

## **SUMA K4180 Writing about Global Science for the International Media**

**Instructor** : Claudia Dreifus

### **Course Description**

This is an interdisciplinary workshop for scientists, future NGO workers and journalists seeking skills in communicating 21st century global science to the public. Scientists will be given journalism skills; journalists will learn how to use science as the basis of their story-telling. Students currently working in the business world or the public sector, will, by doing actual journalism, see what the news looks like from the other side of the desk. Our standards and methods will, at all times, be those of mainstream journalism.

### **Course Objectives**

The course is designed to give students exercises and real-world experiences in producing feature stories on global science topics. While most scientists and international affairs professionals have been trained to write in the style of peer-reviewed journals, we will focus on science journalism, learning how to translate global science into accessible true stories that reach wide audiences.

Science is performed by passionate individuals who use their intelligence and determination to seek answers from nature. By telling their histories and uncovering the drama of discovery, we believe that there are ways for science to be successfully communicated to readers who might otherwise fear it.

### **Rationale**

Currently, there are few comparable courses offered. Traditional science journalism classes have been mostly pegged to future science journalists; but we hope to turn non-journalists into published writers. Our approach blends science, policy, international affairs and journalism. We are willing to discuss advocacy, too.

And now, with mass media more open than ever to free-lance contributions, with new forms of media proliferating in cyberspace and with internet journalism increasingly open to beginning journalists, we see new opportunities for the scientifically-interested to tell their stories, *if* they have the proper skills. With these new opportunities in mind, we will also be pitching our story-telling to the demands of new media and the internet.

Ultimately, we hope to show a climatologist how to get their op-ed into the *Washington Post* and to help an aid worker from Southern Sudan place her first-hand report on desert environments into *Marie-Claire* magazine.

We will welcome students from Columbia University's program on Sustainability Management, the sponsors of the course, but also from the various graduate science, environmental, sustainability and medical programs—as well as those studying humanitarian affairs, human rights, migration policy, conflict resolution and international media and advocacy.

**Prerequisites:** The main prerequisites are a desire to write communicatively and a willingness to experiment with popular forms. Because both the TA and the Instructor do individual critiques of students' writing, we ask that participants in this class be willing to follow the edited instructions offered

and be open to critiquing; this is the way one improves one's writing. Students who feel uncomfortable with that style of instruction will probably not profit from it and ought consider enrolling in a different type of course. Willingness to accept critiques and guidance will be part of the grade.

A fluid knowledge of written English is important, but students who've trained as journalists, scientists or NGO professionals in non-English speaking countries are very welcome. Wherever possible, attempts will be made to meet the needs of students for whom English is a second language.

Because we are looking to create interesting non-fiction literature with science at its heart, we seek students with enthusiasm for both science and mass communications.

Students registering for this course should be willing to try to write in a style different from what they may have been trained for; they should also be willing to find their material through interviews, investigation, observation.

One gauge for your capacity to do this work: can you write as fast as you think?

**Criteria for Grading:** It's not easy to quantify a creative endeavor and the instructor reserves the right to make subjective judgments on progress, effort and attitude in determining final grades.

What I look for is talent, skill, originality, resourcefulness, promptness in meeting deadlines, a collegial attitude in terms of class participation—and of course, improvement of skills over a semester. The student who writes well, but who doesn't read and critiques classmates' submissions, will be penalized. On the other hand, the magazine writing student who got up at five in the morning to approach Lee Bollinger—then new to Columbia—about an interview while he took his morning run, got an "A," even though her written English wasn't perfect.

Because we are talking about subjective matters, I prefer not to give a firm numeric weight to each assignment. Again, what I seek is improvement of skills—and a game attitude. The final term project is very important, but it's not the whole package.

As always, the standards of professional journalism will apply in the classroom—cooperative attitude, openness to critiques, participation in the work of others, originality, enterprise. These are all factors that go into the final decision. Violations of either journalistic or academic standards will obviate all other considerations. And of course, all assignments must be filed on deadline.

Anyone missing more than two classes will be asked to drop the course. Your participation and interaction with your classmates is part of what happens and if you can't be present, no matter how valid the reason, you have denied your colleagues part of what they need to succeed.

Trying hard factors in, too. Woody Allen says that half of success is showing up. We'll amend that: the other half involves trying harder than the next person.

**Course Format and Requirements:** We do a mixture of writing different types of popular science articles of varying lengths, researching them from top to bottom, and then reading some of the students' work

aloud, in class. Students are asked to offer helpful criticism to each other and work together on solving reporting problems.

Great writing skills and improvement of those skills is what we're looking for—but we also appreciate students who are willing to support their classmates, participate in constructive critiques and who are willing to go the extra mile to do creative research for their pieces.

Whenever it is realistic, students are asked to submit their classroom work for publication. That can mean anything from mass circulation magazines to the in-house publications at Columbia University and SIPA. Students are encouraged to find Internet publishers for their work. In Prof. Dreifus' last class, eight different students saw their class work published; three had class-produced works appear on the Atlantic.com.

The Earth Institute has a website—as does the Sustainability Management program—and students are encouraged to submit appropriate class work there; we believe in "recycling." Why waste good work?

Writing is key to success in the course. We believe that writing is like gymnastics: the more you do, the better you get.

We're looking for enthusiastic writers and curious reporters, but also students who will improve their skills over the semester. An improved/dedicated writer can be assured of a fine grade. Handing in assignments on deadline is critical. Because participation is a major aspect of this workshop, students are asked to attend all sessions.

As mentioned previously, Hannah Thonet and I will be spending as much as an hour reading and analyzing every submission to class. We will provide our experienced criticisms and advice on how to improve the stories. Grades will be impacted by the willingness of students to use the information provided in these editorial notes and to follow them.

I am available during office hours for one-on-one coaching and will also mentor students through their larger projects. The grading and curriculum assistant will also have two hours available for that purpose on a different day. Details regarding office hours are listed at the top of the homepage screen.

**Overview:** Students will be asked, depending on the class' pace, to produce as many as five different types of feature articles and two or three short assignments during the semester. That probably means writing almost every week and filing promptly.

Final grades are based on attitude, writing skills, improvement of those skills, reporting enterprise, following of editorial advice, classroom participation, and the meeting of deadlines.

Publication of class work will win extra consideration at grading time and we will do much to encourage it. In this era of internet magazines, newcomers can find markets with comparative ease.

Because this class is formatted as a workshop, students will be asked to produce stories, but also to read and critique each other's writings. Both are key elements of this workshop. Lateness in filing assignments impedes the entire class' progress, and unfortunately, must be penalized in grading.

**A Note on Timely Filing:** In order for students' writing to be graded and considered in time for Tuesday evening, it is vital that assignments be filed on CourseWorks by Saturday night. Firm. This requirement is not aimed at ruining students' weekends, but to give the professor enough time to evaluate the entire class' problems and progress and construct a lecture tailored to the group's needs.

**Midweek E-mail Inquiries:** Though available in emergency situations, your instructor and grading assistant wish to stress that this is not an e-course. It is a lecture-based workshop. We would prefer that you use office hour appointments for your questions about assignments and to take careful notes during lectures, where key pointers will be covered.

**A Separate Note on Pace:** We will move as quickly or as slowly as the class' progress requires. That, of course, means the schedule below is not set in stone. As that late 20th century philosopher John Lennon had it: "Life is what happens when you're making other plans." Please consider this syllabus provisional.

### **SESSION ONE: INTRODUCTION**

**The Difference**—How science journalism contrasts with academic writing, everyday business writing or public relations and how it differs from standard feature writing.

In this introductory session, we will identify current scientific topics that lend themselves to features for newspapers, magazines and the Internet.

We'll discuss the story structure of the science feature. What are the elements of a compelling science feature? How does one transform numbers and findings into a literary narrative? How does one create a simple story without 'dumbing down' the content? Why does the work of successful science communicators such as Oliver Sacks, Brian Greene and the late Stephen Jay Gould, have wide appeal? What are they actually doing?

Why does Rockefeller University Nobelist Gunter Blobel tell his post-docs, "If you can't explain it to your grandmother, don't bring it to me?"

**Assignment:** Write a 750 word science-based op-ed that is targeted to a market like the *New York Times*, the *Washington Post*, or the blogs of an NGO like the World Policy Institute, the National Resources Defense Council or Carnegie Council on Ethics. Latest filing date, January 29th. (Please note—because of the beginning of the semester schedule, the filing date for this first assignment is slightly lengthened; of course, if one wants to file early, it's possible and appreciated.)

### **SESSION TWO—The Science Based Op-Ed, Part I**

What exactly is an op-ed piece? Are science op-eds different from other sorts of opinion pieces? What markets will print a science-based op-ed? What are the mechanics of submission? What the differences between a short personal essay and an op-ed? Can one do a personal essay about a scientific topic—how?

### ***SESSION THREE, The Science Based Op-Ed piece or Short Personal Essay, Part II***

This session will be devoted to reading and discussing the students' op-eds.

**Second Hour:** Class discussion: Profile or Interview? What's the difference?

Hand-out in class: Claudia Dreifus' tips for interviewing.

**Assignment for next week:** (can be started earlier) Interview an individual with a connection to the scientific enterprise. Don't interview anyone you know, work with or are subordinate to. Write either a 1200 word profile or a 1500 word Q and A of this person. Due date: February 9th.

**Reading for next week:** Introduction to Scientific Conversations-Interviews on Science from the New York Times—plus Tracy Kidder's extended profile of Dr. Paul Farmer.

### ***SESSION FOUR, Scientific Conversations—Interviews/Profiles***

**First hour:** Class discussion—how does a writer shape the raw material of an interview into a successful article? Three New York Times interviews by Claudia Dreifus, "A Conversation with...Jane Goodall," "A Conversation with...John Mutter," "A Conversation with...Stephan Hawking," will be deconstructed from idea to source material to publication.

What are the choices a writer makes? Could this have been written from other angles? You can look up the published stories on NYTimes.com or on the NRDC website.

In terms of a profile, an extremely long one, how did Tracy Kidder render Paul Farmer into someone we more than care about? How does he illustrate the complicated issues of poverty and health care in Haiti in such a way that we forget that we're reading a book about health policy?

**Second hour:** reading of selected students' interviews/profiles

**Assignment:** Those students who need to rewrite their interviews will be asked to do so. Due date—Feb. 16. Any student receiving a grade of less than an "A" will be asked to do a rewrite, on this and any other assignment. Students who wrote Qs and As that were unsuccessful will be asked to recast their interviews as profiles; therefore, it is wise to take excellent notes during the original interview session. Do not just rely on taped material.

Professor Dreifus will be in Boston for all of this week, covering the AAAS for the New York Times. Questions regarding classwork should be directed to Hannah Thonet.

### ***SESSION FIVE: Second session on interviews and profiles***

### ***SESSION SIX: Covering a Science Event, Part I***

1) **More reading** in class of students' profiles/interviews.

2) **What is an event piece?**

**Assignment:** Cover an event—Due March 2nd.

### ***SESSION SEVEN, Editor's Night***

**First hour:** Reading of Event pieces.

**Second Hour:** A visit with editors in the sciences.

Editors from scientific media will be visiting with us, talking about what they do and how they do it. After, there will be a dutch-treat informal supper with our guests at Columbia Cottage restaurant on West 112th Street and Amsterdam Avenue.

Confirmed guests so far: Fred Guterl, Executive Editor, *Scientific American*.

### ***SESSION EIGHT, Covering a Science Event, Part 2***

**First Hour:** Finish Up Event Pieces.

**Second Hour:** Intro to the Long Form Science Feature Story.

Query Letters and Outlines for the Long Form article in Science.

**Assignment:** Write a query letter for your term project.

### ***SESSION NINE: The Evolution of the Long Form Science Feature***

**First hour:** Round-robin discussion of issues encountered while researching final project.

Food for thought: Dr. Laurence Krauss, the much respected cosmologist, wrote, "The Physics of Star Trek," which has been a big seller since first issued and has gone into multiple editions. Take a look at the book and see what you think of his fluid style and popular rendering of basic physics concepts. We will discuss next week.

Check out: Rebecca Skloot's "The Immortal Life of Henrietta Lacks." How did she take a tough subject—medical ethics—and make it accessible?

**Second Hour:** Reading of selected query letters for term projects and discussion of them.

**Reading Assignment:** Read assigned long form science stories and dissect their structure. Ask yourself questions—why did the author start where they did? What was the nut? Why did they choose the material they used? Why did they end the way they did? As you begin working on your long form stories, refer to Anya Schiffrin’s PowerPoint on story structure that was given to you in your first class packet to discern the structure of what you will do.

**Assignment for next week:** begin work on a 1500-2000 word feature article on a global science/international sustainability issue. Start off by outlining a plan of action—including sources to interview, events to cover, books to read, information to uncover. Write a tentative lede. Post both outline and lede on CourseWorks by Sunday.

### ***SESSION TEN- The Mini op-ed: The Letter to the Editor***

**First hour:** Round robin on progress.

**Assignment for next week:** Write Letter to the Editor based on some aspect of your class project. File by Saturday.

### ***SESSION ELEVEN-Public Relations Writing in the Sciences: The Good, the Bad, the Ugly***

**First hour:** Round Robin reporting on progress with term project. .

**Second Hour:** Reading of Letters to the Editor.

**Second Hour—Public Relations:** In your work as Sustainability Managers, many of you will probably be asked, at some point, to write press releases for your NGO or your company. What are the conventions of the form? What works and what doesn’t? Professor Dreifus will show examples of press releases that she’s received that were effective and others that were born to fail.

Public Relations executives in the sciences will tell about their jobs and what they do.

### ***SESSION TWELVE—Putting It All Together***

**Assignment due:** first draft of final project on April 19—1500-2000 words on some aspect of global science. Target your story to a specific market you hope to sell it to.

Think about mixed media and new media supplements to your written story—i.e. pod casts, videos, slideshows, blogs that you might create to enhance your story.

The story should not be longer or shorter than the word count. Part of the exercise involves learning to write for space requirements.

### ***SESSION THIRTEEN***

**Final Project is due.** This final session will be held at the home of Professor Dreifus. Every student is asked to bring a home-cooked dish as part of a class communal supper. As is true in the publishing world, please submit a stamped/self-addressed envelope with your manuscript (which should also be filed on-line and with email.) You will receive written critiques back.

**ESSENTIAL READING** *Scientific Conversations: Interviews on Science from the New York Times*, Claudia Dreifus, Henry Holt/Times Books, (Available from used book sources on Amazon or Half.com—get early in semester.)

"Mountains Beyond Mountains: The Quest of Dr. Paul Farmer, A Man Who Would Cure the World," Tracy Kidder

"Am I Making Myself Clear—A Scientist's Guide to Talking to the Public?" Cornelia Dean

"A Field Guide for Science Writers," *The Official Guide of the National Association of Science Writers*, Deborah Blum, Mary Knudson, Robin Marantz Henig

"The Weather of the Future," Heidi Cullen

***More Suggested Source Material:***

**Books:** *The Writer's Market* (Writer's Digest Books). This book is extremely useful if you are considering submitting your work for publication.

"How to Write Attention Grabbing Query and Cover Letters," John Wood, *Writer's Digest Books*. This book will tell you how to write a query letter, an important skill.

"The Immortal Life of Henrietta Lacks," by Rebecca Skloot

"The End of Poverty," Jeffrey Sachs,

"The Physics of Star Trek," Laurence Krauss

"The Canon," Natalie Angier

"Against the Tide," Cornelia Dean

"The Best Science Writing of 2012"

"Field Notes From A Catastrophe: Man, Nature and Climate Change," Elizabeth Kolbert.

"Explaining Research," Dennis Meredith.

"The Gay Talese Reader: Portraits and Encounters," Gay Talese

***Library Reserves:*** Some feature writing source works used in my magazine writing class will be posted within the "library reserves" feature of CourseWorks. Though these are not science stories per se, they may be of use to you in looking at story structure and detail.

***Biographic Notes on the Professor:*** I am a contributing writer to the Science section of the New York Times, a contributor to Newsweek, Smithsonian, Scientific American, Ms., and the various AARP publications.



I am also a senior fellow at the World Policy Institute, a Manhattan-based think-tank, and the publisher of the *World Policy Journal*. Students in my classes often have been able to connect with the *World Policy Journal's* blog and website and publish their work there.

In a former life, I was the Playboy Interviewer—where I interviewed Gabriel Garcia-Marquez, Daniel Ortega, Susan Sarandon, William Safire, Arthur Schlesinger, Jr., among others. But that was long ago and far away.

The American Society of Journalists and Authors has honored me with a "career achievement award," and Sigma Xi, the national honorary society of research scientists has made me an honorary member for "transforming" how science is covered in my New York Times interview column.

In 2010, Times Books/Henry Holt published "Higher Education?" my non-fiction polemic with Andrew Hacker, which was reviewed in the *New York Times*, the *Washington Post*, *USA Today*, the *Economist*, the *Wall Street Journal*, the *American Prospect*, *Bloomberg Business Week* and more. It was among the most reviewed non-fiction books of the year and continues to inform the national debate on the direction of American higher education.

***COLUMBIA INTEGRITY:***

Please familiarize yourself with the proper methods of citation and attribution. The School provides some useful resources online; we strongly encourage you to familiarize yourself with these various styles before conducting your research and writing.

As stated in your Sustainability Management registration packet, Columbia University functions at the highest levels of integrity and demands the same from its students. It goes without saying that plagiarism, "recycling" of previously produced works, the employment of intellectual products created by others, will not be tolerated.