MATH 312 Sections 1 & 2 Concepts of Real Analysis Fall 2023 Schedule

Lec.	Date	Section	Topic
1	8/21	2, 3	Introduction. Rational numbers. Ordered fields.
2	8/23	3, 4	Absolute value. Maximum and minimum. Upper and lower bounds.
3	8/25	4	Supremum and infimum. Completeness Axiom.
4	8/28	4, 5	**Quiz 1.** Archimedean property. Denseness of $\mathbb{Q}$ in $\mathbb{R}$. Symbols ∞ and $-\infty$.
5	8/30	7, 8	Sequences. Limits of sequences. Definition and examples.
6	9/1	7, 8, 9	Uniqueness of the limit. Diverging sequences. Bounded sequences.
-	*9/4*		*Labor Day - no classes.*
7	9/6	9	**Quiz 2.** Limit theorems for sequences: constant multiple, sum, product.
8	9/8	9	Limit of a quotient. Squeeze Lemma (Ex. 8.5). Binomial Theorem (Ex. 1.12).
9	9/11	9	**Quiz 3.** Basis examples. Sequences diverging to ∞ and $-\infty$.
10	9/13		**Team Worksheet 1.**
11	9/15	10	Monotone sequences.
12	9/18	10	**Quiz 4.** Lim inf and lim sup.
13	9/20	10	Cauchy sequences.
14	9/22	11	Subsequences. Bolzano - Weierstrass Theorem.
15	9/25	11	**Quiz 5.** Limits of subsequences.
16	9/27		**Team Worksheet 2.**
17	9/29		Review
18	10/2		**Exam 1: Real numbers and sequences.**
19	10/4	14	Series.
20	10/6		
21	10/9		**Quiz 6.**
22	10/11		
23	10/13		
24	10/16		**Quiz 7.**
25	10/18		
26	10/20		
27	10/23		**Quiz 8.**
28	10/25		
29	10/27		
30	10/30		**Quiz 9.**
31	11/1		
32	11/3		Review.
33	11/6		**Exam 2: Series and continuous functions.**
34	11/8		
35	11/10		
36	11/13		**Quiz 10.**
37	11/15		
38	11/17		
	11/19-25		*Thanksgiving break – no classes*
39	11/27		**Quiz 11.**
40	11/29		
41	12/1		
42	12/4		**Quiz 12.**
43	12/6		
44	12/8		Review

Final Exam: TBA