

INTRODUCTION TO PLASMA PHYSICS

Tue-Thu 11:00 -12:15, Chamberlin 2124

Instructor: Stanislav Boldyrev

Office: 3273, Phone: 262-2338; boldyrev@wisc.edu

Office Hours: Tue-Thu right after class, or call or email to set up an appointment.

Text: "Introduction to Plasma Physics" F. F. Chen

Grades: Homework (~bi-weekly)	25%
Exam I (<i>October 8, 2019</i>)	25%
Exam II (<i>November 12, 2019</i>)	25%
Exam III (<i>December 10, 2019</i>)	25%

Course Outline

- Plasma Parameters. Definition of Plasma.
- Single Particle Motion.
- Plasmas as Fluids. Magnetohydrodynamics.
- Waves in Plasmas.
- Irreversible Processes. Diffusion and Resistivity.
- Equilibrium and Stability.
- Elements of Kinetic Theory.
- Elements of Nonlinear Theory.