In a 1959 lecture titled “The Two Cultures,” C. P. Snow famously declared, “the intellectual life of the whole of western society is increasingly being split into two polar groups,” with “literary intellectuals at one pole—at the other scientists.” Snow asserted that the two are separated by “a gulf of mutual incomprehension,” even “hostility and dislike.” Snow’s view of a fundamental antagonism between science and literature has its roots in the nineteenth-century; his concept of “two cultures” remains influential today. But was he right? This course addresses that question, seeking to deepen our understanding of the relationship between science and literature. Our readings will pair literary and scientific texts: we may consider Thomas Pynchon’s fiction and the laws of thermodynamics; Tom Stoppard’s play Arcadia and chaos theory; Allegra Goodman’s novel Intuition and sociological theories of scientific competition. Assignments will include analytical papers as well as opportunities for students to create their own literary responses to science.

Course Goals:

• to gain an understanding of the relationship between science and literature in the Anglophone world of the past two centuries

• to become familiar with the methods of interdisciplinary study that will be crucial to your work as a Gallatin student

• to gain practice exchanging and developing ideas in a seminar-style class

Required Texts:

1. Books. All are available at the NYU Bookstore. Please purchase the specified editions.


** It’s especially important that you obtain the specified edition of this text!**


Copies of the books are available on three-day reserve at Bobst.
2. There will also be supplementary readings each week. Most of these will be distributed in class; some of them may be on our Classes site; go to the Resources link and select the folder labeled “Readings.”

Course Requirements

• Informal assignments. The purpose of these is to help you read actively and prepare for class discussion as well as your papers. There will be three types:

  a) Commonplacing. Every week after Week 1, you’ll contribute an entry to an electronic commonplace book by posting two passages to the class’s blog. Commonplace entries are due by 2 pm on Monday. (Full instructions will be on a separate handout.)

  b) Response Papers. You’ll write five 300-word papers, in response to prompts included on the assignment sheets. The purpose of these papers is to help you develop ideas for discussion and explore topics for your essays. On the day that responses are due, please bring a paper copy to class.

  c) Leading class discussion.

  On one day of the semester, you will work with a partner to lead off discussion of the day’s readings. (The schedule of these presentations will be circulated after the first week of class.)

• Participation: You should arrive punctually and be prepared for class, which means that you’ve completed the reading and any assignments, and brought with you all necessary materials. You should also participate actively in seminar discussions and other activities, which includes contributing thoughtful comments and questions to discussion; engaging with other students as well as the professor; and listening attentively.

• Three formal assignments:

  Paper 1: a four- or five-page paper about The Time Machine, Einstein’s Dreams, or “Entropy” and one of the scientific texts we’ve read alongside them.

  Paper 2: a six- or seven-page paper about Copenhagen, Arcadia, or Intuition and one of the non-fiction texts that we have read alongside them.

  Paper 3: a final project for which there will be two options:
  — Option 1: an eight- to ten-page analytical essay about two of the literary texts that we’ve read (one of which must be a text you haven’t yet written about)
  — Option 2: an artistic piece that engages creatively with science; this may be a short story, play, poem, video, piece of music, painting.

I’ll hand out detailed paper assignments as we go.

Extra-Credit

There will be some opportunities for extra-credit over the course of the semester, which I’ll discuss as they arise.
Grading

15%  Paper 1
20%  Paper 2
30%  Paper 3
15%  Informal Writing
20%  Class Participation

Grading Standards

• informal assignments:

  I'll assess your commonplacing assignment on the basis of whether they are or are not completed punctually. Missing entries will cause your grade to drop.

  I'll assess response papers on the basis of whether they demonstrate thoughtful engagement with the question and texts at hand. Basically what I'm looking for is that you put some time and effort into writing these papers and reflecting on the questions asked. (Same goes for your discussion-leading assignment.)

• papers:

  a paper in the A-range follows the instructions for the assignment; explores a focused topic; presents a coherent argument; motivates that argument by telling the reader why it matters; supports the argument with well-chosen, effectively analyzed evidence; develops the argument through a progressive structure; contains very few errors of spelling, grammar, or punctuation.

  a paper in the B-range resembles an A-range paper in some ways, but may deviate somewhat from the assignment; may explore an unfocused topic; may present an argument that lacks coherence or motivation; may lack evidence to support that argument, or analyze its evidence insufficiently; may feature a structure that is formulaic or lacking logic; may contain multiple errors of spelling, grammar, or punctuation.

  a paper in the C-range resembles a B-range paper in some ways, but may deviate more drastically from the assignment; may explore an overly broad or otherwise problematic topic; may present a simplistic argument, or one that is obvious and lacks motive; may have significant problems working with evidence, including an absence of analysis or signs of misunderstanding; may feature a confusing structure; may contain distracting errors of spelling, grammar, or punctuation.

  a paper in the D-range falls short of addressing the assignment in some significant way.

Policies

• Written Work: Deadlines in this class are important; for that reason, extensions will be granted only in the case of illness, family emergencies, or religious observance. Late papers will be penalized (normally, 1/3 of a grade for each day that they are late). Late informal writing (response papers and commonplace entries) may not be accepted.
• Attendance: You may miss up to two classes without penalty; after that, absence for reasons other than documented illness, family emergency, or religious observance will affect your grade. Habitual lateness will also affect your grade.

• Academic Integrity: As a Gallatin student you belong to an interdisciplinary community of artists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Examples of behaviors that compromise the academic integrity of the Gallatin School include plagiarism, illicit collaboration, doubling or recycling coursework, and cheating. Please consult the Gallatin Bulletin or Gallatin website (http://gallatin.nyu.edu/academics/policies/integrity.html).

• Technology: In order to make it easier for everyone to focus on the collaborative and cooperative work of the seminar, you may not use a laptop, tablet, smartphone, or Google Glass in class for any purpose, unless otherwise instructed. This means that you must print out any assignments or papers needed for class on any given day. Please turn off or silence your mobile phone.

You are welcome to email me with questions; I read email regularly during weekdays, less frequently at night or on weekends.
Schedule
(the schedule is subject to change based on the pace we establish)

Week One

Tuesday, September 2
Introduction

Thursday, September 4
H. G. Wells, *The Time Machine*, to p. 70
Charles Darwin, from *On the Origin of Species*
E. Ray Lankester, from *Degeneration: A Chapter in Darwinism*

Week Two

Tuesday, September 9
Wells, *Time Machine*, complete
Benjamin Kidd, from *Social Evolution*
Due in class: Response Paper 1

Thursday, September 11
Finish discussion of *Time Machine*
Richard Wolfson, from *Simply Einstein*

Week Three

Tuesday, September 16
Alan Lightman, *Einstein’s Dreams*

Thursday, September 18
Alan Lightman, *Einstein’s Dreams*, complete
Due in class: Response Paper 2

Week Four

Tuesday, September 23
Thomas Pynchon, “Entropy”
Norbert Wiener, “Progress and Entropy”
Peter Coveney and Roger Highfield, “The Arrow of Time”

Thursday, September 25
In-class work towards Paper 1; please draft your introduction and bring a printed copy to class.

Sunday, September 28
Due by 11:00 pm: Paper 1

Week Five

Tuesday, September 30
Michael Frayn, *Copenhagen*, complete
John Gribbin, from *In Search of Schrödinger’s Cat*
Thursday, October 2
Finish discussion of *Copenhagen*

Week Six

Tuesday, October 7
  Tom Stoppard, *Arcadia*, Act One
  James Gleick, from *Chaos: Making a New Science*

Thursday, October 9
  Stoppard, *Arcadia*, Act Two
  Due in class: Response Paper 3

Week Seven

Tuesday, October 14
FALL BREAK•NO CLASS

Thursday, October 16
  Thomas Henry Huxley, “Science and Culture”
  Matthew Arnold, “Literature and Science”
  C. P. Snow, from *The Two Cultures*

EXTRA-CREDIT OPPORTUNITY:
Careers in Science Writing: Science for a General Audience, 6:30–8:00 pm
You’ll receive extra-credit for attending this event. Anyone who writes me a
200-word email of their impressions will receive double extra-credit, as will
anyone who attends the event and asks a question during the discussion.

Week Eight

Tuesday, October 21
  Allegra Goodman, *Intuition*

Thursday, October 23
  Goodman, *Intuition*
  Robert Merton, “Priorities in Scientific Discovery”
  Due in class: Response Paper 4

Week Nine

Tuesday, October 28
  Goodman, *Intuition*
  Steven Shapin, from *The Scientific Life*

Thursday, October 30
  Goodman, *Intuition*, complete

Week Ten

Tuesday, November 4
  In-class work towards Paper 2: Please draft your introduction and one body
  paragraph (it doesn’t have to be the first body paragraph, but it should be an
important paragraph in which you do some real analysis) and bring a printed copy to class with you.
Amitav Ghosh, *The Calcutta Chromosome*, to p. 59

Thursday, November 6
Visit from Yevgeniya Traps to discuss registration
*The Calcutta Chromosome*, to p. 154

Friday, November 7
Due at 6 pm: Paper 2

*Week Eleven*

Tuesday, November 11
Steve Woolgar, from *Science, the very idea*

Thursday, November 13
David Turnbull, from *Masons, Tricksters, and Cartographers*

*Week Twelve*

Tuesday, November 18
Ghosh, *The Calcutta Chromosome*, complete
Ray Kurzweil, from *The Singularity is Near*
Response Paper 5

Thursday, November 20
Thomas Hardy, *Tess of the d'Urbervilles*, through Chapter XII, p. 94
review Darwin, *On the Origin of Species*, and Lankester, *Degeneration*

*Week Thirteen*

Tuesday, November 25
Hardy, *Tess of the d'Urbervilles*, through Chapter XXVI, p. 185
George J. Romanes, “Weisman's Theory of Heredity”

Thursday, November 27
NO CLASS•HAPPY THANKSGIVING!

*Week Fourteen*

Tuesday, December 2
*Tess of the d'Urbervilles*, through Chapter XXXIII, p. 234
Huxley, *Evolution and Ethics*
Response Paper 6

Thursday, December 4
visit from Erika Goldman, editor of Bellevue Literary Press
excerpt from either *Invisible Beasts* or *The Poetic Species*
*Tess of the d'Urbervilles* through Chapter XLII, p. 303
Week Fifteen

Tuesday, December 9
Tess of the d’Urbervilles, through Chapter XLVIII, p. 357
Response Paper 7

Thursday, December 11
Tess of the d’Urbervilles, complete
course wrap-up

Week Sixteen

Tuesday, December 16: final projects due by 10 am