COURSE DESCRIPTION

Overview

The course will cover the region extending from interplanetary space to major portions of the atmosphere. It will include cosmic rays, the heliosphere, sun, solar wind, magnetosphere, radiation belts, plasmasphere, ionosphere, thermosphere, mesosphere, stratosphere, and some aspects of geomagnetism. While this extended space environment has been neatly compartmentalized in this description, these regions do not exist in isolation. The interconnections among them will be discussed. In addition the course will look at some observation techniques and some of the models describing parts of this extended region.

Methodology

The approach will be a combination of lectures, extensive readings, and the use of models. The readings will progress from overviews to CEDAR and GEM lectures, to review papers, and then to research articles. The intent is for this background material to lead to extensive class discussions. These discussions may, in turn, lead to questions to be investigated for the next class or models to be run. Each student is expected to participate in the class discussions and to prepare a major research paper that will be shared with the class.

Topics for the research paper will be decided during the second week of class. To the extent possible, each topic should be related to something that the student is already interested in or currently working on.

As can be inferred from the above, there is no textbook for the course. However, several good books exist covering portions of the material. They are listed on BlackBoard. Also listed on BlackBoard are articles and related papers, websites, and models.

Grades

The grades will be based on class participation and discussion (one third) and on the research paper (two thirds). However, if class participation is low, there will be a significant take-home final exam.
UNIVERSITY ANNOUNCEMENTS

Students with Disabilities

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 435-797-2444 voice, 435-797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

Schedule

First class: Tuesday, 12 January
No classes: Tuesday, 16 February (Monday Schedule)
          Tuesday, 16 March (Spring Break)
          Thursday, 18 March (Spring Break)
Paper presentations: Tuesday, 27 April
                   Thursday, 29 April
Last class: Thursday, 29 April
Papers due: Thursday, 6 May