

Syllabus

PTYS 195A – Spring 2005

Freshman Colloquium: New Views of the Solar System

Wednesdays 11:00-11:50 a.m. – Kuiper Space Sciences Building Room 312

Instructor:

Prof. Renu Malhotra

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Office hours: after class or by appointment

Administrative assistant: Donita Vanture (Room KSS-423, tel:621-6939)

Course description

This course will broadly sample some recent exciting discoveries in planetary science, including hundreds of previously unknown planetary bodies in our solar system and dozens of planetary bodies orbiting sun-like stars in our galactic neighborhood. We will discuss the revisions that these discoveries are provoking in current scientific thinking on “our place in the cosmos”. The course will be non-mathematical, and suitable for freshmen (of any major) curious about this subject. This course is not a pre-requisite for any other course.

Class Format

This will be a relatively informal, discussion-style course. The course material will consist primarily of selected readings from the book, “The New Solar System”, fourth edition (1999), eds. J. Kelly Beatty, et al., Cambridge University Press, and occasional supplementary materials provided by the instructor. Participants will be required to read the materials prior to class meetings. Tentatively, I will plan to spend two weeks on a selected topic. The first week, I will give a short 30 min lecture to set the stage for the topic; this will be followed by a 20 min discussion during which participants will formulate specific questions for further study. The second week, one or two students will lead the discussion on the topic, centered around the previously formulated questions. This schedule may evolve depending upon student and instructor interest.

An essential goal of this format is to have substantial interaction with the professor by encouraging students to speak and to exchange information and ideas on scientific subjects, and to practice critical thinking. Expect to spend 1-3 hours outside class in reading and assessing the topics of discussion each week. Students who do not keep up to date with the reading will be strongly encouraged to drop the course.

Grades

Grades will be awarded based on **class participation and leadership in discussions**. Each member of the class will lead discussion of one or two topics and will be expected to participate in the discussions of all other topics.

“Homework” in the form of a list of essential terminology related to the current topic will be due as assigned. I will ask to see this work, and will check it off, but will not collect or grade it. The principle purpose of this “homework” is to prepare for the assigned reading and class discussion. There will be no reports and no final exams.