Metropolitan State University of Denver

Metropolitan State College of Denver (MSU Denver), now the Metropolitan State University of Denver (MSU Denver), became a UCAR affiliate member in 2007 and, consistent with recent changes in UCAR governance, currently is a UCAR member. The meteorology program resides in the Department of Earth and Atmospheric Sciences, which offers undergraduate degrees in environmental science (B.S.), land use (B.A./B.S.), and meteorology (B.S.), along with various minors and certificates related to these majors. The meteorology program comprises three full-time faculty (two tenured; one tenure-track), whereas the Department of Earth and Atmospheric Sciences comprises 12 full-time faculty (eight tenured; four tenure-track). The meteorology faculty is assisted by one full-time lecturer, several adjunct faculty, one UNIX network administrator (40% of effort allocated to the meteorology program), and one laboratory coordinator (15% of effort allocated to the meteorology program).

The meteorology program comprises approximately 60 undergraduate majors, typically awards 6–12 B.S. degrees annually, and during the past five years has awarded 39 B.S. degrees. A small increase in the number of B.S. degrees awarded is anticipated during the next 3–5 years. The B.S. degree conforms to AMS and NWS recommendations for an undergraduate degree in meteorology, and a mathematics minor is required for the meteorology major. Meteorology students have their own student chapter of the AMS, where activities include organizing field trips, inviting guest speakers, and attending national conferences. Capstone research projects are required of meteorology majors, and in recent years a tradition has been established for students to present undergraduate research at professional conferences. During the past two years, approximately 20 upper-division students have presented research either at a regional or a national conference. In addition to these activities, a number of meteorology students currently are working as interns at NCAR on various projects. The meteorology program has one dedicated classroom for lecture and group activities and a computer laboratory equipped with real-time weather data and analysis software supported by Unidata. One of the meteorology faculty members recently obtained a Unidata grant to upgrade this laboratory through the acquisition of an EDEX server to execute the AWIPS II package.

Consistent with the undergraduate educational mission of MSU Denver, meteorology faculty teach 13–14 credit hours during the fall and spring semesters, with additional teaching during the summer, limiting their opportunities to conduct research. Nevertheless, with the institutional transition to university status, expectations are increasing for faculty to conduct research, pointing to the opportunity for the meteorology faculty to initiate research projects involving the participation of undergraduates. This change in institutional culture is apparent in the MSU Denver President’s letter of endorsement for UCAR membership renewal through the statement that the University supports the meteorology program in “pursuing scholarly work by our faculty, particularly efforts supporting meaningful undergraduate research projects,” and may be expected to translate into the production of scholarly work in the form of peer-reviewed journal articles by the meteorology faculty during the next five years. Although opportunities for the meteorology faculty to conduct research have been limited, the
“progress in the atmospheric sciences” criterion for UCAR membership renewal has been addressed by partnering with UCAR on a grant concerned with equity and diversity in STEM education and teacher professional development; participating in the development of a MOOC entitled “Making Sense of Climate Science Denial”; and contributing to the broader atmospheric science community through memberships on the AMS Board on Higher Education and the AMS Committee on Weather Analysis and Forecasting, and chairmanship of the National Weather Association Weather Analysis and Forecasting Committee.

MSU Denver meteorology faculty are engaged in UCAR activities in a variety of capacities, and a high level of interaction between the meteorology faculty and UCAR/NCAR scientists is cited in the MSU Denver President’s letter of endorsement for membership renewal. Examples of engagement in UCAR activities and interaction with UCAR/NCAR scientists include attendance of the UCAR Member’s Meeting, membership on the Unidata Users Committee, participation in COMET workshops, contributions to art exhibits sponsored and presented by UCAR, and participation in UCAR’s precollege program. Benefiting from their proximity to Boulder, MSU Denver meteorology faculty frequently attend lectures, tours, and special events at UCAR/NCAR and also host frequent visits by UCAR/NCAR scientists to their campus.

The UCAR Membership Committee concludes that the membership criteria are fulfilled, and recommends to the Members’ Representatives that the membership of the Metropolitan State University of Denver be continued as provided by the bylaws.