Topics covered in Math 320

06/09: Natural numbers, integers, rationals; properties of rationals; ordered sets
08/09: LUB and GLB property; fields; ordered fields
11/09: Existence of the reals; consequences of LUB property
13/09: Consequences of LUB property; solution to $y^n = x$
15/09: Construction of the real numbers via Dedekind cuts
18/09: The complex numbers
20/09: Cauchy-Schwarz inequality, Euclidean space $\mathbb{R}^n$
22/09: Cardinality, countable and uncountable sets
25/09: $[0, 1]$ is uncountable, introduction to metric spaces
27/09: Metric spaces cont’d