MA651 Topology 1

Instructor: Nikolay Strigul
E-mails: nstrigul@stevens.edu, nstrigul@princeton.edu
Office Hours: by appointment
Lectures: Tuesdays 06:15-08:45 pm, Lieb Building 120

Homework: There will be weekly homework assignments due every two weeks.

Exams, Quizzes: There will be Midterm and Final Exams. Every class will start with a quiz covering definitions and theorems.

Grading:
Quizzes: 20 %
Homework assignments: 20 %
Midterm: 25 %
Final: 35 %

Course program:

Jan 17 – Elementary set theory.
Jan 24 – Ordinals and cardinals. Well-ordered sets.
Jan 31 – Topological spaces.
Feb 7 – Continuity. Homeomorphisms. Limits.
Feb 14 – Connectedness. Cartesian product topology.
Feb 21 – No lecture (Stevens is on Monday schedule) – takehome midterm exam
Feb 28 –   Separation Axioms.
Mar 7 – Real numbers and functions.
Mar 14 – Spring recess. No lecture.
Mar 21 – Compactness.
Mar 28 – Covering Axioms.
Apr 4 – Metric spaces 1
Apr 11 – Metric spaces 2
Apr 18 – Complete spaces.
Apr 25 – Topological vector spaces and linear mapping.
May 2 – Application of topology to dynamical systems.
May 9 – Final exam.