# Math136 - Real Analysis II - AY2025-2026 spring

George McNinch

## Course Calendar

| Date | DOW | Desc | Seq | Week | Details |
|------|-----|------|-----|------|---------|
| 01/14 | Wed | Meeting | Office hours 0 | 1 | **15:00-16:00 JCC 559 |
| 01/14 | Wed | Lecture | 1 | 1 | 13.1: Limits; 13.2: partial derivatives |
| 01/15 | Thu | Meeting | Office hours 0 | 1 | **14:30-15:30 JCC 559 |
| 01/18 | Sun | Assignment | | 1 | PS01 |
| 01/19 | Mon | Tufts | | 2 | **No classes:** *MLK Day* |
| 01/21 | Wed | Meeting | Office hours 1 | 2 | **15:00-16:00 JCC 559 |
| 01/21 | Wed | Lecture | 2 | 2 | 13.3: The Mean Value Theorem and directional derivatives |
| 01/21 | Wed | Tufts | | 2 | **Academic Date:** *Last day to add a course* |
| 01/21 | Wed | Tufts | | 2 | **Tufts:** *Monday schedule* |
| 01/22 | Thu | Meeting | Office hours 1 | 2 | **14:30-15:30 JCC 559 |
| 01/25 | Sun | Assignment | | 2 | PS02 |
| 01/26 | Mon | Lecture | 3 | 3 | 14.1: First order approximation, 14.2: quadratics, Hessian and 2nd derivs |
| 01/28 | Wed | Meeting | Office hours 2 | 3 | **15:00-16:00 JCC 559 |
| 01/28 | Wed | Lecture | 4 | 3 | 14.3: Second order approximation |
| 01/29 | Thu | Meeting | Office hours 2 | 3 | **14:30-15:30 JCC 559 |
| 02/01 | Sun | Assignment | | 3 | PS03 |
| 02/02 | Mon | Lecture | 5 | 4 | 15.1: Linear maps and matrices; 15.2: derivative matrix, differential |
| 02/04 | Wed | Meeting | Office hours 3 | 4 | **15:00-16:00 JCC 559 |
| 02/04 | Wed | Lecture | 6 | 4 | 15.3: The chain rule |
| 02/05 | Thu | Meeting | Office hours 3 | 4 | **14:30-15:30 JCC 559 |
| 02/08 | Sun | Assignment | | 4 | PS04 |
| 02/09 | Mon | Lecture | 7 | 5 | 16.1: Functions of a single variable and maps in the plane |
| 02/11 | Wed | Meeting | Office hours 4 | 5 | **15:00-16:00 JCC 559 |
| 02/11 | Wed | Lecture | 8 | 5 | 16.2: Stability of non-linear maps |
| 02/12 | Thu | Meeting | Office hours 4 | 5 | **14:30-15:30 JCC 559 |
| 02/15 | Sun | Assignment | | 5 | PS05 |
| 02/16 | Mon | Tufts | | 6 | **No classes:** *Presidents' Day* |
| 02/18 | Wed | Meeting | Office hours 5 | 6 | **15:00-16:00 JCC 559 |
| 02/18 | Wed | Lecture | 9 | 6 | midterm 1 |
| 02/18 | Wed | Exam | | 6 | **midterm 1** |
| 02/18 | Wed | Tufts | | 6 | **Academic Date:** *Last day to drop a course without record* |
| 02/19 | Thu | Meeting | Office hours 5 | 6 | **14:30-15:30 JCC 559 |
| 02/22 | Sun | Assignment | | 6 | PS06 |
| 02/23 | Mon | Lecture | 10 | 7 | 16.3: Minimization principle and the general inverse function theorem |
| 02/25 | Wed | Meeting | Office hours 6 | 7 | **15:00-16:00 JCC 559 |
| 02/25 | Wed | Lecture | 11 | 7 | 17.1: Dini's Theorem |
| 02/26 | Thu | Meeting | Office hours 6 | 7 | **14:30-15:30 JCC 559 |
| 03/01 | Sun | Assignment | | 7 | PS07 |
| 03/02 | Mon | Lecture | 12 | 8 | 17.2: The general implicit function theorem |
| 03/04 | Wed | Meeting | Office hours 7 | 8 | **15:00-16:00 JCC 559 |

| Date | DOW | Desc | Seq | Week | Details |
|------|-----|------|-----|------|---------|
| 03/04 | Wed | Lecture | 13 | 8 | 17.3: Equations of surfaces and paths in space |
| 03/05 | Thu | Meeting | Office hours 7 | 8 | **14:30-15:30 JCC 559 |
| 03/08 | Sun | Assignment | | 8 | PS08 |
| 03/09 | Mon | Lecture | 14 | 9 | 17.4: Constrained extrema problems |
| 03/11 | Wed | Meeting | Office hours 8 | 9 | **15:00-16:00 JCC 559 |
| 03/11 | Wed | Lecture | 15 | 9 | 6.1: Darboux sums; upper and lower integrals |
| 03/12 | Thu | Meeting | Office hours 8 | 9 | **14:30-15:30 JCC 559 |
| 03/14 | Sat | Tufts | | 9 | **No classes:** *Spring Break* |
| 03/15 | Sun | Assignment | | 9 | PS09 |
| 03/15 | Sun | Tufts | | 9 | **No classes:** *Spring Break* |
| 03/16 | Mon | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/17 | Tue | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/18 | Wed | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/19 | Thu | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/20 | Fri | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/21 | Sat | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/22 | Sun | Assignment | | 10 | |
| 03/22 | Sun | Tufts | | 10 | **No classes:** *Spring Break* |
| 03/23 | Mon | Lecture | 16 | 11 | midterm 2 |
| 03/25 | Wed | Meeting | Office hours 9 | 11 | **15:00-16:00 JCC 559 |
| 03/25 | Wed | Lecture | 17 | 11 | 6.2: Archimedes Riemann Theorem |
| 03/26 | Thu | Meeting | Office hours 9 | 11 | **14:30-15:30 JCC 559 |
| 03/29 | Sun | Assignment | | 11 | |
| 03/30 | Mon | Lecture | 18 | 12 | 6.3: additivity, monotonicity, linearity |
| 03/31 | Tue | Exam | | 12 | **midterm 2** |
| 04/01 | Wed | Meeting | Office hours 10 | 12 | **15:00-16:00 JCC 559 |
| 04/01 | Wed | Lecture | 19 | 12 | 6.4: continuity and integrabilty |
| 04/01 | Wed | Tufts | | 12 | **Academic Date:** *Last day to withdraw from a course with W* |
| 04/01 | Wed | Tufts | | 12 | **Academic Date:** *Last day to select Pass/Fail Option* |
| 04/02 | Thu | Meeting | Office hours 10 | 12 | **14:30-15:30 JCC 559 |
| 04/05 | Sun | Assignment | | 12 | |
| 04/06 | Mon | Lecture | 20 | 13 | 6.5: First fundamental theorem: integrating derivatives |
| 04/08 | Wed | Meeting | Office hours 11 | 13 | **15:00-16:00 JCC 559 |
| 04/08 | Wed | Lecture | 21 | 13 | 6.6: Second fundamental theorem: differentiating integrals |
| 04/09 | Thu | Meeting | Office hours 11 | 13 | **14:30-15:30 JCC 559 |
| 04/12 | Sun | Assignment | | 13 | |
| 04/13 | Mon | Lecture | 22 | 14 | Fourier Series 1 |
| 04/15 | Wed | Meeting | Office hours 12 | 14 | **15:00-16:00 JCC 559 |
| 04/15 | Wed | Lecture | 23 | 14 | Fourier Series 2 |
| 04/16 | Thu | Meeting | Office hours 12 | 14 | **14:30-15:30 JCC 559 |
| 04/19 | Sun | Assignment | | 14 | |
| 04/20 | Mon | Tufts | | 15 | **No classes:** *Patriots' Day* |
| 04/22 | Wed | Meeting | Office hours 13 | 15 | **15:00-16:00 JCC 559 |
| 04/22 | Wed | Lecture | 24 | 15 | Fourier Series 3 |
| 04/23 | Thu | Meeting | Office hours 13 | 15 | **14:30-15:30 JCC 559 |
| 04/26 | Sun | Assignment | | 15 | |
| 04/27 | Mon | Lecture | 25 | 16 | Fourier Series 4 |
| 04/28 | Tue | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 04/29 | Wed | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 04/30 | Thu | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 05/01 | Fri | Exam | | 16 | **final exam** |
| 05/01 | Fri | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 05/01 | Fri | Tufts | | 16 | **Academic Date:** *Final Exam Period* |
| 05/02 | Sat | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 05/02 | Sat | Tufts | | 16 | **Academic Date:** *Final Exam Period* |

| Date | DOW | Desc | Seq | Week | Details |
|---|---|---|---|---|---|
| 05/03 | Sun | Tufts | | 16 | **Academic Date:** *Reading Period* |
| 05/03 | Sun | Tufts | | 16 | **Academic Date:** *Final Exam Period* |
| 05/04 | Mon | Tufts | | 17 | **Academic Date:** *Reading Period* |
| 05/04 | Mon | Tufts | | 17 | **Academic Date:** *Final Exam Period* |
| 05/05 | Tue | Tufts | | 17 | **Academic Date:** *Reading Period* |
| 05/05 | Tue | Tufts | | 17 | **Academic Date:** *Final Exam Period* |
| 05/06 | Wed | Tufts | | 17 | **Academic Date:** *Reading Period* |
| 05/06 | Wed | Tufts | | 17 | **Academic Date:** *Final Exam Period* |
| 05/07 | Thu | Tufts | | 17 | **Academic Date:** *Reading Period* |
| 05/07 | Thu | Tufts | | 17 | **Academic Date:** *Final Exam Period* |
| 05/08 | Fri | Tufts | | 17 | **Academic Date:** *Reading Period* |
| 05/08 | Fri | Tufts | | 17 | **Academic Date:** *Final Exam Period* |