

Teaching Undergraduates Scientific Writing: VU Perspective

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Scientific Writing in Meteorology



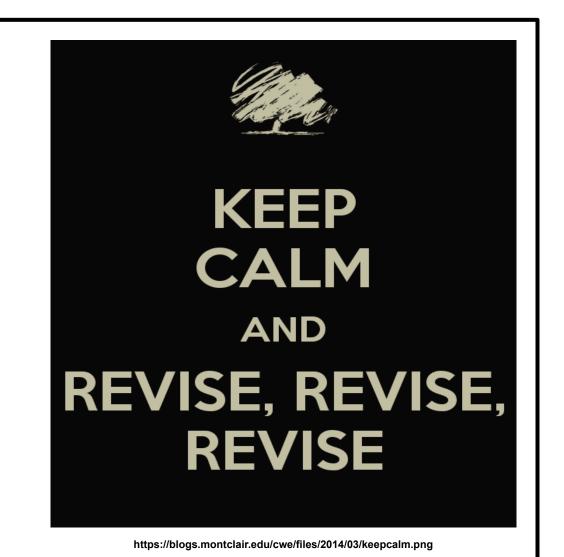
Freshman Year

- Reading Journal Articles
- Bjerknes and Solberg (1922); Mass (1991); Semple (2003)
- Write about the evolution of a synoptic-scale system (i.e., midlatitude cyclone)
 - Make maps via GEMPAK
 - Reference maps to describe evolution of event
 - 5-6 pages

MAPS + WIRTING = METEOROLOGY

Sophomore Year

- Meteorological Observations and Analysis
- Read area forecast discussions
- Climatology
 - Read journal articles
 - Write journal article reviews
- MET Electives (Sophomore, Junior, and Senior)
- Read journal articles
- Write group projects



Junior Year

- Thermodynamic Meteorology
- Read thermodynamic-based journal article
- Write review of journal article
- Dynamic Meteorology II
 - Read dynamic-based journal articles
- Write literature review of dynamic-based topic (10 pages)
- Scientific Writing in Meteorology (1 cr) NEW! (See Below)

Senior Year

- Synoptic Meteorology (Writing Intensive Course)
- Written weekly area forecast discussion (2/wk)
- AFD Portfolio
- Written Group Synoptic Case Study (10-15 pages)
- Draft/Revisions
- Final version
- Mesoscale Meteorology
- Read journal articles
- Write group case study
- Optional written in-depth case study (in lieu of final exam)

WILLIAM STRUNKJR. E.B.WHITE "...still a little book, small enough and important enough to carry in your pocket, as I carry mine." — Charles Osgood ELEMENTS STYLE FOURTH EDITION

NEW!

Goals

- Explicitly introduce students to appropriate scientific writing standards in meteorology
- 2. Analyze scientific arguments and writing
- 3. Practice good scientific writing, reviewing, and revising habits

References

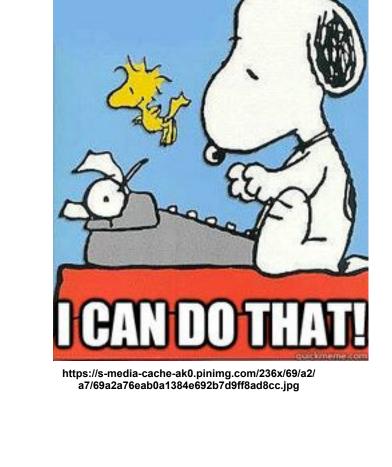
Bjerknes, J. and H. Solberg, 1922: Life cycle of cyclones and the polar front theory of atmospheric circulation. *Geofys. Publ.*, **3**, 3-18.

Mass, C., 1991: Synoptic frontal analysis: Time for a reassessment. *Bull. Amer. Meteor. Soc.*, **72**, 348-363

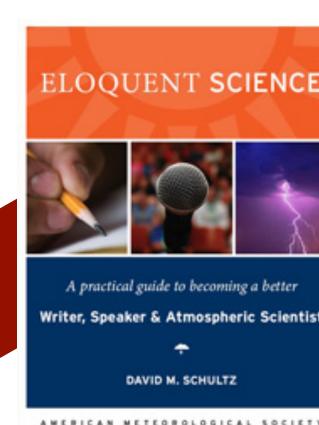
Semple, A. T., 2003: A review and unification of conceptual models of cyclogenesis. *Met. Apps*, **10**, 39-59. doi: 10.1017/S135048270300505X

Weekly Topics

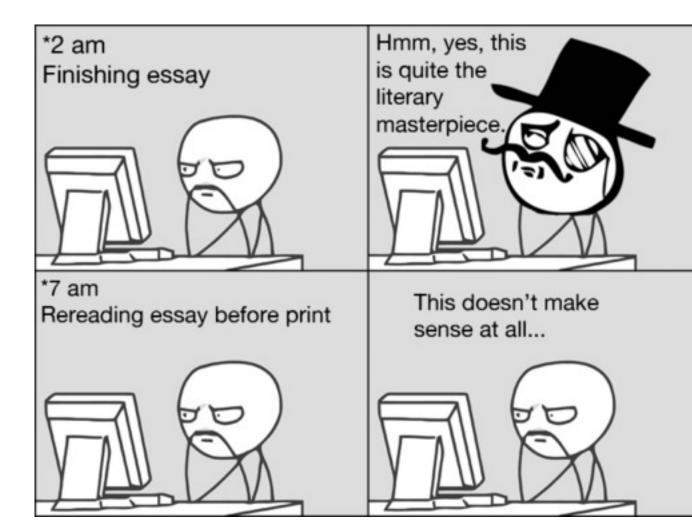
- What is scientific writing? Where to begin?
- Argumentative Writing
- Structure of Scientific Writing
- Brainstorming, Outlining, and Drafting
- Constructing Effective Paragraphs
 Constructing Effective Sentences
- Effective Words and Phrases
- Editing/Revising
- Citations and References
- Figures and Tables
- Abstracts and Titles
- Journal Reading Club



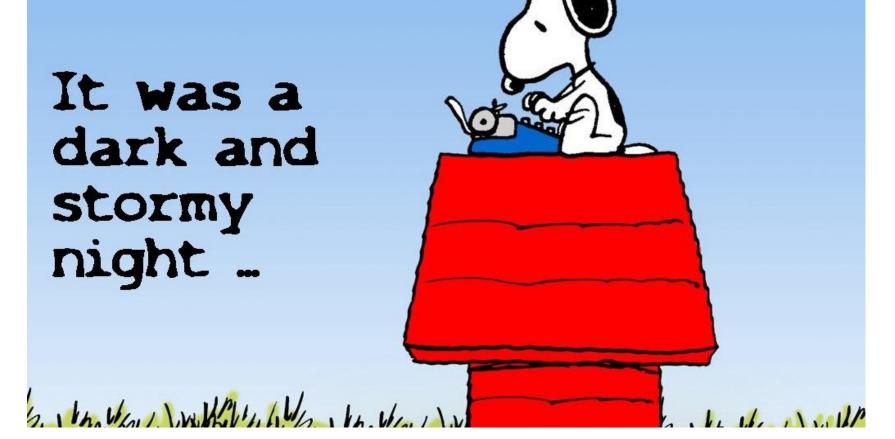
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