

Math 175 – Elementary Functional Analysis

András Vasy, Winter 2022: PRELIMINARY SYLLABUS, AS OF OCTOBER 16, 2021

January 4.	Introduction, inner product spaces (Ch 1)
January 6.	Inner product spaces (Ch 1), Normed spaces (Ch 2)
January 11.	Hilbert and Banach spaces (Ch 3)
January 13.	Hilbert and Banach spaces (Ch 3), Completions (Lecture notes)
January 18.	Completions (Lecture notes)
January 20.	Completions (Lecture notes), Orthogonal expansions (Ch 4)
January 25.	Orthogonal expansions (Ch 4), Classical Fourier series (Ch 5)
January 27.	Classical Fourier series (Ch 5)
February 1.	Dual spaces (Ch 6), Linear operators (Ch 7)
February 3.	Dual spaces (Ch 6)
February 8.	Linear operators (Ch 7)
February 10.	Midterm
February 15.	Linear operators (Ch 7)
February 17.	Compact operators (Ch 8)
February 22.	Compact operators (Ch 8)
February 24.	Compact operators (Ch 8)
March 1.	Sturm-Liouville systems (Ch 9, Lecture notes)
March 3.	Green's functions (Ch 10, Lecture notes)
March 8.	Green's functions (Ch 10, Lecture notes)
March 10.	Eigenfunction expansions (Ch 11, Lecture notes)

Note: The schedule is still subject to change.