

Spring 2017

Math 302 - Theory of Numbers

Tu, Th 2:50 - 4:05 pm

CUE 316

Instructor: Sheng-Chi Liu

Office: Neill 207

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Phone number: (509)335-8648

Office Hours: Tu, Th 1:30 -2:30 pm and by appointment.

Textbook: *Elementary Number Theory*, by James K. Strayer.

Instructor's web page: <http://www.math.wsu.edu/faculty/scliu>

Number of credits: 3

Prerequisites: Math 172 or 182; Math 301.

Course Description: We will cover the following topics: divisibility, factorization, congruences, arithmetic functions, quadratic residues, primitive roots and Diophantine equations. We will cover additional topics as time permits.

Grades and Exam schedule:

Assessment		Date
Midterm 1	25 %	February 16, in class
Midterm 2	25 %	April 6, in class
Final Exam	10 %	take home
Quiz	20 %	
Homework	20 %	

Any appeals of grades on the exams or homework must be made within one week of the graded exams being returned to the class. Your letter grade will be determined as follows:

%	Grade
[90, 100]	A
[87, 90)	A-
[83, 87)	B+
[80, 83)	B
[77, 80)	B-
[73, 77)	C+
[70, 73)	C
[67, 70)	C-
[63, 67)	D+
[60, 63)	D
[0, 60)	F

Homework: There will be regular homework assignments. It is fine for students to work together on finding solutions for these problems. However, each student must write up the solutions on his or her own. Consulting web sites or other problem solution sources (other than the textbook) is not allowed.

Learning outcomes: Students should have knowledge of divisibility, prime numbers, the Euclidean algorithm and solving linear Diophantine equations after completing this course. Students will have some background for further applications in cryptography and computer science.

Absences: Making up missed work (including exams, homework, etc) will be arranged for prior approved arrangements or illness. However you will need to provide some form of written verification such as a doctor's note. If you miss a lecture, you are responsible for obtaining lecture notes from another student. You are also responsible for determining if any announcements were made.

WSU Disability Statement: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in this class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations **MUST** be approved through the Access Center. For more information contact a Disability Specialist at 509-335-3417, Access.Center@wsu.edu or visit the website <http://accesscenter.wsu.edu>.

Academic integrity: Academic integrity will be strongly enforced in this course. Any student caught cheating on any assignment will be given an F grade for the course and will be reported to the Office Student Standards and Accountability. Cheating is defined in the Standards for Student Conduct WAC 504-26-010 (3). It is strongly suggested that you read and understand these definitions.

WSU Safety and Emergency: Washington State University is committed to enhancing the safety of the students, faculty, staff, and visitors. It is highly recommended that you review the Campus Safety Plan (<http://safetyplan.wsu.edu/>) and visit the Office of Emergency Management web site (<http://oem.wsu.edu/>) for a comprehensive listing of university policies, procedures, statistics, and information related to campus safety, emergency management, and the health and welfare of the campus community.

Tentative Schedule

Week	Date	Sections
1	January 9 - 13	1.1 - 1.3
2	January 16 - 20	1.4 - 1.5
3	January 23 - 27	2.1 - 2.2
4	January 30 - February 3	2.3 - 2.4
5	February 6 -10	2.5 -2.6
6	February 13 - 17	Review, Midterm 1 (2/16)
7	February 20 - 24	3.1 - 3.2
8	February 27 - March 3	3.3 -3.4
9	March 6 - 10	3.5 - 3.6
10	March 13 - 17	Spring Vacation
11	March 20 - 24	4.1 - 4.2
12	March 27 - 31	4.3, 5.1
13	April 3 - 7	5.2 - 5.4
14	April 10 - 14	Review, Midterm 2 (4/6)
15	April 17 -21	6.1 - 6.3
16	April 24 - 28	6.4 - 6.5