Syllabus

To-Do Date: Mar 1 at 11:59pm

	**Department of Mathematical, Computer, and Information Sciences** MTH 2023 Fundamentals of Elementary Mathematics II 3 Units (Tuesdays and Thursdays, 2:30-3:45pm, LBRT 201)
Spring 2021 - March 1 - June 11	

Instructor: Professor Kyle Havens
Phone: 619.990.4714
Email: kylehavens@pointloma.edu
Office hours: By Appointment in Zoom

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Department Mission

The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

COURSE DESCRIPTION

A continuation of Mathematics 2013 focusing on additional knowledge necessary for a California multiple-subject teaching credential (K-8). Topics covered in this course include data analysis and statistics, probability, combinations and permutations, simulations as well as standard and non-standard measurement. Planar and three dimensional geometry and geometric constructions are studied, including an algebraic approach to geometry. This class is highly interactive and emphasizes group work and cooperative learning.

Prerequisite: MTH 1013 or equivalent, MTH2013 (3 Units) Fundamentals of Elementary Mathematics I.

COURSE LEARNING OUTCOMES

- Students will be able to demonstrate a facility with operations on the integers.
- Students will be able to demonstrate a facility with operations on the rational numbers.
- Students will be able to apply concepts from number theory to solve problems.

COURSE DESIGN

- The course is designed to help you acquire knowledge and develop understanding of the conceptual and procedural
  foundations for teaching elementary school mathematics
- The course is designed to help you develop the ability to teach mathematics developmentally (i.e., basing procedural
  knowledge on clear connections with prior conceptual knowledge)
- The course is designed to help you acquire knowledge and develop ability to create a problem solving environment in the
  classroom, to set and achieve teaching goals, to stimulate and manage classroom discourse, to use technology effectively,
  and to make ongoing instructional decisions
- The course is designed to help you acquire confidence sufficient to teach elementary mathematics positively and
  enthusiastically

PHILOSOPHY AND APPROACH

Research in learning theory shows that students who learn mathematics effectively must be actively involved in the process, not just
passive listeners/observers. In particular, in order to really learn and understand mathematical ideas

and processes you must become
deeply involved in activities such as exploring, discussing, analyzing, explaining, conjecturing, defending, negotiating, testing, and
evaluating. To do this you need good problems to solve, interaction with others on solutions, and opportunities to write your
conclusions.

The mathematical experience of the students in MTH2013 and MTH2023 varies widely. This means that different students will need
to spend different amounts of time to learn the material. To help assist in this process, the class is designed as a blended class. You
will be doing pre-tests, reading and some homework problems (you get two attempts at each problem) online this will allow you spend
the amount of time that you need to learn the basics before we engage in activities in class.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

Text: *A Problem Solving Approach to Mathematics for Elementary School Teachers*, 12th Edition, Billstein, Libeskind, and Lott. ISBN 978-0-321-98729-7

Needed Supplies: A calculator, a compass, a protractor, a ruler, and access to a computer.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 3 unit class delivered over fifteen weeks. Specific details about how the class meets the credit hour requirement can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

Distribution of Student Learning Hours

Category	Time Expectation in Hours
Video Notes and Activities	20
Live/Zoom Lectures	20
Reading Assignments	25
Written Assignments	15
Online Assignments	15

Category	Time Expectation in Hours
Collaborative Activities	15
Review for Exams	7
Exams including Final	5.5
Total Hours	122.5

ASSESSMENT AND GRADING

Graded Components

- **Homework:** You will have two types of homework:
  - Online Homework - this will be due at 11:59 pm on the Wednesday before our class face to face meeting. Your online homework will be graded by the computer. You will have two attempts to work each problem. You must have access to the online homework in Canvas for this material.
  - Written Homework - this will be due at the start of class the next Thursday. Late homework will not be accepted except by prior arrangement or with a documented emergency. Up to a maximum of one homework assignment will be accepted up to 3 days late provided that consent is received from the professor before it is due. Homework assignments that are submitted late without prior consent will be recorded with a score of zero. In your written homework I expect to see calculations using the terminology and methods of the class and not just the answer. A random selection (the same for all people) of the problems will be graded on any homework assignment. If more than half of the homework assignments are submitted on time, then the lowest homework score will be dropped from the calculations of the homework grade.
    Collected assignments must be prepared in a style suitable for grading. The following guidelines are used to determine credit:
    - the organization must be easy to follow
    - the work must be legible
    - complete solutions must be written for problems (not just answers);
    - answers must be clearly marked
    - use complete sentences to answer questions
  - Review Exercises for Exams (Quizzes) – these will be due at 11:59am on the exam day. In order to earn the maximum

credit for each chapter, a minimum score equivalent to five correct questions must be earned. Earning a score above five
correct questions will not raise the credit for that chapter. The percent correct out of five will be averaged for all of the
chapters for that exam and then multiplied by half of the Exam Review Exercise points for the semester.

- **Notes and Videos**: Each section will have videos to watch and you should take notes.
- **Examinations and the Final Examination**. There will be one Mid-Semester Examination and a comprehensive Final Examination. The Mid-Semester Examination and the Final Examination will include problems and questions over material assigned in the text, readings and handouts, as well as material presented in class. The examination schedule is included in the daily schedule. The instructor will not accept excuses such as poor communication with parents, benefactors, surf team sponsors and/or travel agents. No examination shall be missed without prior consent or a well-documented emergency beyond your control. In such cases, all make-up exams will occur at 8:30 am on the Saturday between classes and Final Exam week. A score of zero will be assigned for an examination that is missed without prior consent or a well-documented emergency beyond your control.
- **Late work will not be accepted** without prior consent or a well-documented emergency. Up to a maximum of one homework assignment will be accepted up to 3 days late provided that consent is received from the professor before it is due. Homework assignments that are submitted late without prior consent will be recorded with a score of zero. If more than half of the homework assignments are submitted on time, then the lowest homework score will be dropped from the calculations of the homework grade.
- The examination schedule is included in the daily schedule. This instructor does not intend to accept excuses such as poor communication with parents, benefactors, surf team sponsors and/or travel agents.

Grade Component	Percent
Mid-Semester Examination	25
Final Examination	35
Review Exercises for Exams	5
Online Homework	15
Written Homework	20
Total	100

FINAL EXAM:

Date and Time: Thursday, 6/10/21, 4:30-7:00pm

The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. This schedule can be found on the university website and in the course calendar. No requests for early examinations will be approved. Only in the case that a student is required to take three exams during the same day of finals week, is an instructor authorized to consider changing the exam date and time for that particular student.

Grading Scale

Grades are based on the number of points accumulated throughout the course with the following exception. A student must pass at least one of Exam 1 or the Final Exam in order to pass the class. That is, a score of 60% must be achieved on one of the Exams, or else the final grade will be an F regardless of all other point totals. Approximate minimal percentages required to obtain a given grade are:

Standard Grade Scale Based on Percentages					
	A	**B**	**C**	**D**	**F**
+		87.5- 90	77.5-80	67.5-70	
	92.5 -100	82.5-87.5	72.5-77.5	62.5 -67.5	0-60
–	90-92.5	80-82.5	70-72.5	60-62.5	

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on **State Authorization (https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures)** to view which states allow online (distance education) outside of California.

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely

unusual circumstances.

CLASS ENROLLMENT

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See **Academic Policies (http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278)** for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (**DRC@pointloma.edu (https://mail.google.com/mail/?view=cm&fs=1&tf=1&to=DRC@pointloma.edu)** or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

PLNU ATTENDANCE AND PARTICIPATION POLICY

While online: Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.) Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

If face-to-face: Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day. Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See **Academic Policies (http://catalog.pointloma.edu/content.php?catoid=18&navoid=1278)** for further information about class attendance.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith. If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the **Office of Spiritual Development (https://www.pointloma.edu/offices/spiritual-development)**

Fundamentals of Elementary Mathematics II - Online Schedule Spring 2021

Week of	*Before Class*	*Live Class (Thursday)*	*After Class*
3/1/2021	Online Introduction and Canvas Exploration	Zoom Introduction 9.1/9.2 Form Groups	Read 9.1/9.2 **Due:** Nothing
3/8/2021	Videos 9.1/9.2 **Due:** OHW9.1/9.2	Zoom Lecture 9.3/9.4 Class Activity	Read 9.3/9.4 **Due:** Written 9.1B/9.2B
3/15/2021	Videos 9.3/9.4 **Due:** OHW9.3/9.4	Zoom Lecture 10.1-10.3 Class Activity	Read 10.1-10.3 **Due:** CA1, Written 9.3B/9.4B
3/22/2021	Videos 10.1-10.3 **Due:** OHW10.1-10.3	Zoom Lecture 10.4/10.5 Class Activity	Read 10.4/10.5 **Due:** CA2, Written 10.1B-10.3B
3/29/2021	Videos 10.4/10.5 **Due:** OHW10.4/10.5	Zoom Lecture 11.1/11.2 Class Activity	Read 11.1/11.2 **Due:** CA3, Written 10.4B/10.5B
4/5/2021	Videos 11.1/11.2 **Due:** OHW11.1/11.2	Zoom Lecture 11.3/11.4 Class Activity	Read11.3/11.4 **Due:** CA4, Written 11.1B/11.2B
4/12/2021	Videos 11.3/11.4 **Due:** OHW11.3/11.4	Zoom Review	Online Review **Due:** CA5, Written 11.3B/11.4B
4/19/2021	Online Review **Due:** Review Problems	***Mid-Term Exam***	Read 12.1/12.2 **Due:** Nothing
4/26/2021	Videos 12.1/12.2 **Due:** OHW12.1/12.2	Zoom Lecture 12.1-12.4 Class Activity	Read 12.3/12.4 **Due:** Written 12.1B/12.2B
5/3/2021	Videos 12.3/12.4 **Due:** OHW12.3/12.4	Zoom Lecture 13.1/13.2 Class Activity	Read 13.1/13.2 **Due:** CA6, Written 12.3B/12.4B
5/10/2021	Videos 13.1/13.2 **Due:** OHW13.1/13.2	Zoom Lecture 13.3/13.4 Class Activity	Read 13.3/13.4 **Due:** CA7, Written 13.1B/13.2B
5/17/2021	Videos 13.3/13.4 **Due:** OHW13.3/13.4	No Zoom Lecture Work on Project	Read 14.1-14.3 **Due:** CA8, Written 13.3B/13.4B
5/24/2021	Videos 14.1-14.3 **Due:** OHW14.1-14.3	Zoom Lecture 14.1-14.3 Class Activity	Read 14.4/14.5 **Due:** Project
5/31/2021	Videos 14.4/14.5 **Due:** OHW14.4/14.5	Zoom Lecture 14.4/14.5 and Review	Online Review **Due:** CA9, Written 14.1-14.3
6/7/2021	Online Review **Due:** Review Problems	***Final Exam [6/10/21]*** 4:30-7:00pm (Cumulative)	**Due:** Written 14.4/14.5

Modifications or omissions may occur due to unforeseen circumstances.