

MATH109: Excursions in Math

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MATH109: Excursions in Math

Course Welcome

Welcome to MATH109: Excursions in Mathematics! We call this course "excursions" because rather than focusing in depth on one particular area of mathematics (like Algebra), we will instead sample several diverse areas of mathematics. We will look at some topics that are likely to come up in everyday life, things like general problem solving, financial math, and interpreting statistics. We'll also look at some fun and unusual topics like graph theory, just to give you a broader exposure to mathematics.

Instructor Email Response Policy

Any course related email sent to the instructor will have a response either by email, phone, or through Canvas within 48 hours.

Course Description and Credit Hours

(3 credit hours) A general education math course designed to foster development of problemsolving skills, quantitative literacy (particularly in the use of data), and effective communication in writing and speaking on mathematical subjects. Topics of the course may include probability and statistics, geometry, voting theory, graph theory, and notions of infinity.

Please note that this general education math course is not designed to serve as a prerequisite for further courses in math or statistics.

Course Objectives

At the conclusion of the course, students should be able to:

- Apply mathematical ideas to discover creative solutions to problems.
- Communicate precisely and effectively about (mathematical) problems and solutions.
- Critically analyze the presentation and interpretation of data in certain contexts.
- Articulate how mathematics intersects various areas of the modern world.

Program Competencies

At the completion of the program, students should:

- Know how to think critically and analytically within their discipline.
- Be able to communicate concepts and ideas within their discipline effectively through both verbal and written communication skills.
- Be able to use knowledge and skills in a variety of settings, especially in employment situations.
- Understand how to apply a Christian world view in a variety of settings, especially in employment situations.

Required Textbook / Materials

Title: Math in Society
Author(s): David Lippman

Publisher: open-source, available online for FREE at:

http://www.opentextbookstore.com/mathinsociety/index.html

ISBN: 978-1479276530

Textbooks and other course materials can be purchased from the online campus bookstore.

Final Grade Calculation

Grade Distribution

Assignment	Percent of Grade
Online Discussions	5%
Online Homework	35%
Written Assignments	10%
Skills Quizzes	35%
Final Exam	15%
Total	100%

Grading Scale

Letter Grade	Percent
Α	94% - 100%
A-	90% - < 94%
B+	87% - < 90%
В	84% - < 87%
B-	80% - < 84%
C+	77% - < 80%
C	74% - < 77%
C-	70% - < 74%
D+	67% - < 70%
D	64% - < 67%
D-	60% - < 64%
F	Below 60%

Course Schedule

This schedule serves as a general outline for the course. The instructor reserves the right to adjust the schedule as the need arises.

Class Schedule

The online class session schedule begins on Sunday at 12:00 a.m. EST of the assigned week and ends Saturday night at 11:59 p.m. EST. All weekly assignments can be completed at any time during the week but must be completed during that week.

Week	Topic	Assignment
1	Problem-Solving	Discussion Online Homework Written Assignments Skills Quizzes
2	Voting Theory and Weighted Voting	Discussion Online Homework Written Assignments Skills Quizzes
3	Fair Division and Graph Theory	Discussion Online Homework Written Assignments Skills Quizzes
4	Growth Models and Finance Math	Discussion Online Homework Written Assignments Skills Quizzes
5	Collecting Data and Describing Data	Discussion Online Homework Written Assignments Skills Quizzes
6	Probability	Discussion Online Homework Written Assignments Skills Quizzes
7	Final Review and Exam	Discussion Review Exercises Final Exam

Course Requirements

All online course activities assigned to the course are performed within Canvas. Students will navigate through the course using the *Modules* page.

Additional web sites and related web-based activities, if assigned, will be accessed through the course on Canvas or through links provided for websites located outside the course.

Assignments

Weekly Assignments

Please see the list of *Modules* in Canvas for a complete list of assignments and activities organized by week. Each week includes the following activities:

- Devotional
- Readings/Videos
- Online Discussion (initial post due Wednesday, two replies due Saturday)
- Homework Assignments (2 per week)
- Written Assignment (essay or in-depth problem-solving activity)
- Skills Quizzes (2 per week)

Final Week Assignments

- Review Exercises
- Final Exam

Course Participation

Class Participation

Each week a portion of the course will be devoted to a class discussion related to a particular concept or topic. Each student is expected to participate in this discussion. In-class discussions are designed to allow the class to engage in a healthy dialog on the lesson topic or question being presented. In the event of an in-person class cancelation, the scheduled class session and discussion will continue online.

Many in-person classes utilize a weekly online discussion forum. Specific requirements for online discussions can be found in the next section of this syllabus.

Online Discussion Forums

Weekly discussion forums are a portion of all online courses, as well as some in-person courses, and are conducted in Canvas. Each student is expected to participate in online discussions as applicable for the topic chosen. Answers are to reflect the student's opinions, critical thinking, as well as properly documented research to support the student's insights.

To receive the minimum points possible for a weekly discussion, each student is to submit an initial discussion post by Wednesday at 11:59 pm EST, and reply to at least two classmate posts by Saturday at 11:59 pm EST.

The initial discussion post is to be a minimum of 250 words and must include a level of detail, analysis, and reflection related to the discussion topic. The student is expected to cite references to support their opinion using APA format.

Reply posts are to be a minimum of 100 to 150 words each and include a level of detail, analysis, and reflection. Students are encouraged to access the discussion board several times throughout the week to remain current and active in the discussion.

Post / Response Guidelines

For the dialog to remain productive, in either an online or classroom discussion, Bethel University requires each person to behave responsibly by adhering to the following guidelines. These help to maintain a collaborative and congenial environment by reminding us that whether we communicate online or in the classroom, we are engaging real people.

Be respectful of participants and their time by staying on-topic and not commandeering a discussion with vague or unrelated comments. Contribute productive information when participating in a discussion by stating a complete and logical idea or concept. The goal in the discussion is to delve into a topic and "learn," so when you share a comment, stay on topic, and explain your point of view.

Do not post copyrighted material without the expressed, documented permission of the copyright holder or following proper source citation of the information, just as you would when writing an essay or term paper. Cite a source if you use it.

Contact your instructor if you have any questions.

Bethel University Policies and Resources

To view all Bethel University policies and information, please review the **Student Handbook**.

Attendance

Classroom Attendance

Classes are accelerated, and there are no "free" or "automatic" absences. Student success in the course work and in personal and small group relationships requires regular class attendance. A student may be considered absent if he/she attends only a part of the class. Please see the Student Handbook for the Attendance Policy.

Online Attendance

The academic week is seven days for an online session, which begins Sunday morning and ends Saturday night. When an on-ground course moves to an online week, due to a holiday, the week is based on the night the class normally meets (i.e., if the class meets on Monday night, then the online session will be from Monday night through Sunday night of the following week).

To receive full credit for online attendance, you must login AND complete one of the following items as directed by the instructor:

- Submit an academic assignment.
- Submit a quiz or exam.
- Participate in a posted online academic discussion.

Note that the following actions will not count as attendance:

- Logging into class without active participation does not constitute online attendance.
- Work done in a lab or other outside environment will not count toward online attendance.
- Assignments completed the week after the online assignment is due will not count toward online attendance for the previous week.

It is best practice for students to access the online course a minimum of three days during each week to understand the subject fully and to be successful in class.

Late or Make Up Work

It is important for students to submit work on time as scheduled in the class. This allows the instructor time to grade the material and provide feedback if necessary. Circumstances may interfere with the ability to submit an assignment on time. However, as a student you agree to take the class and therefore agree to submit work on time.

Students are encouraged to work ahead to avoid late assignments. Please communicate with your instructor promptly if you have extenuating circumstances that may contribute to a late assignment.

Assignments (excluding discussion posts) will be accepted late, subject to a 10% deduction off the earned grade per day late (24-hour period), for up to 3 days. No assignments will be accepted after 3 days. Discussion posts and responses that are not posted by the due date will receive 0 points and are not accepted past the due date.

All work must be completed and submitted by the end of Week 7 of the course. No work will be accepted after the last day of the course.

Class Cancelation / Weather Policy

In the advent of a classroom meeting cancelation due to a campus scheduled holiday or severe weather, the course will move to an online format. Campus closures do not affect the online course schedule.

Netiquette Policy

In an online course, almost all your interactions with other people will be through the internet. This netiquette policy applies to all your interactions with the instructor and your fellow students, and you are expected to follow the guidelines outlined below.

Respect other people and be willing to share your ideas and thoughts in a respectful way. Simply, respect others' views. You may disagree with someone but do so graciously and

constructively. Pause before writing emails or posts when you are angry and reread what you wrote carefully before clicking 'send.' Treat others the way you wish to be treated—with respect.

Do not post or communicate offensive or hateful content. Bethel University does not permit discussions that are obscene, harassing, sexually explicit, or derogatory toward individuals or groups. These will be deleted and repeat offenders may be barred from future participation.

Do not post or share personal information. Do not post or share information such as addresses, telephone numbers, etc., and do not post or share someone else's personal information.

Plagiarism

Any act of deceit, falsehood or stealing by unethically copying or using someone else's work, including Al-created work, in an academic situation is prohibited. A student found guilty of plagiarism will receive an "F" for that paper, assignment, or exam. The instructor will have an interview with the student and submit a written report to the Program Coordinator for the area in which the student is enrolled. If a second offense should occur, the student will be required to appear before the instructor, the coordinator, and the dean of the academic program. At this point the student's continuation in the course and academic career are in jeopardy. Students are encouraged to refer to the Bethel Library's online help for proper citation.

Diversity and Inclusion Statement

Bethel University respects the dignity of all God's image-bearers, and stands against racism, prejudice, and discrimination. Because Christ calls us to love our neighbors as ourselves, Christian discipleship includes pursuing the good of those who suffer injustice due to their color, race, or ethnicity. Therefore, we aim to continually transform our classrooms into safe and hospitable spaces where we listen to one another with mercy, learn from and value each other with tenacity, and commit to pursuing justice for the most vulnerable in our community.

Disability Services

The Americans with Disabilities Act (ADA) is a law which provides civil rights protection for people with disabilities. Bethel University, in compliance with equal access laws, requests that students with disabilities seeking to acquire accommodations make an appointment with The Center for Academic Success – Disability Services by calling (574) 807-7460 or emailing academicsuccess@betheluniversity.edu.

The Center for Academic Success is located in the lower level of the Miller-Moore Academic Center. Please refer to Bethel's website for more information.

Information Technology Help Desk

The Help Desk is open Monday-Thursday from 7:30 a.m. – 6:00 p.m. and Friday, 7:30 a.m. – 5:00 p.m., during the fall and spring semesters, and 8:00 a.m. – 5:00 p.m. during the summer (starting May 1). Hours may vary on holidays and breaks.

Contact the Help Desk at helpdesk@betheluniversity.edu or by calling (574) 807-7777.

Library

Bethel's Bowen Library offers a range of resources and services, both online and physical, to all students enrolled at Bethel University. All online resources are available at the <u>library website</u>.

Almost all periodicals and journals are available online, and there is a wide selection of e-books available as well. Off-campus access to these resources requires an active Bethel login account. For help locating information, students can submit questions via email, through Ask a Librarian, by phone, or in person during regular business hours. For physical resources, students can use the online library catalog to locate books and resources held by Bethel or any other library. Students may use the catalog to request books from another library and have them delivered to the Bowen Library.

Students may also go to any <u>PALNI</u> library or to Notre Dame or Holy Cross and check material out in person with a valid student ID. PALNI is a consortium of several academic libraries in Indiana of which Bethel is a member; some nearby member libraries include Saint Mary's, Associated Mennonite Biblical Seminary, Goshen, and Grace. In addition, physical books and journals, the Bowen Library provides study spaces, computers, and printers (included a web print station) to all students.

Syllabus Acknowledgment

Enrollment in this course is considered an acknowledgment that the student will review and follow the course syllabus and additional university policies as stated within the student handbook, university catalog and student information provided by the university through the campus website.

This syllabus is not a legal contract but serves as a general outline for the semester. The instructor reserves the right to adjust the course as the need arises.