decreasing, and Piecewise Functions; Applications

February 9: Chapter 1 Test

WEEK 5: February 14 - 20, 2021
CHAPTER 2: More on Functions
2.2 The Algebra of Functions
2.3 The Composition of Functions

WEEK 6: February 21 - 27, 2021
CHAPTER 2: More on Functions
2.4 Symmetry and Transformations
2.5 Variation and Applications

February 26: Chapter 2 Test

WEEK 7: February 28 – March 6, 2021
CHAPTER 3: Quadratic Functions and Equations; Inequalities
3.1 The Complex Numbers
3.2 Quadratic Equations, Functions, Zeros, and Models
3.3 Analyzing Graphs of Quadratic Functions

WEEK 8: March 7 - 13, 2021
CHAPTER 3: Quadratic Functions and Equations; Inequalities
3.4 Solving Rational Equations and Radical Equations
3.5 Solving Equations and Inequalities with Absolute Value

WEEK 9: March 14 - 20, 2021
CHAPTER 4: Polynomial Functions and Rational Functions
3.5 Solving Equations and Inequalities with Absolute Value
4.1 Polynomial Functions and Models
4.2 Graphing Polynomial Functions

March 18. Chapter 3 Test

WEEK 10: March 21 - 27, 2021
CHAPTER 4: Polynomial Functions and Rational Functions
4.3 Polynomial Division; The Remainder Theorem and the Factor Theorem
4.4 Theorems about Zeros of Polynomial Functions

WEEK 11: March 28 – April 3, 2021
CHAPTER 4: Polynomial Functions and Rational Functions
4.5 Rational Functions
4.6 Polynomial Inequalities and Rational Inequalities.

April 2: Chapter 4 Test

WEEK 12: April 4 - 10, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.1 Inverse Functions
5.2 Exponential Functions and Graphs

WEEK 13: April 11 - 17, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.3 Logarithmic Functions and Graphs
5.4 Properties of Logarithmic Functions

WEEK 14: April 18 - 24, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.5 Solving Exponential Equations and Logarithmic Equations
5.6 Applications and Models: Growth and Decay; Compound Interest

WEEK 12: April 4 - 10, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.1 Inverse Functions
5.2 Exponential Functions and Graphs

WEEK 13: April 11 - 17, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.3 Logarithmic Functions and Graphs
5.4 Properties of Logarithmic Functions

WEEK 14: April 18 - 24, 2021
CHAPTER 5: Exponential Functions and Logarithmic Functions
5.5 Solving Exponential Equations and Logarithmic Equations
5.6 Applications and Models: Growth and Decay; Compound Interest

Final Exam Review April 26, 2021

Final Exam – Wednesday, May 5, 2021

Course Ground Rules

I want you to know that you should learn how to navigate in D2L and keep abreast of course announcements; use the assigned university e-mail address rather than a personal e-mail address.

Guidelines for Communication

Email

- **All** email correspondence must be made through your University of Memphis email account.
- Check your email daily, and make sure that your "inbox" isn't so full that no new messages will get through. Please include your section number in your email.
- You must use the University email address. I may not reply your email if you fail to follow the instruction.
- Always include a subject line.
  Example Subject: **MATH 1710-003- Homework**.

- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. Use of emoticons might be helpful in some cases.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members

Discussion Groups

- Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.
- Try to maintain threads by using the "Reply" button rather starting a new topic.
- Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of others' ideas.
- Be patient and read the comments of other group members thoroughly before entering your remarks.
- Be cooperative with group leaders in completing assigned tasks.
- Be positive and constructive in group discussions.
- Respond in a thoughtful and timely manner.

Chat

- Introduce yourself to the other learners in the chat session.
- Be polite. Choose your words carefully. Do not use derogatory statements.
- Be concise in responding to others in the chat session.
- Be prepared to open the chat session at the scheduled time.
- Be constructive in your comments and suggestion

Web Resources

- Columbia Guide to Online Style by Janice R. Walker and Todd Taylor (2nd Edition)
- Citation Styles Online at Purdue Owl

Class Participation

Students must communicate with the instructor and students in the chat room when using zoom or virtual classroom. Students must check the course bulletin board frequently for announcements.

Plagiarism and Integrity

Plagiarism, cheating, and other forms of academic dishonesty are prohibited. Students guilty of academic misconduct, either directly or indirectly, through participation or assistance, are immediately responsible to the instructor of the class in addition to other possible disciplinary sanctions which may be imposed through the regular institutional disciplinary procedures. Expectations for academic integrity and student conduct are described in detail on the website of the Office of Student Accountability. (https://www.memphis.edu/osa/students/academic-misconduct.php). Please read, in particular, the section about "Academic Integrity".

Turnitin.com

"Your written work will be submitted to Turnitin or a similar electronic detection method, for an evaluation of the originality of your ideas and proper use and attribution of sources. As part of this process, you may be required to submit electronic well as hard copies of your written work, or be given other instructions to follow. By taking this course, you agree that all assignments may undergo this review process and that the assignment may be included as a source document in Turnitin.com's restricted access database solely for the purpose of detecting plagiarism in such documents. Any assignment not submitted according to the procedures given by the instructor may be penalized or may not be accepted at all."

Library, Tutoring, and Other Resources

- The myMemphis Portal system, eCampus Student tab provides access to University library.
- The tutoring link in the course navigation bar provides access to free online tutoring through UpSwing.

- The Lynda.com link in the course navigation bar provides free access to thousands of video tutorials.
- Other support services are available through the Educational Support Program.

Student Accommodations
Students with accessibility issues or learning accommodation issues due to a disability should contact Disability Resources for Students (DRS) to submit an official request for course accommodations.

Contact (DRS) at 901.678.2880 or at drs@memphis.edu.
(https://www.memphis.edu/drs/index.php)

Student Health
Students who have a positive COVID-19 test should contact the Dean of Students at deanofstudents@memphis.edu.

Student Resources
Students who need additional resources can visit the Dean of Students Office website at https://www.memphis.edu/deanofstudents/crisis/index.php.
This courseis scheduled as Remote Synchronous.

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Student Resources
Students who need additional resources can contact the Dean of Students Office at https://www.memphis.edu/deanofstudents/crisis/index.php.

Sexual Misconduct and Domestic Violence Policy

This policy specifically addresses sexual misconduct which includes dating violence, domestic violence, sexual assault, and stalking. The policy establishes procedures for responding to Title IX-related allegations of sexual misconduct. Complaints can be reported to the Office for Institutional Equity (OIE). You may contact OIE by phone at 901.678.2713 or by email at oie@memphis.edu. Complaints can be submitted online at File a Complaint. OIE's office is located in the Administration Building, Room 156.

Non-Discrimination and Anti-Harassment Policy

University policy prohibiting discrimination and harassment based on protected characteristics and classes. Complaints of discrimination and harassment can be reported to the Office for Institutional Equity (OIE). You may contact OIE by phone at 901.678.2713 or by email at oie@memphis.edu. The full text of the policy can be found at GE2030-NON-DISCRIMINATION AND ANTI-HARASSMENT.

Academic and Classroom Misconduct:
Academic integrity: *Cheating will not be tolerated*. The incident will be reported to the department.
With respect to work undertaken in this class, students are responsible for reading, understanding and adhering to the terms and provisions of this policy. Please visit the following websites to read about the university rule concerning academic integrity and classroom misconduct.
http://www.memphis.edu/studentconduct/misconduct.htm
https://www.memphis.edu/osa/pdfs/csrr.pdf

Technology Requirements

The following is a list of the minimum requirements to use our learning management system. Some courses will have more advanced requirements.

- Access to a reliable, high-speed Internet connection (DSL or Cable).
- Test your device to ensure it is compatible with our LMS (Learning Management System) using the System Check Wizard.
- Open PDF files using the free downloadable PDF software.
- Access Flash-based content with Adobe Acrobat Reader DC (free).
- Use Microsoft Office for Faculty, Staff, and Students for document creation.

Play media content with Real Player (free), QuickTime (free), or Windows Media Player (free).

Syllabus Changes

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the course bulletin board.

Technical Support

Call the Helpdesk: (901) 678-8888

Online Helpdesk: To report an issue or request assistance, contact umTech - Information Technology Services.