

Point Loma Nazarene University
Department of Mathematics, Information, and Computer Sciences

Instructor: Jesús Jiménez, PhD.

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Office Hours: MW 1:00 am – 4:00 pm and R 1:00 pm – 3:00 pm.

Textbook: Elementary Number Theory, G. A. Jones and J. M. Jones. Springer. ISBN:3-540-76197-7

Room and Time: LA 2, MW 11:00 am – 11:55 am.

Final Exam: April 29, 2019 (Monday) 10:30 am – 1:00 pm in room LA 2.

COURSE DESCRIPTION

An introduction to proofs using the study of natural numbers, integers, prime factorization, divisibility, congruences, multiplicative functions, continued fractions, quadratic residues. Methods used include investigation, conjecture, inductive and deductive proofs. Offered on a Quad basis.

Prerequisite(s): [MTH 174](#)

COURSE CREDIT HOURS

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for a 2-unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

COURSE LEARNING OUTCOMES

- Students will be able to write proofs.
- Students will be able to demonstrate facility with algebraic structures.
- Students will be able to speak about their work with precision, clarity and organization.
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- Students will collaborate effectively in teams.
- Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- Students will be able to gather relevant information, examine information and form a conclusion based on that information.

UNIVERSITY MISSION

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.

GRADING SCHEME**Grade Distribution**

Your course percent is computed as a weighted average using the following distribution of your assignments.

Two partial exams @ 200 points each	400	points
Final Exam	300	points
Homework	300	points
Total	1000	points

Grading Scale

A passing grade requires getting at least 60% in one of the partial exams or on the final exam. Grades are based on the number of points accumulated throughout the course. Approximate minimal percentages required to obtain a given grade are:

Grading Scale in Percentages				
	A	B	C	D
+		(87.5, 90]	(77.5, 80]	(67.5, 70]
	(92.5, 100]	(82.5, 87.5]	(72.5, 77.5]	(62.5, 67.5]
-	(90, 92.5]	(80, 82.5]	(70, 72.5]	[60, 62.5]

FINAL EXAM POLICY

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.

LATE WORK POLICY

Late work: All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Late work need not be accepted. Work accepted late may be assessed a penalty.

Incomplete grade: Incompletes will only be assigned in extremely unusual circumstances. You may request a grade of I (incomplete) only if you are having a passing grade and at least 70% of the course work is completed.

MISSED EXAM POLICY

No examination shall be missed without prior consent or a well-documented emergency beyond your control. A score of zero will be assigned for an examination that is missed without prior consent or a well-documented emergency beyond your control.

There is no make-up for the Final Exam.

Tests and the final exam will include problems and questions over material assigned in the text, readings and handouts, as well as material presented in class.

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.

ATTENDANCE

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 the Undergraduate Academic Catalog [Class Attendance](#).

ACADEMIC ACCOMMODATIONS

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 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.

ACADEMIC HONESTY

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 Honesty](#) for definitions of kinds of academic dishonesty and for further policy information.

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SCHEDULE

Week	Day	Date	Activities
1	Tue	1/8/2019	Induction and Well Ordering Principle
1	Wed	1/9/2019	Chapter 1
2	Mon	1/14/2019	Chapter 1
2	Wed	1/16/2019	Chapter 1
3	Mon	1/21/2019	Martin Luther King Day (No Classes)
3	Wed	1/23/2019	Chapter 1
4	Mon	1/28/2019	Chapter 2
4	Wed	1/30/2019	Chapter 2
5	Mon	2/4/2019	Chapter 2
5	Wed	2/6/2019	Chapter 2
6	Mon	2/11/2019	Chapter 3
6	Wed	2/13/2019	Chapter 3
7	Mon	2/18/2019	Chapter 3
7	Wed	2/20/2019	Chapter 3
8	Mon	2/25/2019	Chapter 3
8	Wed	2/27/2019	Exam 1
9	Mon	3/4/2019	Spring Break
9	Wed	3/6/2019	Spring Break
10	Mon	3/11/2019	Chapter 4
10	Wed	3/13/2019	Chapter 4
11	Mon	3/18/2019	Chapter 4
11	Wed	3/20/2019	Chapter 4
12	Mon	3/25/2019	Chapter 4
12	Wed	3/27/2019	Chapter 4
13	Mon	4/1/2019	Chapter 5
13	Wed	4/3/2019	Chapter 5
14	Mon	4/8/2019	Chapter 5
14	Wed	4/10/2019	Chapter 5
15	Mon	4/15/2019	
15	Wed	4/17/2019	Exam 2
16	Mon	4/22/2019	Easter Break
16	Wed	4/24/2019	Chapter 5
17	Mon	4/29/2019	Final Exam (10:30 am -- 1:00 pm)
17	Wed	5/1/2019	