

Journalism & Electronic Media 450
WRITING ABOUT SCIENCE AND MEDICINE
NOTES TO STUDENTS

COURSE DESCRIPTION IN CATALOG

Writing workshop to analyze examples of successful science writing and write a series of articles for the general public based on scientific journals, news conferences, technical meetings, and interviews.

COURSE OBJECTIVES

This writing workshop is for students who wish to explore communicating scientific, technological, and medical information to the general public. At the conclusion of this course, students should be able to conduct background research on scientific topics and write:

- Stories for general audiences based on information gleaned from scientific journals, news conferences, technical meetings, and interviews with scientists.
- Query letters to popular science and general interest magazines and newspapers.
- Science feature stories for popular science and general interest magazines, newspapers, and websites.

Because this course is designed as a writing workshop, the schedule and assignments may be modified to fit the needs and interests of the students who enroll.

REQUIRED READING

Articles are available through Hodges Library on-line reserve or as handouts. Whenever reading is assigned, you must bring a copy of the article to class so that we can refer to it in our discussion.

CLASS MEETINGS

Tuesdays and Thursdays from 3:40 to 4:55 p.m. in 309 Communications Building

Students are also expected to attend the Hill Lecture and Hill Lecture master class on a date and times to be scheduled.

There may be one to three two field trips depending on student availability. Participation is recommended but not required because field trips must extend beyond the regular class period.

ATTENDANCE

You are now a working writer. Be at work (in class) unless you have a medical reason to be absent. Please notify me in advance if you cannot be at work (in class). Each unexcused absence deducts from your grade for Participation. Excessive absences reduce the remainder of your grade.

HANDICAPS OR OTHER PROBLEMS

Please notify the Office of Disability Services (974-6087) about handicaps or other problems that may affect your work so that they can help you and me find accommodations.

INTEGRITY

Compliance with University of Tennessee academic ethics, as explained in *Hilltopics*, and with the standards of professional journalism is expected. Plagiarism will result in a failing grade and possibly expulsion from the university.

Writing that you have submitted in another class or have previously published or that has been critiqued or edited by a writing instructor or a professional editor may not be submitted in this course without the explicit permission of the instructor.

GRADING

Your out-of-class writing assignments will count for about 80% of your grade in the course.

Your class presentation and leadership of a discussion of a science writer's work will provide about 5% of your grade. The remaining 15% of your grade will be based on your participation in class discussions, because your contributions make the class more interesting and valuable to your colleagues and me. Please come to class ready to discuss the assigned readings. Please also study the background reading requested by some guest speakers and come to class prepared to interview all guests.

If you wish, you may revise one of your articles for a higher grade. To earn a higher grade, your revision must go beyond fixing typographical and grammatical errors. You must improve as needed the organization or research base or presentation of your story. Your revised article can raise your grade but cannot lower it unless there are ethical problems.

You are welcome to write an additional article for extra credit on a subject of your choice (but please check your story idea with me in advance). Extra-credit articles can raise your grade but cannot lower it unless there are ethical problems.

Graduate students must submit an extra story in order to earn graduate credit. This article will count about 10% of your grade.

Summary of Writing Assignments (and *approximate* grading weight)

Brief science column story (about 250 words)	5%
Story based on a speech or conference (about 500 words)	10%
Story of your choice on a local scientist and his research (about 750 words)	15%
Query letter (about 300 words)	5%
Longer science feature story (about 1,200 words)	20%
Notes on reading assignments	15%
Other writing: in-class exercise(s), informal notes on magazines and on newspaper science sections, proposal and draft excerpt from final article	10%

INSTRUCTOR AND OFFICE HOURS

Mark Littmann, Ph.D.
Professor, Hill Chair of Excellence in Science Writing
267 Communications Building
974-8156 (office); 974-3896 (fax); 588-6661 (home)
E-mail: littmann@utk.edu

Office hours:
Generally Monday through Friday
2–3 p.m. — but call ahead.
I am also available at most
other times by appointment.

Journalism and Electronic Media 450
WRITING ABOUT SCIENCE AND MEDICINE
SCHEDULE
Spring 2009

Thursday, January 8 — Overview

- * What is science writing?
- * Examples of science writing
- * About this course

Tuesday, January 13 — Writing about science for the general public

- * Class exercise using eulogies from *Time* magazine
- * Sea slugs: example of science feature writing
- * Showing versus telling
- * Tips on reading scientific journals
- * Writing about science: inverted pyramid and feature story formats
- * Discussion of brief science column writing assignment
- * Discussion of writing assignment to cover a speech or news conference

Thursday, January 15 — Storytelling

- * Generating story ideas and story angles
- * Discussing Angier article
- * Brainstorming for covering a speech or new conference writing assignment
- * Assigning discussion leaders

Assignments

Natalie Angier: “Busy as a Bee?” (on-line reserve)

Note to hand in: Did Angier use a technique over and over again? What was it? Give an example. Was it effective – why or why not?

Between now and next Thursday, go to a giant bookstore (Borders, Barnes & Noble).

Explore the magazine rack and make informal notes on your impressions. Buy and bring to class a magazine that both (1) publishes science writing and (2) you would like to publish in (especially one you likely *could* publish in).

Tuesday, January 20 — Scientists, science, and science writers

- * Guest speaker: Dr. Harry Y. (Hap) McSween, Distinguished Professor of Earth & Planetary Sciences: How science works, scientists and the mass media, and UT story ideas
- * Storytelling in science writing (discussing Kanigel story)
- * Details, anecdotes, and perspective
- * Exploring magazines to publish in

Assignments

Reading: Kanigel: “An Ordinary Miracle” (on-line reserve)

Note to hand in: Find two examples of oxymoron in Kanigel’s story. What role does oxymoron play in the article?

Between now and Thursday, go to a giant bookstore (Borders, Barnes & Noble). Explore

the magazine rack and make informal notes on your impressions. Buy and bring to class a magazine that both (1) publishes science writing and (2) you would like to publish in (especially one you likely *could* publish in)

Thursday, January 22 — Interviewing

- * Interviewing techniques
- * Sharing observations about magazines
- * Discussing Ackerman story: a fascinating scientific fact about how something works

Assignments

Bring to class the magazine you bought that publishes science writing
Make two copies of your informal impressions of a giant bookstore's magazine rack
and hand in one (counts toward your "other writing" grade)
Diane Ackerman: "Why Leaves Turn Color in the Fall" (on-line reserve)
Note to hand in: What's odd about the title of Ackerman's article?

Tuesday, January 27 — Analyzing magazine structure

- * Structure and analysis of magazines
- * Discussing your favorite story in your magazine

Assignments

Story due: Brief science column (about 250 words)
Bring to class the magazine you bought and your analytical notes
From your magazine, select your favorite story and be prepared to summarize it
very briefly for the class and explain why it impressed you

Thursday, January 29 — Science/environment writing for a daily newspaper

- * Guest: Scott Barker, Environmental Reporter, Knoxville *News Sentinel*: Covering science
- * Covering a speech or a news conference
- * Leads

Assignments

Barker articles (handouts or on-line reserve)
From your magazine, select an excellent (or an especially bad) lead from a feature story.
Read it to the class and explain how it contributes to or detracts from the story

Tuesday, February 3 — Organizing and focusing stories

- * What makes a story appealing
- * Choosing topics, focusing subjects, organizing stories
- * Jargon and technical terms in science writing
- * Covering a speech or a news conference (continued)
- * Review of interviewing techniques
- * The essay and science writing (discussing Selzer article)
- * Sharing *brief science column* stories

Assignments

Bring to class the magazine you bought and your analytical notes for further discussion
Richard Selzer: "Liver" (text)
Note to hand in: "Liver" is more difficult to read than previous articles in this course.
Give an example or two of a technique Selzer uses to make his essay more appealing.

Thursday, February 5 — Profiling people

- * Nonfiction characters in nonfiction stories (discussing Gannon story)
- * Personality profiles and science writing
- * “The Miss Dennis School of Writing”
- * Sharing *brief science column* stories (continued)

Assignments

Robert Gannon: “Bill Moss: Tentmaker” (on-line reserve)

Note to hand in: Discuss a technique that Gannon uses in his profile of Bill Moss to make him vivid.

Tuesday, February 10 — Profiling people

- * Nonfiction characters in nonfiction stories (discussing Quammen story)
- * Other examples of Quammen’s work
- * Problem-solving for upcoming story based on speech or news conference

Assignments

David Quammen: “Thinking About Earthworms” (on-line reserve)

Note to hand in: Has your perspective on earthworms changed because you read this article? How did Quammen accomplish that?

Thursday, February 12 — Anecdotes in science writing

- * Investigative reporting for science (discussing Levin story)
- * The use of anecdotes
- * Problem-solving for upcoming story based on a speech or news conference (continued)

Assignments

Myron Levin: “The Greatest Health Protection in Cigarette History” (on-line reserve)

Note to hand in: There are many anecdotes in this article. Which one in your opinion is the most powerful? Where is it positioned? Why?

Tuesday, February 17 — **FIELD TRIP (tentative)**

Field Trip to TVA Kingston Fossil Plant coal ash spill (3:30–5:30 p.m.)

Please note early departure and late return — Transportation by UT van

Assignments

Story due: involves attendance at a speech or news conference (about 500 words)

Thursday, February 19 — First person stories

- * The narrator as character (discussing Bowden story)
- * Developing a philosophy of science writing

Assignments

Charles Bowden: “Bats” (on-line reserve)

Note to hand in: Ronnie Sidner guides the Bowden to the bat cave. What does she contribute to your knowledge of bats? How does that affect the story?

Tuesday, February 24 — Opinion writing

- * Opinion in science writing (discussing the Sagan article)
- * Sharing stories based on speeches or news conferences

Assignments

Carl Sagan: “Star Wars: The Leaky Shield” (on-line reserve)

Note to hand in: Sagan’s article is an editorial. Based on Sagan’s approach, what is the most effective way to argue for your side of the controversy?

Thursday, February 26 — Science writing opportunities for students

- * Guest speaker: Josh Chamot, Science Writer, National Science Foundation: The evolving world of science writing; science writing across all media; life as a science writer

Assignments

Chamot stories (handouts)

Tuesday, March 3 — Presenting controversy

- * Editorializing without editorializing (discussing Hunt story)
- * Letting characters and details make your point
- * In-class writing exercise (maybe)

Assignments

Morton Hunt: “Research Through Deception” (on-line reserve)

Note to hand in: How do you end up feeling about research by deception? Do you think Hunt wanted you to reach that conclusion? How did he accomplish that or why did he fail?

Thursday, March 5 — Technical communication

- * Guest speaker: Dr. Russel Hirst, Associate Professor of English; Director, Program in Technical Communication: What technical writers and editors do; UT courses in technical communication; enhancing your career with technical communication skills
- * Personal tips for science writing

Assignments

None

Tuesday, March 10 — Getting published

- * Query letters
- * The narrator as character in science articles (discussing the Sapolsky story)
- * Popular science written by scientists
- * Troubleshooting upcoming local scientist stories

Assignments

Robert Sapolsky: “The Young and the Reckless” (on-line reserve)

Note to hand in: What are Sapolsky’s credentials? How does he depict himself in the article? How does his depiction of himself affect the story?

Thursday, March 12

Field trip to UT Medical Center (3:30-5:30 p.m.)

Please note early departure and late return — Transportation by UT van

Assignments

Story due about research of a local scientist of your choice (about 750 words)

Tuesday, March 17

NO CLASS — SPRING BREAK

Thursday, March 19

NO CLASS — SPRING BREAK

Tuesday, March 24 — Science writing as a profession

- * Guest speaker: David Brill, Science Writer and Assistant Director, Publications and Communications, Institute for a Secure and Sustainable Environment: Tips on writing and getting published

Assignments

Brill stories (handouts)

Thursday, March 26 — Innovative approaches to storytelling

- * Experimental science writing (discussing Rogers story)
- * Sharing and critiquing ideas for final feature stories
- * More on query letters
- * Preparations for the Hill Lecture and Master Class

Assignments

Brief informal proposal for final feature story due

Michael Rogers: “Totality – A Report” (on-line reserve)

Note to hand in: How does Rogers convey how impressive a total eclipse of the Sun is?

Tuesday, March 31 — Hill Lecture and Master Class Day

MASTER CLASS with **TOM SIEGFRIED**, Editor in Chief, *Science* magazine

3:30–4:30 317 Communications Building

HILL LECTURE by **TOM SIEGFRIED**, Editor in Chief, *Science* magazine

8:00–9:00 Shiloh Room, University Center

Thursday, April 2 — Demonstrating science in science writing

- * Guest speaker: Dr. Al Hazari, Lecturer in Chemistry: Bringing science to life
- * Sharing ideas for final feature stories (continued)

Assignments

Advance alert: Buy the Tuesday, April 7 issue of the *New York Times*: read and make informal notes on all the articles in the Science Times section. Bring the Science Times section and your notes (two copies) to class on Tuesday, April 15

Tuesday, April 7 — **FIELD TRIP**

Field trip to Oak Ridge National Laboratory (2:10–6:00 p.m.)

Please note early departure and late return — Transportation by UT van

Please bring photo identification (driver’s license) with you

Assignments

Query letter for final feature story due

Buy the Tuesday, April 7 issue of the *New York Times*: read and make informal notes on all the articles in the Science Times section. Bring the Science Times section and your notes (two copies) to class on Tuesday, April 14

Thursday, April 9

NO CLASS — You attended the Hill Lecture

Assignments

Continue to read and make informal notes on the Science Times section of the Tuesday, April 7 *New York Times*. Bring the Science Times section and your notes (two copies – one to hand in) to class on Tuesday, April 14

Tuesday, April 14 — Science section in a national newspaper

* Discussing the Science Times section of the April 7 issue of the *New York Times*

Assignments

Bring to class the April 7 Science Times section of the *New York Times* and two copies of your informal notes on the articles. One copy of your notes should be handed in at the beginning of discussion (counts toward your “other writing” grade)

Thursday, April 16 — Immersion reporting

* Literary journalism in science writing (discussing Franklin story)

* Sharing query letters

Assignments

Optional additional article for extra credit due (about 750 words)

Graduate students: extra article for graduate credit due (about 750 words)

Franklin: “Mrs. Kelly’s Monster” (on-line reserve)

Note to hand in: Did the story turn out the way you thought it would? Did Franklin give you any hint about the outcome? Should he have given you hints?

Tuesday, April 21 — Conversation with the author

* Guest speaker (by phone – *health permitting*): Jon Franklin, winner of 2 Pulitzer Prizes; Merrill Professor of Journalism, University of Maryland: The making of “Mrs. Kelly’s Monster”; tips for science writers

Alternatively: * Sharing sections of final feature stories
 * Troubleshooting final feature stories
 * Sharing graduate and extra-credit stories

Assignments

Revised articles due (optional)

Have an excerpt of your final feature story ready to read to the class (and to hand in)

Review Franklin’s “Mrs. Kelly’s Monster” in preparation for discussion with author

Prepare 3 questions to ask Professor Franklin; make two copies of your questions and hand in one at the beginning of the class period; ask Professor Franklin at least one

of your questions

Thursday, April 23 — Sharing

- * Sharing excerpts from final feature stories
- * More personal thoughts on science writing

Assignments

Science feature story due (about 1,200 words)

Monday, May 4

ALTERNATIVE PERIOD 2:45-4:45 p.m.

(No final exam)

- * Final thoughts on science writing
- * Supplemental evaluation
- * Surprise

Journalism and Electronic Media 450***WRITING ABOUT SCIENCE AND MEDICINE*****Spring 2009****SUMMARY OF WRITING ASSIGNMENTS**

DUE DATE	ASSIGNMENT (<i>writing assignments provide 80% of final grade</i>)
[when reading is to be discussed]	Notes on 13 assigned readings (about 200 words each) (together: 15%)
Tuesday, January 27	Story (about 250 words) for a brief science column (5%)
Tuesday, February 17	Story (about 500 words) on a scientific subject of your choice that includes attendance at a speech or news conference (10%)
Thursday, March 12	Story (about 750 words) about the research of a local scientist of your choice (15%)
Thursday, March 26	Brief informal proposal (about 200 words) for your final feature story, with expected sources (counts toward your “other writing” grade)
Tuesday, April 7 feature story, including topic, angle, interviewees, and sources, directed to a real magazine or newspaper (5%)	Query letter (body of letter: about 300 words) for your final
Tuesday, April 14	Informal (and not extensive) notes from reading the Science Times section of the Tuesday, April 7 <i>New York Times</i> (counts toward your “other writing” grade: 10%)
Thursday, April 16	For all students: Optional additional article (about 750 words) for extra credit For graduate students: Required extra article (about 750 words) for graduate credit
Tuesday, April 21	Last day to submit (optional) revised articles
Thursday, April 23	Longer science feature story for a magazine (about 1,200 words) (20%)