Department of Earth Sciences
Plan for Writing Across the Curriculum
Meteorology BS and BA

I. Goals: At the completion of degree requirements in meteorology, a graduate will be able to:

1. understand the vocabulary of meteorology and use that vocabulary appropriately;

2. take accurate and sufficient laboratory notes on observations of experiments;

3. properly write a laboratory report that includes an introduction, an experimental procedures section, a results section and a final conclusions section that is based on experiments actually performed in the field or in the laboratory;

4. document sources of information appropriately as well as know how to find sources both electronically and through indices;

5. write a secondary research paper (paper based on library research) that includes an abstract and a properly presented list of references;

6. present data in graphical form (tables, graphs, charts, diagrams) and write a clear and concise explanation of these data;

7. write a proposal to request funding for research.

II. Objectives: All Meteorology majors will write frequently in their course work and will receive constructive criticism of their writing. Note that all of the following courses are required for the BS in meteorology and all but seminar are required for the BA (though most BA students also take the seminar). If a BA student does not take the seminar in meteorology, they must take an approved writing course outside the major.

A. Behavior
Each student will engage in a variety of writing experiences that include, but are not limited to, writing brief essays that address specific questions related to laboratory experiments, taking experimental observation notes, writing reports based on experiments or research they have conducted and writing detailed papers and a proposal.

B. Conditions
Students will be provided with examples of the kinds of writing expected of them and/or specific instructions for each kind of writing assignments.

C. Criteria
Each student must take at least five courses that have a substantive writing component. Two courses are introductory in nature, three are writing to learn and one is advanced writing.

1. Introductory Writing Courses: The introductory course for science majors in meteorology (Met 210) requires written lab material which involves well thought out answers to meteorological questions. In addition, students are graded on the proper use of English in short essays on exams. The introductory course in chemistry (Che 111) currently addresses critical thinking skills in lecture and students are required to hand in weekly laboratory reports which introduce and train students in those types of writing listed in Goals 1, 2, & 6 above.

2. Courses Emphasizing Writing to Learn: Two of these courses in the major require students to write lab reports which make up the major part of the grade plus one of them requires a paper. The third course requires writing a proposal and designing, doing and writing about an experiment.

3. Advanced Level Writing Course: This course is a capstone experience for meteorology students. Most of the grade is based on a major secondary research paper. The paper is handed in, then criticized by the instructor and suggestions are made for improvement and handed back to the student to be redone.

III. Courses: The following courses are all required for a BS in meteorology and all but the seminar course is required for the BA. The BA student may either take the seminar course or a course with a major writing component from another discipline under advisement.

Introductory Writing Courses:

Che 111 - General Chemistry - requires weekly lab reports

Met 210 - Meteorology for Science Majors - requires writing well thought out answers to meteorological questions posed in lab plus short essays on exams in the lecture. For the few students who take Met 100 plus Met 210 lab, there is sufficient writing in the lab to count.

Courses Emphasizing Writing to Learn:

Met 302 - Synoptic Meteorology II - requires writing forecast discussions, lab reports and a major term project.

Met 350 (lecture) - Meteorological Experimentation - requires writing a proposal to request funding for an experiment including developing a budget and designing, performing and writing about an experiment.

Met 350 (lab) - Meteorological Experimentation - requires at least 10 formal lab reports (including introduction, procedure, results and conclusions plus organizing the results in a table) plus a group generated lab report.

Advanced Level Writing Course:

Met 497 - Meteorology Seminar - requires researching a topic in the library, creating an annotated bibliography and a proper list of references, developing an outline, and writing a major paper which is critiqued by the instructor and handed back for corrections.