

New Courses in Earth and Space Science at Howard University

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Howard University is developing, and currently offering, a new series of courses in Earth & Space Science. These were initially sponsored by a NASA Aerospace Research and Development Program, by way of the DC Space Grant Consortium, and are now completing their second full year of offering.

The reason for developing new curricula in these fields, is that Earth science and space science have much more in common than was true in the past. This is due to (1) the increasing use of space-based remote sensing for studies of Earth; and (2) the increasing commonality between Earth science and planetary science (the emerging sub-field of astrobiology has further increased the commonality between the two fields).

In addition, the technologies for Earth observations from space have much in common with those for similar observations of other planets and their satellites, asteroids, and comets.

Recently, NASA has integrated its Office of Space Science and its Office of Earth Science into a single Office of Science, in recognition of these facts.

Our course participants are Howard University undergraduate students majoring in science or engineering, but also include DC Public Schools high school science teachers, whose tuitions and fees are covered by the DC Space Grant Consortium.

We have also included guest lecturers, from NASA Goddard Space Flight Center and other organizations, to give presentations in these classes.

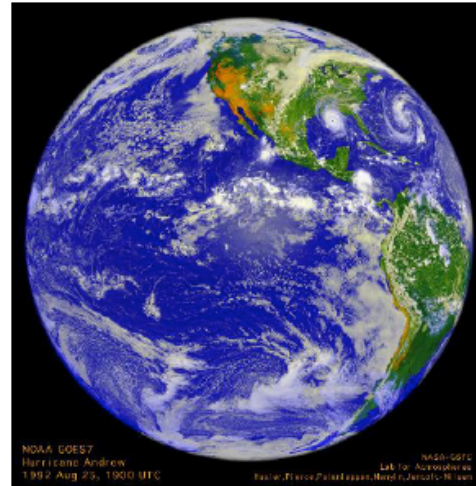
Intermediate-level courses are also being planned in the topic areas of Atmospheric Science and Space Weather, which will lead toward the currently-offered graduate-level courses in the existing Howard University Program in Atmospheric Science (HUPAS).



Dr. James Green, of the NASA Goddard Space Flight Center, giving a presentation on the topic of Space Weather to a class in Earth & Space Science at Howard University.



View of Polar Aurora from a Space Shuttle



View of Earth from a geosynchronous orbiting satellite, showing weather patterns and hurricane *Andrew*



Students taking notes at Dr. Green's lecture at Howard University



View of hurricane *Katrina*, from an orbiting satellite, which devastated New Orleans and other areas of Louisiana and Mississippi, in the summer of 2005

As the last year's hurricane season has made clear, these are topics of great practical importance to the general public! The topic of space weather, also, is becoming relevant to all, because of potential effects on radio, TV, and radar communications, and on astronauts and satellites in near-Earth space.

Earth System Science at Howard University

http://esse21.usra.edu/ESSE21/esse21_howard.html