Dynamics is a powerful tool that is used to analyze patterns of behavior change. Those patterns may characterize a particular process (e.g., cognitive development) or make predictions about future behavior (e.g., perceived pain). Dynamics is studied in physics and engineering classes, but it has great relevance to questions that we ask of ourselves in Psychology and other Social Sciences. We will spend the semester learning the basic concepts in dynamics and complex systems and understanding how they might be applied to Psychology.

Each week will be structured in a similar way: A new topic will be introduced each Wednesday, followed by informal Q & A on Friday and a formal class discussion each Monday. All course readings will be available on Blackboard. Everyone will be required to make a post on Blackboard about the reading by 5 p.m. each Sunday.

Course Evaluation:

- Class Participation .................. 30%
- Discussion Leader ................. 30%
- Blackboard Posting .............. 10%
- Final Project ....................... 30%

Cheating:
The highest standards of academic integrity are expected of all students. The failure of any student to meet these standards may result in suspension or expulsion from the university or other sanctions as specified in the University Student Academic Integrity Policy. Violations of academic integrity include, but are not limited to, cheating, fabrication, tampering, plagiarism, or facilitating such activities. The University Student Academic Integrity Policy is available from the Office of the Senior Vice President and Provost, your instructor, and from the deans of the individual colleges.
Calendar: The following is our schedule for the first part of this semester. This schedule is likely to change during the semester, but I will give you plenty of notice in class. **You are responsible for any changes that are made.**

Week 1: Introduction to Dynamics and Complexity  W Jan 20 – M Jan 25

Week 2: Complex structures: W Jan 27 – M Feb 1

Week 3: Complex behavior: W Feb 3 – M Feb 8

Week 4: Chaos & fractals: W Feb 10 – M Feb 15

Week 5: Fractal Cities and Market Crashes: W Feb 17 – M Feb 22

Week 6: Fractal Cognition: W Feb 24 – M March 1

Week 7: Properties of a dynamical system: W March 3 – M March 8

Week 8: Coordination Dynamics: W March 10 – M March 22

March 15 – 19 Spring Break

Week 9: Motor Development: W March 24 – M March 29

Week 10: W March 31 – M April 5 Project Preparation Week
Week 11: Motor-Respiratory Coordination: W April 7 – M April 12

Week 12: Dynamics of Pain Predictions: W April 14 – M April 19

Week 13: Team Work: W April 21 – M April 26

Week 14: Presentations: W April 28 – M May 3

Final Projects are due on Monday, May 3 by 5 p.m.