

Current Topics in Science, Health and Environmental Journalism (Fall 2019), G54.1017  
Room 653, 20 Cooper Square  
Tuesdays, 10 a.m. to 4:30 p.m. (with breaks!)

Instructor: Dan Fagin  
Professor of Journalism, New York University  
Director of the Science, Health and Environmental Reporting Program

Office Hours: Room 712, 20 Cooper Square: Tuesdays after class and Wednesdays 4-5.

### Overview

This aim of this course is to introduce you to the world of science journalism in two important ways: covering a science-related beat, and case studies of cutting-edge topics that are the raw material for great science journalism. Our goal throughout will be to understand and adopt the practices that the very best science journalists use when covering newsworthy and often controversial science. You will learn how they find and pitch worthy story ideas, do background research, interact with sources, organize their reporting and then write, edit and re-write their stories. A key learning tool will be in-class workshoping of the stories you produce. As you immerse yourselves in challenging areas of current science, you will read the work of highly accomplished researchers and journalists and hear from them directly in class. You will also sharpen your skills by writing for the SHERP webzine, [Scienceline](#). You'll be covering a beat and following peer-reviewed journals, blogs and other sources to stay on top of the news as it happens. You won't just be studying science news, you'll be breaking it.

### Learning Objectives

- Demonstrate awareness of journalism's core ethical values
- Write clear, accurate and engaging prose in an audience-appropriate manner
- Demonstrate critical thinking, independence, and creativity appropriate to the role of journalism in a democratic society
- Interview subjects, conduct research, and evaluate information
- Work ethically in pursuit of truth, accuracy, fairness, and diverse perspectives
- Use technological tools and apply quantitative concepts as appropriate

### Course Structure

We will begin the semester by focusing on the basics of covering science news, including working a beat, mining the journals, recognizing news, interviewing and developing reporting strategies. We will then plunge into our case studies and writing projects, with short interruptions to focus on editing and media law, among other topics. We'll also go on working trips to Brookhaven National Laboratory and *The New York Times*.

In addition to learning the tools and practicing the techniques science journalists use to cover news, we will explore four topics as in-depth case studies, guided by distinguished visiting journalists and scientists. In each case, you will do preparatory readings and in-class interviews and will then practice transforming what you've learned into engaging, accurate journalism.

## Beats

Beat coverage is at the core of journalism, and of this class. We will follow a newsroom model, with each of you covering an assigned beat. You will be expected to keep up to date with newly published research on your beat in scientific journals as popular media. You will write three beat-related stories plus an event story that does not need to be beat-related.

On the first day of class, we'll assign 12 beats, based on a combination of your preferences and the needs of the class. My goal is for each of you to end up with a beat that interests you but that you don't know much about, because you'll learn more that way. Here are the 13 beats to choose from (there's one extra):

- Climate Change and Earth Science
- Drugs (legal and illegal)
- Ecology and Evolution
- Energy
- Environmental Health and Pollution
- Genetics and Biotechnology
- Health and Prevention
- Medical Practice
- Microbes
- Physics, Chemistry and Math
- Psychology and Neuroscience
- Space
- Technology

At the beginning of each class (except the first one), I'll call on one or two of you at random to briefly update the rest of us on one piece of timely news you've found on your beat, and we'll discuss how to turn that news into a solid piece of science journalism, either as a news story, feature, video, data visualization, podcast or some other story form. To be ready to be called upon, you must follow your beat closely and continually. Everything you'll need to read in order to do so is available free online via the journals and databases you can access via NYU Home (you'll learn about these databases at the mandatory library training session).

## Writing Assignments

There will be writing assignments in and out of class. In addition to writing about our case studies in class, you will write (and re-write!) four graded stories: a 500-word news story, a 450-word event story, a 750-word explainer and a 1,000-word feature. Some of your work, if done well, will end up being published in *Scienceline*, the webzine you will be running for a year, starting at the end of November.

The topics of all of your stories, including your event story, must be cleared with me in advance.

All assignments for this class must be written in Microsoft Word (.doc files), so I can edit them and send them back with comments. If for some reason you must use some other word-processing program, it's your responsibility to make sure it's a program I can work with. Unless I tell you otherwise, you should e-mail all of your assignments as attached files to dan.fagin@nyu.edu. After I've edited your work and returned it to you, you'll want to be quick to

tweak them and send them on to the relevant *Scienceline* editor, since timeliness is always helpful in newswriting.

About story lengths: You should take assigned word limits seriously and practice writing as close to assigned length as you can because many editors in the professional world will insist on it. For this class, I'll accept stories within 100 words of the assigned length. Your 1,000-word story, for instance, should be at least 900 (well chosen) words and no more than 1,100.

### Assigned Readings and Discussion

The only book you need to buy for this class (you'll use it for the next 16 months and beyond) is the AP Stylebook, which you can order at <http://www.apstylebook.com/>. The print version costs \$22.95 or you can choose online access for a year at \$26. The online version is handy because it's searchable and accessible wherever you're online, but the paper version you can keep beyond a year. Either way, it's very important that you buy the Stylebook and use it! **Don't rely on your peer editors and professors to fix basic style and usage problems in your work** – that's what the Stylebook is for!

There will be digital readings for all of the case studies and for our days on investigative reporting and on media law and the First Amendment. I will post all pdfs to the class Google Drive folder; other readings will be links. It's very important that you do all of the assigned readings. We will be moving very quickly through a lot of material on disparate topics, and you're going to have trouble with the in-class assignments unless you keep up. In-class discussion is a big part of this course (and a major component of your grade), so come to class prepared to contribute – and expect to be called upon if you don't speak up.

### Grades and Editing

Learning, not grades, should be the focus of your time at SHERP. Most of your in-class writing will not be graded, but at least some of it will be edited. You should always be your own toughest editor, but you'll also learn by being edited by many other people: professors, visiting journalists, your classmates and the editors of *Scienceline*.

Letter grades are not nearly as important as the detailed feedback you will get from your peers and professors, but grades serve a useful purpose because they are a convenient way for you to gauge your progress, so you should pay attention to them.

Here is the formula I will use to calculate your final grade:

- 500-word beat news story, 15 percent
- 450-word event story, 15 percent
- 750-word beat explainer, 20 percent
- 1,000-word beat story, 25 percent
- In-class contributions (case studies and discussion), 25 percent

For the assignments in which you're doing multiple versions (all but the event story), your grade will be the average of your grade for the first version you turn in to me (the first revise, after peer editing) and your grade for the rewritten version (the second revise).

### Deadlines

Coping with deadlines is one of the most valuable lessons you will learn in SHERP. In the world of professional journalism, you will not be able to sustain a career if you blow deadlines. If you cannot meet a deadline for a written assignment in this class, I expect you to have a very good reason. Even the best reason will not be good enough to avoid being marked down for lateness. Remember that unless I specify otherwise, all assignments except the event stories are due at 10 a.m. on the due date via email to me as attached Word e-mail files. Event stories are due two hours after the completion of the event.

You are welcome to turn in work early; I edit assignments in the order I receive them. Here are the assignments and due dates:

- 500-word beat story: three pitches due Sept. 16; first draft due to peer editor Oct. 3, returned to writer Oct. 5; first revise due to Dan Oct. 8; second revise due to Dan Oct. 22.
- 750-word beat explainer piece: three pitches due Sept. 30; first draft due to peer editor Oct. 24, returned to writer Oct. 26; first revise due to Dan Oct. 29; second revise due to Dan Nov. 12.
- 1,000-word beat feature story: three pitches due Oct. 21, first draft due to peer editor Nov. 21, returned to writer Nov. 23; first revise due to Dan Nov. 26; second revise due to Dan Dec. 10.
- 450-word event story due to Dan anytime between Sept. 11 and Dec. 9 within two hours of the event's completion. Note: This story does not have to be on your beat.

### Scheduling and Attendance

I expect you to attend every class. If there's a good reason you must be absent, you need to let me know beforehand via e-mail or telephone.

With two exceptions, the class will meet Tuesdays from 10:00 to as late as 4:30 in Room 653. (Don't worry – we'll take breaks and usually won't go all the way to 4:30!) The exceptions are Oct. 15, when Monday classes will meet, and Nov. 26, when we won't have class for Thanksgiving week.

We will have two field trips: Sept. 26-27 to Brookhaven National Laboratory (by rented bus, departing from in front of 20 Cooper Square at 9:00 a.m. Thursday and returning by 5 p.m. Friday) and Oct. 22 to *The New York Times* (we'll have a regular morning class and then go to the *Times* for a tour and a feature story pitching session. The *Times* building is at the corner of 41<sup>st</sup> St. and Eighth Ave. We'll meet in the lobby at 1 p.m. and will be done by about 4:30).

### Ethical Conduct

Your life as a professional journalist has begun, which means that for the rest of your working life, your obligation is to be your own toughest critic by holding yourself to the highest standards of our profession. While you're at NYU, your professors will also hold you to those standards, which are outlined in the ethics pledge you will sign and in the NYU Journalism Handbook for Students. Those standards are enforceable by sanctions that can range from a lowered grade to expulsion. Keeping faith with your audience requires understanding what plagiarism means in a journalistic context, how and when to attribute information, and how to treat sources ethically.

Read the pledge and the handbook carefully at <http://journalism.nyu.edu/about-us/resources/ethics/>, and if you are ever in doubt about an ethics issue talk to a professor! The golden rule for ethical behavior is: When in doubt, seek counsel from someone who is more experienced and whose advice you value.

### Your Health

SHERP can be stressful. We're preparing you for a challenging (but fun!) profession, so things are going to get intense at times, especially when deadlines loom. Living in an unfamiliar city can worsen the stress. It's important to pay attention to your own mental and physical health, and to get help when you need it. It's also important to be supportive of your classmates, and to encourage them to seek assistance if needed. If you're feeling overwhelmed, please come talk to me or to any of your professors and we'll do our best to help. And please do not hesitate to take full advantage of all of the professional health resources provided by NYU (after all, you're paying for them!). The Student Health Center is at 726 Broadway (Third Floor), the number is 212-443-1000 and they do accept walk-ins. There's also a 24-hour hotline: 212-443-9999.

### Contacting Me, Contacting You

I regularly check e-mail; contact me anytime at dan.fagin@nyu.edu. If you prefer good old-fashioned interpersonal communication (and who doesn't?) you can call me at my home office (516-801-2477). In a pinch, you can try my cell phone (516-660-6383) but try the home office number first because, well, I hate talking on my cell phone. Better still, you can always find me in my NYU office in Room 712 on Tuesday and Wednesday afternoons. The number there is 212-998-7971. It's also very important that you give me your current e-mail address, and that you check your e-mail frequently in case I need to reach you.

### Tentative Weekly Schedule and Assignments

**IMPORTANT:** This schedule will soon be out of date, so don't print out or save; instead, keep checking in Google Drive and use the version you see there, which will be continually updated.

#### **Sept. 3**

Morning: goals, expectations, syllabus, beat assignments.

Afternoon: Sources and techniques for finding good stories on your beat. Guest speakers (at 1:30): ClimateWire staff writer Chelsea Harvey (SHERP 32) and Axios space writer Miriam Kramer (SHERP 30).

**IMPORTANT:** On **Sept. 5** from 10:00 to 12:30 in Room 743 (the 'LearnStudio') of Bobst Library on Washington Square South, you have a mandatory training session on databases and other online research tools, conducted by NYU Science Librarian Hope Lappen. Make sure you complete your quiz by then.

Assignment due Sept. 10: Identify five diverse news sources on your beat (not including those from previous classes) and add them to the beat files in Google Drive (open the "beat sources" subfolder in the class folder).

#### **Sept. 10**

Morning: Pitch School. Guest Speakers: Live Science Editor in Chief [Jeanna Bryner](#) (SHERP 21) and Popular Science Associate Editor [Claire Maldarelli](#) (SHERP 32).  
 Afternoon: Introduction to event coverage. Story research basics.

Assignments:

- 1) By 10 a.m. Sept. 16, find three 500-word news story ideas on your beat (only one of which can be a newly published study), write a 100-word strategy and send it to Dan, and also prepare a 60-second oral pitch for each of your ideas. Make sure all three of your ideas are feasible (something you can finish in two weeks).
- 2) Start looking for an event to cover and get Dan's approval to reserve it (any science-related event before Dec. 9 is potentially eligible, first come first served).

### **Sept. 17**

Morning: narrowing your three good news story ideas to one great one. 10:15 Guest editor: Associated Press science writer [Malcolm Ritter](#).

Afternoon: Interviewing + introduction to explainers. We'll also preview the case study. At 3:00, Rene Ebersole will explain the internship program.

Assignment due Sept. 24: Readings for Case Study I, Octopus Ethics: Joanna Makowska, Becca Franks et al., "[Standard Laboratory Housing for Mice Restricts their Ability to Segregate Space into Clean and Dirty Areas](#)," *Nature Scientific Reports*, April 16, 2019; Jennifer Jacquet, Becca Franks et al., "[The Case Against Octopus Farming](#)," *Issues in Science and Technology*, Vol. 35, No. 2 (Winter, 2019); Ben Guarino, "[Inside the Grand and Sometimes Slimy Plan to Turn Octopuses into Lab Animals](#)," *Washington Post*; Ben Guarino, "[This is What Happens to a Shy Octopus on Ecstasy](#)," *Washington Post*, Sept. 20, 2018; Danna Staaf, "[How to Put an Octopus to Sleep – and Make Cephalopod Research More Humane](#)," *Science*, April 14, 2018; Carl Zimmer, "[Yes, the Octopus is Smart as Heck. But Why?](#)" *New York Times*, Nov. 30, 2018.

### **Sept. 24**

Case Study I: Octopus Ethics. Guest journalist: *Washington Post* staff science writer [Ben Guarino](#) (SHERP 31). Guest Scientist: Research Scientist [Becca Franks](#), NYU

**Sept. 26-27** – Brookhaven Lab Trip! Be at 20 Cooper Square at 9:00 a.m. sharp Thursday to meet the bus. You'll be back before 5 p.m. Friday.

Assignments:

- 1) By 10 a.m. Sept. 30, find three ideas for 750-word explainers on your beat, send Dan a 100-word strategy for each idea, and also prepare a 60-second oral pitch for each idea.
- 2) Work on your news story.

### **Oct. 1**

Morning: Narrowing your three good explainer ideas to one great one. Guest editor: *IEEE Spectrum* News Manager [Amy Nordrum](#) (SHERP 32).

Afternoon: Story Structure and Story Editing. Guest speaker at 1:30 p.m.: [Mary Beth Griggs](#) (SHERP 29), science editor at *The Verge*. Assign first round of editor/reporter pairings. Also, structuring news stories.

Assignments:

- 1) By 10 a.m. Oct. 3, send news story to your assigned peer editor.
- 2) By 10 a.m. Oct. 5, editors finish your proposed edits (in track changes) of your assigned reporter's 500-word story, email them to your reporter (with a cc to Dan).
- 3) By 10 a.m. Oct. 7, email your first revise (peer-edited) 500-word story to Dan.

### **Oct. 8**

Morning: Workshop news stories.

Afternoon: Pitching, reporting and writing a successful feature

### **Oct. 15 – Robin's class meets today instead of this class**

Assignments:

- 1) By 10 a.m. Oct. 21, generate three 1,000-word feature ideas on your beat, send Dan a 100-word strategy for each, and also prepare a two-minute oral pitch for each.
- 2) By 10 a.m. Oct 22, turn in second revise of 500-word news story to Dan.
- 3) Work on your explainer.

### **Oct. 22**

Morning: Practice feature pitches

Afternoon: Tour and pitching workshop at *The New York Times* (corner of 41<sup>st</sup> St. and Eighth Ave., meet in the lobby at 12:45 p.m. and finish by 2:30). Narrowing your three good 1,000-word story ideas to one great one. Guest editor: *Times* Senior Staff Editor for Science Michael Roston and colleagues.

- 1) By 10 a.m. Oct. 24, turn in 750-word explainer to your assigned editor.
- 2) By 10 a.m. Oct. 26, finish your proposed edits (in track changes) of your assigned reporter's 750-word explainer, email them to your reporter (with a copy to Dan).
- 3) By 10 a.m. Oct. 29, e-mail your first revise (peer edited) 750-word explainer to Dan.
- 4) By 10 a.m. Oct. 29, readings for Case Study II, PTSD in First Responders: Rene Ebersole, "[First Responders Struggle With PTSD Caused by the Emergencies, Deaths, Tragedies They Face Every Day](#)," *Washington Post*, Oct. 26, 2019 (if the link doesn't work for you, see "Ebersole First Responders Final Draft" in class Google group); Abe Aboraya, [Five First Responders to the Pulse Massacre. One Diagnosis: PTSD](#) and [audiovisual companion gallery](#), *ProPublica*, June 11, 2018; Erich Barber et al., "[Survey Reveals Alarming Rates of EMS Provider Stress and Thoughts of Suicide](#)," *Journal of Emergency Medical Services*, Issue 10, Vol. 40 (Sept. 28, 2015); "[Majority of First Responders Face Mental Health Challenges in the Workplace](#)," University of Phoenix, April 18, 2017; Jill Barron, "Community Needs Assessment for the Town of Newtown, CT in the wake of the Sandy Hook Elementary School Shootings," 2013 (see "Barron Newtown" in class Google group); Leo Shane III, "[New Blood Test Could Help Identify Troops and Veterans with PTSD](#)" *Military Times*, Sept. 9, 2019.
- 5) OPTIONAL READINGS for Case Study II: Gregory Quirk et al., "The Role of Ventromedial Prefrontal Cortex in the Recovery of Extinguished Fear," *The Journal of Neuroscience*, Aug. 15, 2000 (see "Quirk PTSD" in class Google group); R.H. Pietrzak et al., "[Trajectories of PTSD Risk and Resilience in World Trade Center Responders: An 8-year Prospective Cohort Study](#)" (abstract only), *Psychological Medicine*, Jan. 2014; Jong-Sun Lee, "[Perceived Social Support Functions as a Resilience in Buffering the Impact of Trauma Exposure on PTSD Symptoms Via Intrusive Rumination and Entrapment in Firefighters](#)," *PLOS One*, Aug. 2, 2019.

**Oct. 29**

Case Study II: PTSD in First Responders. Guest journalist [Rene Ebersole](#) (SHERP 17). Guest Scientist: [Dr. Jill Barron](#), Yale School of Medicine.

Assignments:

- 1) By 10 a.m. Nov. 5, read [First Amendment Handbook](#) and fill out open-book media law quiz (see Media Law Quiz in Google Drive). Bring answers to class.
- 2) Work on your explainer and feature.

**Nov. 5**

Morning: Media law and the First Amendment. 10:45: Attorney [Kate Bolger](#) of Davis, Wright Tremaine.

Afternoon: Guest speaker at 1:30: [Virginia Hughes](#), deputy editor-in-chief of BuzzFeed News. Also, workshop explainers.

Assignments:

- 1) By 10 a.m. Nov. 12, turn in second revise of 750-word explainer to Dan
- 2) By 10 a.m. Nov. 12, readings for Case Study III: Urban Epidemics: Melinda Wenner Moyer, “American Epidemic”, *Scientific American*, May 2018 (see “Wenner American Epidemic” in Google class group); Jessica Leibler et al., “Personal Hygiene Practices Among Urban Homeless Persons in Boston, MA”, *International Journal of Environmental Research and Public Health*, Vol. 14, No. 928 (see “Leibler Urban Hygiene” in class Google group); Peter Hotez, “Neglected Infections of Poverty in the United States of America”, *PLOS Neglected Tropical Diseases*, Vol. 2, Issue 6, June 2008 (see “Hotez Infections of Poverty” in class Google group); “Health, Income & Poverty: Where We Are & What Could Help,” Health Policy Brief from the Robert Wood Johnson Foundation, October 2018 (see “Health Income and Poverty” in class Google group). OPTIONAL VIEWING: “[The Health-Care Cost of Homelessness](#)”, a 12-minute video from *The Atlantic*, July 7, 2017.

**Nov. 12**

Case Study III: Urban Epidemics. Guest journalist: Freelance magazine writer [Melinda Wenner Moyer](#) (SHERP 24). Guest scientist: Boston University environmental epidemiologist [Jessica Leibler](#).

Assignments:

- 1) By 10 a.m. Nov. 19, readings for Case Study IV: Transgender Autism: Apoorva Mandavilli, unpublished draft feature for The Cut (see “Trans Mandavilli” in class Google group – UNPUBLISHED DRAFT, DO NOT SHARE); Aron Janssen et al., “Gender Variance Among Youth with Autism Spectrum Disorders: A Retrospective Chart Review,” *Transgender Health*, Vol. 1, No. 1 (2016), pp. 63-68 (see “Trans Janssen” in class Google group); J.F. Strang et al., “They Thought it Was an Obsession: Trajectories and Perspectives of Autistic Transgender and Gender-Diverse Adolescents,” *Journal of Autism and Developmental Disorders*, Vol. 48 (2018) pp. 4039-4055 (see “Trans Strang” in class Google group); Williams Institute, “[New Estimates Show that 150,000 Youth Ages 13 to 17 Identify as Transgender in the U.S.](#),” Jan. 17, 2017.
- 2) Work on your feature.

**Nov. 19**



Case Study IV: Transgender Autism. Guest journalist: Spectrum Editor in Chief and Science Writer [Apoorva Mandavilli](#) (SHERP 17). Guest scientist: [Kevin Pelphrey](#), director of the [Autism and Neurodevelopmental Disorders Institute](#) at George Washington University.

Assignments:

- 1) By 10 a.m. Nov. 21, turn in 1,000-word feature to your assigned editor.
- 2) By 10 a.m. Nov. 23, edit your assigned reporter's 1,000-word feature, return it to your reporter (copy to Dan).
- 3) By 10 a.m. Nov. 26, turn in your first revise (peer edited) 1,000-word feature to Dan. Work on features.

**Nov. 26 – No class today, enjoy the holiday week!**

**Dec. 3**

Morning: Workshop features

Afternoon: Institutional Communications. Guest speakers: [Sarah Fecht](#) (SHERP 29), content manager at the Earth Institute of Columbia University; [Jillian Rose Lim](#) (SHERP 32), science writer at the Children's Hospital of Philadelphia.

Assignments due Dec 10:

- 1) By 10 a.m., turn in second revise of feature.
- 2) Read the following: Maria Konnikova, "[How Norms Change](#)," *The New Yorker*, Pct. 11, 2017; Emily Anthes, "[A Floating House to Resist the Floods of Climate Change](#)," *The New Yorker*, Jan. 3, 2018; Robin Marantz Henig, "[What is it About 20-Somethings?](#)" *New York Times Magazine*, Aug. 18, 2010. And just for fun: Claudia Dreyfus, "[Maria Konnikova Shows Her Cards](#)," *The New York Times*, Aug. 10, 2018.

**Dec. 10**

Morning: Journalists-as-authors plus class evaluations. Guest speakers [Maria Konnikova](#), [Emily Anthes](#) and [Robin Marantz Henig](#).

### Accommodations

Students with disabilities that necessitate accommodations should contact and register with New York University's Moses Center for Students with Disabilities (CSD) at [212-998-4980](tel:212-998-4980) or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu). Information about the Moses Center can be found at [www.nyu.edu/csd](http://www.nyu.edu/csd). The Moses Center is located at 726 Broadway on the 2nd floor.

### Diversity and Inclusion

The Institute is committed to creating an inclusive learning environment. The Institute embraces a notion of intellectual community enriched and enhanced by diversity along a number of dimensions.