

THE UNIVERSITY OF NORTH CAROLINA ASHEVILLE

FACULTY SENATE

Senate Document Number SD6224S

Date of Senate Approval 05/02/2024

Statement of Faculty Senate Action:

**APC Document 51 (ATMS): Update the narrative for the Atmospheric Sciences department;
Change requirements for the ATMS Broadcast Meteorology concentration;
Update the computer programming requirement for all concentrations**

Effective Date: Fall 2024

1. Delete: On page 93, the narrative for the Atmospheric Sciences department:

The Atmospheric Sciences Department offers a B.S. degree with three concentrations that prepare students for employment upon graduation or for further studies at the graduate level. The Broadcast Meteorology concentration prepares students for a career of communicating weather forecasts to the public using a variety of media resources, in addition to learning the basics of weather forecasting and analysis. Both the Climatology and Weather Forecasting concentrations fulfill federal Civil Service requirements for employment as a meteorologist. A Climatology concentration provides a strong preparation for graduate work with a specialization in climatology and mathematics. In the Weather Forecasting concentration, students learn the basics of weather analysis and forecasting and how to communicate meteorological information to the public. Students are encouraged to focus their career objectives through enrollment in cooperative education and internship courses.

As one of the nation's largest weather data centers, Asheville is home to NOAA's National Centers for Environmental Information (NCEI) and UNC Asheville's National Environmental Modeling and Analysis Center (NEMAC), offering atmospheric science majors unique internship opportunities and career connections.

Add: On page 93, in place of deleted entry:

The Department of Atmospheric Sciences offers a Bachelor of Science degree with three concentrations that prepare students for employment upon graduation or for further studies at the graduate level. The Broadcast Meteorology concentration fulfills requirements for the American Meteorological Society's Certified Broadcast Meteorologist program and prepares students for a career communicating weather and climate information to the public. Both the Climatology and Weather Forecasting concentrations fulfill federal Civil Service requirements for employment as a meteorologist. The Climatology concentration provides strong preparation for graduate work with specialization in climatology and mathematics. The Weather Forecasting concentration focuses on weather analysis and forecasting techniques. Students are encouraged to focus their career objectives through enrollment in cooperative education and internship courses.

As one of the nation's largest weather data centers, Asheville is home to NOAA's National Centers for Environmental Information (NCEI) and UNC Asheville's National

Environmental Modeling and Analysis Center (NEMAC), offering atmospheric sciences majors unique internship opportunities and career connections.

2. Delete: On page 93, under **Concentration in Broadcast Meteorology:**

- I. Required courses in the major—37 hours, including: ATMS 103, 203, 204, 230, 305, 310, 320, 328, 350, 410, 411, 455, 464. CSCI 183 may be substituted for ATMS 230.
- II. Required courses outside the major—34-38 hours distributed as follows: CHEM 132; DRAM 213; MATH 191 (requires completion of MATH 167 or placement), 192, 291; MCOM 201; PHYS 221, 222; VMP 205. Recommended electives: Broadcast Journalism courses.

Add: On page 93, in place of deleted entry:

- I. Required courses in the major—49 hours, including: ATMS 103, 203, 204, 223, 235, 305, 310, 316, 328, 350, 405, 410, 411, 455, 464; 3 hours chosen from ATMS 315 or 320; and 3 hours chosen from ATMS 381–383, 490, or 499. CSCI 183 or ATMS 230 may be substituted for ATMS 235.
- II. Required courses outside the major—23-27 hours distributed as follows: DRAM 213; MATH 191 (requires completion of MATH 167 or placement), 192, 291; MCOM 201; PHYS 221. Recommended electives: ATMS 326, 345, 355, 420, PHYS 222, VMP 205, and Broadcast Journalism courses.

Impact: A curriculum that adheres to the American Meteorological Society’s Certified Broadcast Meteorologist program will likely see increased enrollment within the atmospheric sciences major and graduates will be better prepared for employment upon completion of the degree. This change has no impact on funding or staffing needs. We acknowledge that this proposal increases the number of required credit hours by one credit hour over the current version of the curriculum.

Rationale: The American Meteorological Society (AMS) offers a professional certification specifically for broadcast meteorologists within their Certified Broadcast Meteorologist (CBM) program. A CBM certification is the gold standard for broadcast meteorologists and “was established to raise the professional standard in broadcast meteorology and encourage a broader range of scientific understanding, especially with respect to environmental issues.”¹ These new eligibility requirements require specific coursework from an accredited university to qualify for the CBM certification. The current course requirements for the broadcast meteorology concentration fall short of the standards for this certification. The changes to the curriculum detailed here bring our Broadcast Meteorology concentration into compliance with this important professional certification.

Eligibility for the CBM certification program alone requires 66 credit hours of coursework and associated prerequisites. The outside courses DRAM 213 (*Public Speaking/Presentations*) and MCOM 201 (*Basic Journalism*), both of which are part of the current curriculum, teach critical skills for a career in broadcast meteorology. While these courses are not specifically required for CBM eligibility, the faculty in the Department of Atmospheric Sciences agree that it remains important to keep these courses in the revised curriculum in order for our graduates to build a strong foundation for success. We also agree that ATMS 411 (*Synoptic Meteorology II*) completes the two-course synoptic meteorology sequence and covers topics that should not be left out of any accredited atmospheric sciences degree program. While not specifically required for CBM eligibility, we have therefore chosen to keep ATMS 411 in the list of required courses. Combined with the current PHYS 222 (*Physics II*) and VMP 205 (*Basic Video Production*) courses that are part of the current

¹ American Meteorological Society (AMS), cited 2023: Certified Broadcast Meteorologist Program (CBM). [Available from <https://www.ametsoc.org/index.cfm/ams/education-careers/careers/ams-professional-certification-programs/certified-broadcast-meteorologist-program-cbm/>.]

curriculum, this brings the potential credit hours for the major up to 80, which is too high. In conversations with professional broadcast meteorologists, we have determined that knowledge of video production techniques, while useful, is not a requirement for employment and can be learned on the job. We have therefore opted to remove VMP 205 (*Basic Video Production*) from the list of required courses in the current curriculum and listed it instead as a recommendation. In addition, PHYS 222 is not required for CBM eligibility. By removing the PHYS 222 prerequisite for ATMS 315 (*Radar and Satellite Meteorology*) and instead recommending PHYS 222 for ATMS 315 as we currently do for ATMS 320 (*Meteorological Instruments*), the total required number of credit hours further reduces to 72. Both VMP 205 and PHYS 222 are the most logical courses to cut from the current curriculum requirements to keep a similar number of required credit hours while meeting CBM eligibility requirements.

All faculty in the Department of Atmospheric Sciences agree with this proposal.

3a. Delete: On page 93, under “Concentration in Climatology”:

- I. Required courses in the major—43 hours, including: ATMS 103, 203, 204, 223, 230, 305, 310, 320, 405, 410, 411, 420, 455, 464, and 3 additional hours of ATMS at the 300-400 level. CSCI 183 may be substituted for ATMS 230.

Add: On page 93, in place of deleted entry:

- I. Required courses in the major—43 hours, including: ATMS 103, 203, 204, 223, 235, 305, 310, 320, 405, 410, 411, 420, 455, 464, and 3 additional hours of ATMS at the 300-400 level. CSCI 183 or ATMS 230 may be substituted for ATMS 235.

3b. Delete: On page 93, under “Concentration in Weather Forecasting”:

- I. Required courses in the major—43–44 hours, including: ATMS 103, 203, 204, 230, 305, 310, 320, 350, 410, 411, 455, 464; 6–7 hours chosen from ATMS 223, 355, 405, or ENVR 338, and 3 additional hours of ATMS at the 300-400 level. CSCI 183 may be substituted for ATMS 235.

Add: On page 93, in place of deleted entry:

- I. Required courses in the major—43–44 hours, including: ATMS 103, 203, 204, 235, 305, 310, 320, 350, 410, 411, 455, 464; 6–7 hours chosen from ATMS 223, 355, 405, or ENVR 338, and 3 additional hours of ATMS at the 300-400 level. CSCI 183 or ATMS 230 may be substituted for ATMS 235.

Impact: ATMS 235 is being added as an option to ATMS 230 and CSCI 183, so the course needs to be added to the listing of requirements

Rationale: These are editorial changes to update the major requirements.