

This syllabus is **tentative**; elements such as scheduling of exams and coverage on each exam **may change**. All changes will be posted on the class web site.

Section numbers refer to *Advanced Engineering Mathematics* (2nd edition), by Michael, D. Greenberg.

Date	Sections	Topics
9/01–9/17	4.1–4.3, 4.5, 4.6	Power series solutions of ordinary differential equations
9/22–9/29	5.1–5.6	Laplace transforms and applications to ordinary differential equations
10/08	EXAM 1	All covered material from Chapters 4 and 5.
10/01–10/20	7.1–7.5	Systems of differential equations and the phase plane
10/22–10/27	9.6–9.10	Vector spaces of functions, inner products, and orthonormal bases
10/29–11/05	17.1–17.6, 18.1–18.3.1	Fourier series and applications to the diffusion equation on an interval
11/17	EXAM 2	All covered material from Chapters 7 and 9 Sections 17.1–17.6 and 18.1–18.3.1
11/10–11/24	17.7–17.8, 11.3, 18.1–18.3	Sturm-Liouville theory, applications to the diffusion equation on an interval
12/01–12/03	17.9, 17.10, 18.4	Fourier integrals and the Fourier transform, and the diffusion equation on infinite intervals
12/08–12/10	19.1, 19.2	The wave equation
12/16	FINAL EXAM	8:00 AM–11:00 AM