

## **CHAOTIC DYNAMICS: COURSE SYLLABUS**

**Course Number:** ENEE 789O (also co-listed as PHYS 715)

**Class:** Mon., Wed.: 2:00-3:15

**Place:** CSS 2428

**Instructor:** Edward Ott, AVW 3329, x5-5033; [eo4@umail.umd.edu](mailto:eo4@umail.umd.edu)

**Office hours:** Tuesday 4:00-5:00, and, at other times, by appointment.

### **Course Content:**

Theory and application of chaos in dynamical systems. Topics covered include strange attractors, Lyapunov exponents, bifurcations of chaotic systems, quasiperiodicity, chaos in Hamiltonian systems, and control and synchronism of chaos. Applications in physics, engineering and biology.

### **Textbook:**

'Chaos in Dynamical Systems' by E. Ott (Cambridge University Press, Second Edition, 2002).

### **EXAMS:**

Exam I, Oct. 20;

Exam II, Dec. 1;

Final Exam, Dec. 16, 1:30-3:30.

### **Approximate grading scheme:**

Home Work: 25%

Exams I and II: 40%

Final: 35%