



HistSci 133: Biology and Society, 1950-Today

Credits: 3

Course Designations and Attributes: Humanities or Social Science breadth

Requisites: None

Instructional Modality: Synchronous online

Meeting Time and Location: MW 11:00-11:50am, plus discussion section

Course Description

From medical advancements to environmental crises and global food shortages, the life sciences are implicated in some of the most pressing social issues of our time. This course explores events in the history of biology from the mid-twentieth century to today, and examines how developments in this science have shaped and are shaped by society. In the first unit, we investigate the origins of the institutions, technologies, and styles of practice that characterize contemporary biology, such as the use of mice as "model organisms" for understanding human diseases. The second unit examines biological controversies such as the introduction of genetically modified plants into the food supply. The final unit asks how biological facts and theories have been and continue to be used as a source for understanding ourselves

How Credit Hours are Met by the Course

This class meets for three 50-minute class periods each week over the Spring semester and carries the expectation that you will work on course learning activities (reading, writing, studying, etc) for about 2 hours out of the classroom for every class period.

Regular and Substantive Student-Instructor Interaction

Lectures will be conducted synchronously online by the course instructor, and will include interactive components. Discussion sections will be conducted synchronously online by the TAs. Feedback on written assignments will be provided by the TAs. You are also encouraged to make use of weekly online office hours.

Instructors & Teaching Assistants

Instructor Title and Name: Nicole C. Nelson, PhD

Email: nicole.nelson@wisc.edu

Preferred Method of Communication: Course Questions forum, office hours

Virtual Office Hours: Thursdays from 2-4pm, on Zoom ([access here](#)).

TA Name: Emma Wathen

Email: ewathen@wisc.edu

Preferred Method of Communication: Course Questions forum, office hours

Virtual Office Hours: Mondays from 3-5pm, on Zoom

TA Name: Hermann von Hesse

Email: vonhesse@wisc.edu

Preferred Method of Communication: Course Questions forum, office hours

Virtual Office Hours: Fridays from 2-4pm, on Zoom

Course Learning Outcomes

- Develop an appreciation for the ways in which the institutions, practices, and ways of thinking associated with contemporary biology are specific to a particular place and time, and have changed over time.
- Identify and state the significance of key people and events in the recent history of biology.
- Understand key theoretical frameworks for describing interactions between biology and society, and be able to apply these frameworks to new empirical cases.
- Identify and evaluate the strength of the arguments and evidence used in an academic paper.
- Extrapolate complex arguments to new contexts and assess how new information would change the argument.

Grading

Component	Weight	Due date
Discussion section participation	15%	No due date
Quizzes (two lowest scores will be dropped)	15%	Feb 12, Feb 26, March 26, April 23
Reading summary assignment	15%	February 17-26, as assigned in section
Midterm exam	15%	March 12
Critical thinking assignment	20%	April 9
Final exam	20%	May 2

All assignments will receive a numeric score (e.g. 29/30), and your total numeric score will be converted into a final letter grade using the conversion table below. Final grades will not be curved.

A	AB	B	BC	C	D	F
93.0– 100%	88.0– 92.99%	83.0– 87.99%	78.0– 82.99%	70.0– 77.99%	60.0– 69.99%	0–59.99%

Grading errors: If there are errors in calculating your grade for an assignment or you would like additional clarification on how your work was graded, please see your TA. If you would like to request a regrade of your assignment, please contact Prof Nelson. She will regrade the entire assignment, and the score she assigns will become your new grade. All regrade requests must be submitted within two weeks of day that the assignment grades are posted.

Late assignments: If you are facing circumstances are making it difficult for you to meet assignment deadlines (as many of us are these days!), we are happy to discuss deadline extensions or other accommodations. Please get in touch with your TA or Prof Nelson in advance of the assignment deadline whenever possible. If you do not make arrangements with your TA or Prof Nelson, late assignments will lose 3% of the total assignment points per day late.

Course Website, Learning Management System & Digital Instructional Tools

You can access the course website through Canvas [here](#). More details on the digital tools and platforms used in this course is available [here](#).

Discussion Sessions

Synchronous discussion sections will be held over Zoom. You can find the link to join your discussion section in the Zoom tab in the left hand menu of the Canvas page. Arrive to your discussion section with your readings and notes somewhere handy. If there is anything other than doing the readings that you need to do to prepare for section, we'll make a note of it in the week's module on Canvas. For more detail on expectations for discussion section preparation and participation, you can consult the grading rubric provided on Canvas.

Attendance in discussion section counts towards the discussion section participation component of your grade. You have one no-questions-asked absence from discussion section, but we recognize that this is a semester where you may need more than that—please communicate your TA if you anticipate missing more than one section (if possible before the missed section), and we will work with you to figure something out.

Required Textbook, Software & Other Course Materials

There are no required textbooks for this course. All of the readings are available on the course website on Canvas.

Exams, Quizzes, & Written Assignments

Dedicated on-campus spaces with high-speed internet are available for students to [reserve](#) for any exam/quiz taken during the semester. Computers can also be requested.

Quizzes: These are intended to help you keep up with the lecture and reading material throughout the semester. They are open book, and you will have an opportunity to suggest questions to be included in these quizzes. Quizzes will be administered through Canvas. On the weeks where quizzes are assigned, they will open Wednesday morning and must be completed by Friday at midnight. Only your best two scores will count towards your grade.

Reading summary assignment: This assignment focuses on your ability to identify the most important elements of a complex argument. You will have the opportunity to choose the reading you will work with for this assignment (a list of eligible course readings will be distributed in section), and the assignment will be due on the day that the reading you selected is due in section. A detailed description of the assignment and a grading rubric is available on Canvas.

Critical thinking assignment: This assignment focuses on your ability extend or revise an argument using new evidence. Starting with one of the course readings on biology and the public, you will demonstrate your understanding of one of the author's arguments and develop a research question about how the argument might change given new evidence. You will have an opportunity to discuss your research question and brainstorm potential sources of evidence in section prior to completing the written assignment. A detailed description of the assignment and a grading rubric is available on Canvas.

Midterm and final exams: Exams contain a combination of multiple choice questions, short answer questions, and essay questions. Each reading and lecture starts with a set of three guiding questions, and seeing if you can answer those questions is a good way to test your understanding of the material. We will also provide examples in discussion section of questions from past exams. For both exams, you will have a twelve hour window (beginning at 8am and ending at 8pm CST) in which to complete the exam.

Campus Policies

Privacy of Student Information & Digital Tools: Teaching & Learning Analytics & Proctoring Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported digital tools used to support teaching and learning, to help support success through [learning analytics](#), and to enable proctoring capabilities. UW-Madison takes necessary steps to ensure that the providers of such tools prioritize proper handling of sensitive data in alignment with FERPA, industry standards and best practices.

Under the Family Educational Rights and Privacy Act (FERPA which protects the privacy of student education records), student consent is not required for the university to share with school officials those student education records necessary for carrying out those university functions in which they have legitimate educational interest. 34 CFR 99.31(a)(1)(i)(B). FERPA specifically allows universities to designate vendors such as digital tool providers as school officials, and accordingly to share with them personally identifiable information from student education records if they perform appropriate services for the university and are subject to all applicable requirements governing the use, disclosure and protection of student data.

Privacy of Student Records & the Use of Audio Recorded Lectures

See information about [privacy of student records and the usage of audio-recorded lectures](#).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Course Evaluations

UW-Madison now uses an online course evaluation survey tool, [AEFIS](#). In most instances, you will receive an official email two weeks prior to the end of the semester when your course evaluation is available. You will receive

a link to log into the course evaluation with your NetID where you can complete the evaluation and submit it, anonymously. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

Students' Rules, [Rights & Responsibilities](#)

During the global COVID-19 pandemic, we must prioritize our collective health and safety to keep ourselves, our campus, and our community safe. As a university community, we must work together to prevent the spread of the virus and to promote the collective health and welfare of our campus and surrounding community.

UW-Madison [Badger Pledge](#)

[Campus Guidance on the use of Face Coverings](#)

Face coverings must be [correctly worn](#) on campus at all times and in all places (both outside and inside), except by students in their assigned residence hall rooms; by employees when alone in a private, unshared lab or office; when traveling alone in a private vehicle; and when exercising outside in a way that maintains 6 feet of distance from other people.

Students with disabilities or medical conditions who are unable to wear a face covering should contact the [McBurney Disability Resource Center](#) or their Access Consultant if they are already affiliated. Students requesting an accommodation unrelated to disability or medical condition, should contact the Dean of Students Office.

Students who choose not to wear a face covering may not attend in-person classes, unless they are approved for an accommodation or exemption. All other students not wearing a face covering will be asked to put one on or leave the classroom. Students who refuse to wear face coverings appropriately or adhere to other stated requirements will be reported to the [Office of Student Conduct and Community Standards](#) and will not be allowed to return to the classroom until they agree to comply with the face covering policy. An instructor may cancel or suspend a course in-person meeting if a person is in the classroom without an approved face covering in position over their nose and mouth and refuses to immediately comply.

Quarantine or Isolation Due to COVID-19

Student should continually monitor themselves for COVID-19 symptoms and get [tested](#) for the virus if they have symptoms or have been in close contact with someone with COVID-19. Student should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their Instructor concerning their illness and the anticipated extent of their absence from the course (either in-person or remote). The instructor will work with the student to provide alternative ways to complete the course work.

Diversity & Inclusion Statement

[Diversity](#) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

Academic Integrity Statement

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are

examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

Accommodations for Students with Disabilities Statement

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))

Academic Calendar & Religious Observances

See: <https://secfac.wisc.edu/academic-calendar/#religious-observances>

Course Schedule

Week 1: Course Introduction

- Heloise Dufour and Sean Carrol, “Great myths die hard,” *Nature* 502 (2013): 32–33.

Unit One: Institutions and social practices

Week 2: Telling the history of biology

- Leslie Roberts, “Controversial from the start,” *Science* 291.5507 (2001): 1182-1188.

Week 3: From big physics to big biology

- David Kaiser, “From blackboards to bombs,” *Nature* 523 (2015): 523–525.
- R.J. Havighurst and K. Lark-Horovitz, “The schools in a physicists’ war,” *American Journal of Physics* 103(1943): 103-108.

Week 4: Model organisms

- Daniel Engber, “The trouble with black six,” *Slate*, 17 November 2011.
- Susan Lederer, “Political animals: the shaping of biomedical research literature in twentieth century America,” *Isis* 83 (1992): 61-79.

Week 5: University-industry relations

- Steven Shapin, “Who is the industrial scientist?” in *The Science-Industry Nexus*, eds. Karl Grandin, Nina Wormbs, and Sven Widmalm. Science History Publications, 2004, 337-363.
- Adriane Fugh-Berman, “The haunting of medical journals,” *PLOS Medicine* 7.9 (2010): e1000335.

Unit Two: Governance and participation

Week 6: The ethics of genetics

- Dorothy Nelkin and M. Susan Lindee. “The DNA mystique: the gene as a cultural icon,” in *Perspectives in Medical Sociology*, ed. Phil Brown. Waveland Press, 2000, 406-424.

Week 7: Regulating biotechnology

- ** No assigned readings this week.
- ** No sections this week.

Week 8: Public understanding and lay expertise

- Harry Collins and Trevor Pinch, “The science of the lambs: Chernobyl and the Cumbrian sheepfarmers,” in *The Golem at Large: What You Should Know About Technology*, Cambridge University Press, 1998, 113-125.

Week 9: Citizen science and environmental politics

- Robert Bullard, “Environmental racism and ‘invisible’ communities,” *West Virginia Law Review* 96 (1994): 1037-1050.

Unit 3: Biology and the Self

Week 10: Seeing humanity through biology

- Nathaniel Comfort, “How science has shifted our sense of identity,” *Nature* 574 (2019): 167-170.
- Sarah Richardson et al, “Don’t blame the mothers,” *Nature* 512 (2014): 131-132.

Week 11: Race and reproduction

- Charis Thompson, “Strategic naturalization: kinship in an infertility clinic,” in *Relative Values: Reconfiguring Kinship Studies*, eds. Sarah Franklin and Susan McKinnon, Duke University Press, 2001, 175–202.

Week 12: Neuroscience and the authentic self

- Ilina Singh, “Will the ‘real boy’ please behave: dosing dilemmas for parents of boys with ADHD,” *American Journal of Bioethics* 5.3 (2005): 34-47.

Week 13: Globalizing biology

- Margaret Lock and Christina Honde, “Reaching consensus about death: heart transplants and cultural identity in Japan,” in *Social Science Perspectives on Medical Ethics* 16 (1990): 99-119.

Week 14: Conclusion

- **No assigned readings this week.
- **No sections this week.