

Math 33B: Differential Equations

- [Math 33B: General Course Outline & Catalog Description](#)

The course Math 33B has evolved over the years. At one time it was a course in infinite series, including power series solutions of differential equations. In the Fall of 1997 the infinite series course was renumbered as Math 31C, in hopes that students would take it earlier, but by the Fall of 1998 the course was back at the end of the calculus sequence with its original label Math 33B.

In 2004, the courses Math 33A and 33B were reorganized. The differential equations portion of Math 33A was moved to Math 33B, so that Math 33A is now a course in linear algebra and Math 33B is now a course in differential equations. Math 33B also includes (temporarily) some foundational material on infinite series. The topics currently treated in Math 33B are as follows:

Introduction to first order differential equations (about 4 classes),

- second order linear differential equations with constant coefficients (about 7 classes),
- sequences, series, and power series (about 4 classes),
- power series solutions of second order differential equations (about 2 classes),
- linear systems of differential equations (about 7 classes).

The material on differential equations is selected from Chapters 1, 2, 3, 5, and 7 of the Boyce-DiPrima textbook. Supplementary notes are used to cover the foundational material on sequences and series. Material on infinite series and power series was inserted in the syllabus of Math 31B beginning Fall, 2004. By Winter or Spring, 2006, students in Math 33B will be assumed to have covered this material in Math 31B. The four classes on sequences and series will be replaced by a one-class review, thus allowing for more coverage of differential equations.

Past enrollment statistics for Math 33B are given in the following table.

Recent Enrollment Statistics

Year	Fall	Winter	Spring
1993-1994	160 (2 sections)	223 (2 sections)	204 (2 sections)
1994-1995	248 (2 sections)	219 (2 sections)	189 (2 sections)
1995-1996	193 (2 sections)	208 (2 sections)	190 (2 sections)
1996-1997	204 (2 sections)	198 (2 sections)	207 (2 sections)
1997-1998	343 (3 sections)	371 (2 sections)	207 (1 section)
1998-1999	128 (2 sections)	144 (2 sections)	268 (2 sections)
1999-2000	239 (1 section)	256 (2 sections)	348 (2 sections)
2000-2001	323 (2 sections)	369 (3 sections)	290 (2 sections)
2001-2002	300 (2 sections)	300 (3 sections)	250 (3 sections)
2002-2003	263 (2 sections)	317 (2 sections)	237 (2 sections)
2003-2004	270 (2 sections)	298 (2 sections)	(2 sections)
2004-2005	(2 sections)	(2 sections)	(2 sections)