

University of West Georgia
DEPARTMENT OF MATHEMATICS
Foundations of Numbers and Operations
MATH 2008 – Sec E01

Instructor: Mr. Robert Burnham
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Office: Email/CourseDen
Office Hours: T/TH: 10 am – 12 pm, Other Times by Appointment

During office hours I will be available via email.

Prerequisite: Math 1001 or Math 1111 or Math 1113 with a grade of C or better.

Required Text: A problem solving Approach to Mathematics for Elementary Teachers (12th edition), by Billstein, Libeskind, Lott from Pearson Publishers.

Course Description: This course is an Area F introductory mathematics course for early childhood education majors. This course will emphasize the understanding and use of the major concepts of numbers and operations. As a general theme, strategies of problem solving will be used and discussed in the context of various topics.

Learning Outcomes

Students should be able to demonstrate:

1. The student will be able to solve problems using various problem solving strategies
2. The student will be able to identify patterns and sequences including arithmetic, geometric, and Fibonacci sequences.
3. The student will be able to work with set operations and Venn diagram.
4. The student will be able to work with numeric systems of various bases.
5. The student will be able to understand mathematical properties including commutative, associative, and distributive properties..
6. The student will be able to understand various strategies in computing number operations for integers and fractions.

How Online Instruction Works

Online instruction requires the student to be more active in their own learning. The student will have to spend a sufficient amount of time completing independent study. This means the student will teach themselves and reach out to the instructor when help is needed. The instructor has provided course materials that cover all topics. However, for the student to master the topics they must work through all materials on a consistent basis and be conscious of their understanding. Keep this in mind moving forward in this course.

EXPECTATIONS / REQUIREMENTS

Grade : Your grade will consist of two Tests (20% each), Homework Average (20%), Project Average (15%), and a cumulative Final Exam (25%).

ASSESSMENT GRADING:

Course Grade = $0.20*(\text{Hw Ave}) + 0.15*(\text{Proj Ave}) + 0.20*\text{Test 1} + 0.20*\text{Test 2} + 0.25*(\text{Final Exam})$

When computing your Final Course Grade I will replace your lowest test grade with your Final Exam Grade, if the Final Exam Grade is higher than your lowest test grade. In the event of academic dishonesty the student forfeits this benefit.

Grading Scale :

Letter Grade	A	B	C	D	F
Grading Scale	90% to 100%	80% to 89%	70% to 79%	60% to 69%	0% to 59%

Pacing Calendar: I've created a pacing calendar and in it I list the sections you should cover during that week. However, it is a good idea to work ahead. I advise everyone to watch the corresponding Lecture Video and complete the lecture notes as if they were in a regular classroom lecture. It also states the due dates of the homework assignments and the dates of our tests and final exam.

Calculator Policy: A graphing calculator is recommended (preferably a TI-83 or TI-84 model) however you can use any calculator you prefer.

Lecture Notes: Lecture notes play a big role in this course. I have posted all of my lecture notes on CourseDen and I do expect you to print them off and complete them as you watch the lecture videos.

Lecture Videos: These are videos that I've made where I go through the course lecture notes, explain the topics, and complete the examples.

Completed Lecture Notes: These are the exact lecture notes that you'll see me complete in the Lecture Videos.

Homework: Homework assignments will be completed using MyOpenMath.com via CourseDen. You will have assignments due on a weekly basis. Do not wait until the due date to do the assignments – if the site is not available, you will get a 0 for those assignments.

Projects: There will be 6 projects that will be taken for a grade. They will require you to do research and submit a paper that describes your findings.

Tests/Final: There will be 2 Tests and a comprehensive final exam. Test 1 will be due on **Sunday, June 21st at 11:59pm**. Test 2 will be due on **Sunday, July 12th at 11:59pm**.

Final Exam: The Final Exam will be given on **Wednesday, July 22nd 2020**

Make-up Policy: If you miss an assignment then you will have one week from the date of the assignment to contact me about making up the missing assignment. After which you will not be allowed to make up the assignment. So please contact me as soon as possible.

Withdrawal Policy: The last day you can withdraw from this course and receive a “W” is Wednesday **June 24th, 2020.**

Attendance: This being an online class there is no attendance policy. However, you are expected to log into your CourseDen account every day to check class announcements and email. You are also expected to check your MyUWG email every day.

Questions about grading: Questions about grading must be asked within one week of the graded works return.

UWG EMAIL POLICY: University of West Georgia students are provided a MyUWG e-mail account. The University considers this account to be an official means of communication between the University and the student. The purpose of the official use of the student e-mail account is to provide an effective means of communicating important university related information to UWG students in a timely manner. It is the student’s responsibility to check his or her email.

CourseDen: Course materials will be posted on CourseDen. Please check CourseDen often for updates. You may log in to CourseDen at www.westga.edu or <http://webct.westga.edu>. If you are having problems logging into CourseDen, please go to <http://uwgonline.westga.edu/students.php> or call 678-839-6248

Accessibility Services:

Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, you should notify me in writing and provide a copy of your Student Accommodations Report (SAR), which is available only from Accessibility Services. I cannot offer accommodations without timely receipt of the SAR; further, no retroactive accommodations will be given. For more information, please contact Accessibility Services.

Math Tutoring Center (MTC): The Math Tutoring Center Online Tutoring service is available in CourseDen starting Wednesday, June 3rd. You can access live tutoring by going to MTC Online Tutoring in the CourseDen, from the top course menu "Communication", choosing "Collaborate Ultra", and then entering a live session when available. More information is available in MTC Online Tutoring in the CourseDen.

Center for Academic Success: The Center for Academic Success provides services, programs, and opportunities to help all undergraduate students succeed academically. For more information, contact them: 678-839-6280 or cas@westga.edu

Student Conduct:

Students are expected to abide by the guidelines detailed in the university honor code.

COURSE POLICIES AND INFORMATION:

University Policies and Academic Support

Please carefully review the following Common Language for all university course syllabi at the link:

<https://www.westga.edu/UWGSyllabusPolicies/>

It contains important material pertaining to university policies and responsibilities. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Academic Dishonesty:

All students of the University of West Georgia are expected to follow the Honor Code as described in the student handbook (<https://www.westga.edu/administration/vpsa/assets/docs/2016-2017-student-handbook.pdf>). Any student who commits academic dishonesty will receive the following penalties.

1. For a first charge of academic dishonesty the student will receive a grade of “0” for said assignment. In the event of academic dishonesty the final exam grade will not replace your lowest test grade if it is higher.
 2. For a second charge of academic dishonesty the student will receive a grade of “0” for the course.
- Note that all incidents of academic dishonesty will be reported to the University.

IMPORTANT DATES:

<u>First Day of Class:</u>	Monday, June 1st
<u>Drop Ends:</u>	Tuesday, June 2nd
<u>Last Day to Withdrawal with W:</u>	Wednesday, June 24th
<u>Last Day of Class:</u>	Tuesday, July 21 st
<u>Test 1 Due Date:</u>	Sunday, June 21 st at 11:59pm
<u>Test 2 Due Date:</u>	Sunday, July 12 th at 11:59pm
<u>Final Exam Due Date:</u>	Wednesday, July 22 nd at 11:59pm

****Note**** This syllabus provides a general plan for the course; deviations may be necessary

COURSE OUTLINE

Section	Title
1.1	Mathematics and Problem Solving
1.2	Explorations with Patterns
2.1	Reasoning and Logic: An Introduction
2.2	Describing Sets
2.3	Other Set Operations and Their Properties
3.1	Numeration Systems
3.2	Addition and Subtraction of Whole Numbers
3.3	Multiplication and Division of Whole Numbers
3.4	Addition and Subtraction Algorithms, Mental Computation, and Estimation
3.5	Multiplication and Division Algorithms, Mental Computation, and Estimation
Test 1	Chapters 1-3
4.1	Divisibility
4.2	Prime and Composite Numbers
4.3	Greatest Common Divisor and Least Common Multiple
5.1	Addition and Subtraction of Integers
5.2	Multiplication and Division of Integers
6.1	The Set of Rational Numbers
6.2	Addition, Subtraction, and Estimation with Rational Numbers
6.3	Multiplication, Division, and Estimation with Rational Numbers
6.4	Proportional Reasoning
Test 2	Chapters 4-6
Final Exam	Chapters 1-6