# AST 381C/PHY 394U/GEO 391 Syllabus
# Fall 2015

**Course Title:** "Astrophysical Gravitational Dynamics"

**Course Number:**
AST 381C (Unique No. 46810)
PHY 394U (Unique No. 55840)
GEO 391 (Unique No. 27190)

**Course Description:** Orbital, collective, and tidal effects of astronomical objects, such as stars, galaxies, planets and the interstellar medium, under the influence of a gravitational field. Topics will include stellar and galactic dynamics, elements of cosmological structure formation, and a very brief introduction to general relativity.

**Hours:** Tu, Th 12:30 - 2:00 p.m.

**Location:** RLM 15.216B

**Textbooks:** Binney, J. & Tremaine, S. *Galactic Dynamics: (2nd Edition)* (Princeton University Press) ISBN: 9780691130279

**Exams:** None

**Homework:** (1) Problem sets will be assigned.
(2) One end-of-semester student lecture on a topic selected in consultation with the professor, with lecture notes handed in.

**Grading:** Course grade will be based upon the problem sets and student talk/lecture notes.

**Instructor:**
Professor Paul R. Shapiro
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Office Hours: after class or by appointment

**Prerequisites:** Suitable for all beginning or advanced graduate students in astronomy or physics.