

Astronomy 104

Our Exploration of the Solar System

Spring 2004
MW 9:55 3425 Sterling
(Lecture 1)

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TEACHING ASSISTANT: Marta Sewilo 4524 Sterling, 265-2554, sewilo@astro.wisc.edu

INTRODUCTION: If I were to say “your environment”, likely you would think of trees and air and water. My overarching goal for this course is to expand the boundaries of your environment to the edge of the Solar System. Importantly, my goal is not only for you to *understand* the contents and evolution of the Solar System. In addition I want you to leave the course *feeling a part of* the Solar System, a place in which you can locate yourself, a place across which you can travel, a place that has influenced your cultural history, a place whose energy affects your everyday life, and a place that permitted life on earth, fostered its evolution to you, and ultimately will be life’s demise.

Along the way you will be introduced to the basic physics that is the essence of your environment, on and beyond the Earth. Light, gravity, even quantum mechanics and general relativity, will be presented in a "user-friendly" fashion that will expand your perceptions of the world around you.

PREREQUISITES: There are no course prerequisites. A basic familiarity with elementary algebra, geometry, and scientific notation are assumed. If these present any difficulties for you, both the professor and TA are ready and willing to help.

TEXTS: *The Solar System: The Cosmic Perspective* (Bennett, Donahue, Schneider & Voit, 2004, 3rd edition), available at the University Book Store
Discovering the Cosmos, Bless, Chaps. 3—8, available at Bob’s Copy Shop at University Square

WEBSITE: <http://www.astro.wisc.edu/astro104>

DISCUSSION SECTION: The primary purpose of the discussion section is to give students opportunities to engage with both the Solar System and their teachers. Discussion sections will typically begin with questions-and-answers in order to resolve confusions with lecture material and homework problems. Thereafter, each discussion section will be a time for students to collaboratively attack a new problem, to experience lecture material from a different perspective, and occasionally to see new material. Students will be responsible for the content of discussion sections.

You should be registered in one of the following discussion sections:

301	11:00	Tuesday	3331 Sterling	Mathieu
302	2:25	Tuesday	6515 Sterling	Sewilo
303	11:00	Thursday	6515 Sterling	Sewilo
304	2 :25	Thursday	6515 Sterling	Sewilo
305	3:30	Wednesday	6515 Sterling	Sewilo
306	1:20	Friday	6515 Sterling	Sewilo

Discussion Sections will not meet during week of January 18.

Note: Astronomy 104 requires naked eye observations of the night sky (phases of the moon, motions of the planets, etc.) on your own schedule. We also will have classes in the planetarium and (optional) open house nights at Washburn Observatory.

OFFICE HOURS: We strive to be as accessible to you as possible. We will stay after lecture until all questions are answered. In addition, office hours are a remarkably underutilized resource! You are warmly invited to stop by, whether to resolve a homework problem, to explore a thought, to find out what an astronomer does, or whatever.

Mathieu M 3:30-5:30, T 1:30-3:30, W 11:00-12:00
By appointment
Just stop by anytime (but please, not before lecture)

Sewilo To be announced

STUDY GROUPS: You are urged to join a study group within which you may work on homework together, study for exams, etc. Evaluate the effectiveness of your group frequently; if its not working for you, join another.

Note: even though you have worked together, you must write up any assignments independently. Please see the course policies on collaboration below.

ELECTRONIC MAIL: Use e-mail to facilitate your study groups, to obtain fast responses to questions from professor or TA (we are logged in most of the time!), to make suggestions or requests, etc.

FEEDBACK: While end-of-the-year course evaluations are invaluable, they won't change your experience. This is the first time we have taught this course and we are trying numerous new approaches. Don't hesitate to let either Bob Mathieu or Marta Sewilo know how the course can be improved. We will listen!

DEGREE REQUIREMENTS: 3 credits, applied to the Physical Science Breadth Requirement.

Astronomy 114 "Hands on the Universe" is a computer laboratory course designed (but not required) to be taken with Astronomy 104, giving students the opportunity to make their own astronomical observations with the largest telescopes in the world. Taking both Astronomy 104 and 114 satisfies the Business School laboratory requirement and the L&S Quantitative Reasoning - B requirement. Note that these requirements are satisfied even if you take Astronomy 114 in a later semester.