MTH 521 Syllabus Fall 2018

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Office Hours: 10:00–11:00 p.m. MW, 1:00–2:00 p.m. TTh, or by appointment.
Textbook: *Elementary Number Theory*, Underwood Dudley, 2nd Edition, Dover Publications, 1978.

Welcome the MTH 521, Theory of Numbers a subject area some call the "Queen of Mathematics". In this class we will explore the properties of the positive integers. The topics include divisibility, prime numbers, and solving equations. It will be seen that many properties of numbers are easily stated, but proofs of these properties can be quite daunting. Number theory is one of the oldest of areas mathematical study and as such has a rich long history. Of recent years number theory is being used in the development of data encryption and error detection.

Prerequisites

MTH 332: Introduction to Analysis.

Grading Policy

There will be 3 exams and a final exam each worth 100 points. In cases of extreme emergency, serious illness, or university related activity, when I have been notified in advance of the scheduled exam day. In these cases the student will be allowed to make up the missed exam. I will give these makeup exams on Friday, December 7 only. In addition, homework will be turned each week, usually on Fridays. Each of these homework assignments will be worth 15 points.

Absolutely no late homework will be accepted for any reason.

I will, however drop you lowest two homework scores.

Grading Scale[1]

Point Total			Grading Scale (% of total)					
10	Homework	150	100–92	A	82–80	B-	69–66	D+
3	Exams	300	92–90	A-	79–76	C+	65–63	D
	Total	450	89–86	B+	75–73	C	62–60	D-
			85–83	B	72–70	C-	59 ↓	E

Exam Dates

Midterm:	Wednesday, October 18	Chapters 1,2,3,4
Final Exam:	TBD	Comprehensive
	TBD	

CMU provides students with disabilities reasonable accommodation to participate in educational programs, activities, or services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should contact me as early as possible.

[1] Graduate students must earn a C to pass.

Material to be covered and assignments (More to follow later.)

(*-required by graduate students)

Section 1
p. 9 (12,4,5,6,7,8,10,11,12,14,15*)

Section 2
p. 19 (2,3,4*,6,8,10,12*,14)

Section 3
p. 26 (2,3,5,6,8,10*)

Section 4
pp. 32–33 (2,3,6,9,10,12,14,15,17.19*,20*)

Section 5
pp. 40–41 (2,4,5,6,8,9,11,12,14,16,17,17*,19*)

Section 6
pp. 48–49 (2,3,4,6,9,10,12*,13,14,15*,17*,18,20)

Section 7
pp. 55–56 (2,3,5,6,8,10,12,13,15,16,17*,19*,20*)

Section 8
pp. 61–62 (1,2,3,4,5,6,9,10,11*,13*,14,15*)

Section 9 pp.71–72 (2,3,5,7,8,9,10,12,13,15,16*,17,18*,20*)

Section 10
pp. 81–82 (2,4,5,8,9,10,11*,13*,14,18*,19*,20*)

Section 11
p. 93 (2,4,6,7,10,11,13,14,15*,16,17,19*,20*)

Section 12
pp. 104–105 (1,2,3,4,5*,6,7,8*,9*,10*)

Section 16
pp. 133–134 (1,2,4,5,8,,9,10,11,13,15,17,18*,20*)