THE UNIVERSITY OF NORTH CAROLINA ASHEVILLE
FACULTY SENATE

Senate Document Number 1120S
Date of Senate Approval 02/06/20

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Statement of Faculty Senate Action:

APC Document 11 (ATMS): **Delete ATMS 205, 241, 251, and 261, replacing with ATMS 203 and 204**

Effective Date: Fall 2020

1. Delete: On page 84, the entries for **ATMS 205, 241, 251, and 261:**

205 Weather Analysis (1)
Basic plotting of the various weather codes, fundamentals of map analysis, basic techniques of weather forecasting. Prerequisite: ATMS 103 or 113 or permission of instructor. Fall.

241 Geography in Meteorology (1)
An introductory lab course to study maps, the physical earth, physical geography and climate. Corequisite: ATMS 103 or 113. Spring.

251 Mathematics in Meteorology (1)
An introductory lab course to study fundamental meteorological equations and applications of mathematics in meteorology. Prerequisites: ATMS 103 or 113; MATH 191. Spring.

261 Computer Applications in Meteorology (1)
An introductory lab course to familiarize students with computer applications and meteorological software packages, such as McIDAS and GEMPAK. Prerequisites: ATMS 103 or 113; MATH 191. Spring.

Add: On page 84, in place of deleted entries, **ATMS 203** and **ATMS 204:**

203 Foundations of Atmospheric Science I (2)
Basic meteorological, mathematical, and computational skills required for advanced study in atmospheric science. Topics include geographical ideas, map analysis, weather codes, navigating the UNIX environment, and meteorological display and analysis software. Prerequisite: ATMS 103 or 113. Fall.

204 Foundations of Atmospheric Science II (2)
Intermediate meteorological, computational, and mathematical skills required for advanced study in atmospheric science. Topics include an introduction to computer programming, fundamental meteorological equations and their applications, and basics of numerical modeling. Prerequisites: ATMS 203; MATH 191. Spring.

Impact Statement: The proposed changes will not affect the number of credit hours in the ATMS major or minor. The proposed changes are not anticipated to affect ATMS faculty resources nor student time to graduation.

Currently enrolled students in the department have been informed that they need to take ATMS 205, 241, 251, and 261 this academic year, as this will be the last time they are offered. In the event a student still needs to take one of the four courses after it's been deleted, it will be offered as an independent study during the transition.

The anticipated class size for both courses is 8-20 students. The courses will be a mixture of lecture and lab activities and will meet for 2 hours, 30 minutes each week. All full-time faculty in ATMS will be prepared to teach each of the courses. The courses will be offered every year. The addition of these courses will not affect the ability of ATMS to regularly offer LAC courses, including one or two sections of LA 178 each year.

Rationale: The proposed new courses essentially consolidate the four 1-credit hour labs into a more efficient and coherent delivery of the curriculum. They provide a clear path for beginning ATMS majors to make progress during their first two years of study. Previously, students would delay taking one or more of the 1-credit hour labs until their junior or senior years, violating the spirit and purpose of the courses. Now, students will not be able to progress in the major until they complete the second-year courses.

The Student Learning Outcomes (SLOs) for the proposed courses closely follow the SLOs for the lab courses they are replacing. They are:

1) Acquire the knowledge and skills to accurately and efficiently represent meteorological data on a map through manual analysis,

2) become proficient with modern meteorological software and visualization techniques such that effective data visualizations can be produced and interpreted correctly,

3) develop connections between theoretical mathematical ideas to concrete meteorological phenomena, and

4) begin to develop scientific writing and presentation skills.