Simon Fraser University, Department of Mathematics
Mathematical Psychology
MATH 495/795, Spring Semester 2018

Instructor: Paul Tupper pft3@sfu.ca.
Grading Scheme: Homework: 40%, midterm 20%, final presentation and report 40%.
Time: Tuesdays 9:30am to 11:20am, Thursdays 10:30am to 11:20am.
Prerequisites: (Math 232 or 240) and Math 310. Or permission of the instructor.

Text: There will be a custom courseware pack available at the bookstore. The readings included in the course pack are listed on the next page.
Another book I will be consulting during the course is the Oxford Handbook of Computational and Mathematical Psychology, (on hold at library)

Assessment: There will be a few homework assignments and a late midterm exam. Students will have to give a half-hour presentation on a topic of their choice and submit an accompanying report.

What is Mathematical Psychology? Mathematical psychology consists of the use of mathematics in psychological modelling, and is a very broad topic. In this course we will mainly focus on mathematics in cognitive psychology, which is roughly the study of the information processing capabilities of the mind, and includes perception, learning, memory, and decision-making, among other topics. The readings for the course will consist of a collection of classic papers that have introduced new mathematical ideas into psychological research, or reviews of earlier work.

Readings
Each of these is a paper or a chapter from a book.

- George A. Miller. “The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information.” 1956.