Math 522 Number Theory

Spring 2024 Calendar

◄ Dec 2023 | **January 2024** | Feb 2024 ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
21	22 Start of the semester	23 First Day of Class Introductions and Expectations	24	25 Review of Rings, Ideals, and Fields	26	27
28	29	30 Chapter 1.1: Unique Factorization in $\mathbb{Z}$	31 Homework 0 Due			

◄ Jan 2024

February 2024

Mar 2024 ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Section 1.2: Unique Factorization in k[x]	2	3
4	5	6 Sections 1.3 and 1.4: Unique Factorization in a PID and The Rings Z[i] and Z[ω]	7 Homework 1 Due	8 Finishing up Chapter 1 (Purple text indicates on opportunity for student presentations.)	9	10
11	12	13 Sections 2.1 and 2.2: The Infinitude of the Primes and Some Arithmetic Functions (Euler's φ function)	14	15 Section 2.3: $\sum \frac{1}{p}$ Diverges Congruences in Z SMIMIC Talk	16	17
18	19	20 Congruences in Z ax congruent to b modulo m Section 3.4: Sunzi's Remainder Theorem	21 Homework 2 Due	22 Section 3.4: The Chinese Remainder Theorem Finish up Chapter 3, Start Chapter 4 SMIMIC Talk	23	24
25	26	27 Midterm 1	28	29 Section 4.1 Primitive Roots in U(Z/nZ) Section 4.2: n^{th} Power Residues SMIMIC Talk		

◄ Feb 2024

March 2024

Apr 2024 ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5 Section 4.2: n^{th} Power Residues Quadratic Reciprocity	6 Homework 3 Due	7 Intro to Galois Theory: Field Extensions and Authomorphisms	8	9
10	11	12 Galois Theory, Quadratics as Example	13	14 Galois Theory, Cyclotomics as Example SMIMIC Talk	15	16
17 Spring Break!	18 Spring Break!	19 Spring Break!	20 Spring Break!	21 Spring Break!	22 Spring Break!	23 Spring Break!
24 Homework 4 Due	25	26 Section 12.1: Algebraic Preliminaries, Section 12.2	27	28 Section 12.2: Finiteness of the Class Number, Unique Factorization SMIMIC Talk	29	30

◄ Mar 2024

April 2024

May 2024 ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Mar. 31	1 Cesar Chavez Day	2 Midterm 2	3	4 Section 12.3: Ramification and Degree SMIMIC Talk	5	6
7	8	9 Section 13.1: Quadratic Number Fields	10 Homework 5 Due	11 Section 13.2: Cyclotomic Number Fields	12	13
14	15	16 Section 13.3: Quadratic Reciprocity Revisited	17	18 Section 13.3: Quadratic Reciprocity Revisited	19	20
21	22	23 Reid Lecture	24 Homework 6 Due	25 Kummer's Attack on Fermat's Last Theorem	26	27
28	29	30 Kummer's Attack on Fermat's Last Theorem				

May 2024

◄ Apr 2024 | Jun 2024 ►

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2 Buffer and Student Presentations SMIMIC Talk	3	4
5	6	7 Buffer and Student Presentations Vistas into Modern Number Theory and Arithmetic Geometry	8 Homework 7 Due	9 Last Day of Class Vistas into Modern Number Theory and Arithmetic Geometry	10	11
12	13 Final Exam Week (Exam date and time TBD)	14 Final Exam Week (Exam date and time TBD)	15 Final Exam Week (Exam date and time TBD)	16 Final Exam Week (Exam date and time TBD)	17 Final Exam Week (Exam date and time TBD)	18