

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. Definitions and examples. |
| 6 | 9/1 | 8, 9 | Uniqueness of the limit. Diverging sequences. Bounded sequences. |
| - | 9/4 | | <i>Labor Day - no classes.</i> |
| 7 | 9/6 | 9 | Quiz 2. Limit theorems for sequences. |
| 8 | 9/8 | | |
| 9 | 9/11 | | Quiz 3. |
| 10 | 9/13 | | |
| 11 | 9/15 | | |
| 12 | 9/18 | | Quiz 4. |
| 13 | 9/20 | | |
| 14 | 9/22 | | |
| 15 | 9/25 | | Quiz 5. |
| 16 | 9/27 | | |
| 17 | 9/29 | | Review |
| 18 | 10/2 | | Exam 1: Real numbers and sequences. |
| 19 | 10/4 | | |
| 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 | | <i>Thanksgiving break - no classes</i> |
| 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