Jackson State University has been an Affiliate Member of UCAR since 1995.

1. Program of Studies and Research

The Meteorology Program at Jackson State University is an option within the Department of Physics, Atmospheric Sciences, and Geoscience. Currently there are two tenured Associate Professors of Meteorology (Reddy and White) and a vacant tenure-track position which is in process of being filled. There are also a non-tenured instructor (Greene) and a research associate (Lu). These four faculty members currently cover all of the required meteorology courses. Some related courses are taught by faculty in the umbrella department. The department currently offers a B.S. degree in meteorology that meets the UCAR curriculum recommendations. In 2007 the curriculum was revised to meet a state mandated 124 credit-hour maximum and to strengthen instruction in synoptic and mesoscale analysis. The department is awaiting approval of a proposal to establish an M.S. degree program. Approval has been delayed because of financial constraints. Graduate study in the Environmental Sciences program is an option within the umbrella department. The program has approximately 20 majors and has had 25 graduates receive B.S. degree during the last five years. The facilities available to the program include laboratories for weather analysis, high performance computing and boundary layer meteorology. The program has responsibility for several mesonet stations and three portable weather stations at various sites in Mississippi.

2. Progress in the Atmospheric Sciences

For the past decade, the Meteorology Program has been a funded partner in the NOAA Center for Atmospheric Sciences (NCAS) under the leadership of Howard University. The primary objective of the NCAS is to prepare minority students to undertake graduate study in the atmospheric sciences, NCAS has also helped the meteorology program at Jackson State to become involved in collaborative research on air quality, landfalling tropical cyclones and surface fluxes. Outreach programs, such as an annual high school Weather Camp, training workshops, a pilot surface mesonet and publicly accessible blogs, have resulted from these collaborations as well. The faculty members account for 14 reviewed journal articles during the past 8 years. Given the size of the program and the teaching demands, this is rather remarkable. Furthermore, faculty, staff, and students in the meteorology program participate regularly in scientific conferences and workshops. Undergraduate students were recently able to gain experience with the use of Doppler-on-Wheels mobile radar through a partnership with the Center for Severe Weather Research. Meteorology program faculty members participate in service activities that further the cause of atmospheric science. For example, Dr. White is currently the President of the Central Mississippi chapter of the AMS, served as a member of the NWA Weather Analysis and Forecasting Committee, 2007-2009, and is member of the Metadata Ad Hoc Working Group for the Nationwide Network of
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Networks. Faculty members in the program are also active as reviewers for mainstream meteorological journals.

3. Participation in UCAR Activities

Jackson State University is an active participant in UCAR activities.

At least one representative attends the UCAR annual meeting each year and during the eight-year period just ended, Dr. White presented a seminar at NCAR on the Mississippi Mesonet. Undergraduate meteorology majors have participated in SOARS and the Undergraduate Leadership Workshop at UCAR. In 2009 the meteorology program received a UCAR equipment grant to upgrade student computing facilities, the program makes use of UCAR online resources such as COMET METED and RAP, and uses UCAR-developed software such as WRF, IDV, netCDF, and solo ii.

Recommendation

The Meteorology Program at Jackson State University has produced approximately 1 out of every 4 African Americans who hold bachelor degrees in meteorology in the United States. Several graduates of the program are now in highly visible positions on television with The Weather Channel, WLBT and WJTV, and many have gone successfully to highly regarded graduate programs. The Meteorology Program provides a supportive environment for the preparation of minority atmospheric scientists. The program embraces a strong commitment to student learning and professional preparation, with the goals of increasing the number of African American atmospheric scientists, increasing the number of African American graduate students in atmospheric science and expansion of research and outreach opportunities.

The UCAR Membership Committee concludes that Jackson State University continues to meet the criteria for membership as an Affiliate and recommends to the Members’ Representatives that membership be renewed as provided for in the bylaws.