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: Michael Frayn’s play *Copenhagen* and quantum physics; Andrea Barrett’s story “The Particles” and a sociological account of scientific norms; Thomas Hardy’s *Tess of the d’Urbervilles* and evolutionary theory. 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. You must own books in hard copy, not on e-readers.


   ** It’s especially important that you obtain the specified edition of this text! Please ask me if you have questions. **


2. Course Packet. Available at the NYU Bookstore.

Copies of the books and course packet are available on three-day reserve at Bobst.

3. I will also distribute some supplementary readings in class or post them on our Classes site.

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 four types:

  a) Commonplacing. Every week after Week 2, 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 every Monday. (Full instructions will be on a separate handout.)

  b) Response Papers. You'll write six 300-word response 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 discussion of the day's readings. (The schedule of these presentations will be circulated after the first week of class.)

  d) ePortfolio

  The ePortfolio is an online tool for recording your reflections on your courses; it's meant to help you develop your concentration and prepare for your IAPC, rationale, booklist, and colloquium, and to meet other students who share your interests. You'll complete three ePortfolio assignments for this course. I encourage you to discuss these with your advisor as well.

- 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 Einstein's Dreams, Copenhagen, or “Entropy” and one of the scientific texts we've read alongside them.

  Paper 2: a six- or seven-page paper about “The Particles” or The Calcutta Chromosome 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: a seven-page analytical essay about *The Heart of Redness*, *The Time Machine*, or *Tess of the d’Urbervilles* and one of the non-fiction texts that we have read alongside them
— Option 2: an artistic piece that engages creatively with science

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

**Grading**

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**Grading Standards**

• informal assignments:

  I’ll assess your commonplacing assignment on the basis of whether they are or are not completed punctually. Missing or late 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. I’ll use the same criteria for your discussion leading and ePortfolio assignments.

• 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, $\frac{1}{3}$ of a grade for each day that they are late). Late informal writing (response papers and commonplace entries) may not be accepted.

You must submit all three formal assignments to pass the course, and you must do so within the time frame that I specify.

• 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.

**If you miss more than six class meetings for any reason, you may not pass the course.**

• 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 smartwatch in class for any purpose, unless otherwise instructed or unless there are significant extenuating circumstances that you’ve discussed with me. 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 and alerts on your smartwatch.

You are welcome to email me with questions; I read email regularly during weekdays, less frequently at night or on weekends.

**Week One**

Tuesday, September 6
   Introductions

Wednesday, September 7
   Please complete your first ePortfolio assignment by 2 pm today: add a picture and write a short bio (200–300 words) introducing yourself. Give me and your advisor viewing privileges.

Unit 1: Twentieth-Century Physics

Thursday, September 8
   Richard Wolfson, from *Simply Einstein* (excerpts; about 35 pages)
   Alan Lightman, *Einstein’s Dreams*, to p. 78
Week Two

Tuesday, September 13
Alan Lightman, *Einstein’s Dreams*, complete
Due in class: Response Paper 1 (instructions on Paper 1 handout)

Thursday, September 15
Finish discussion of *Einstein’s Dreams*
John Gribbin, from *In Search of Schrödinger’s Cat* (excerpts; about 35 pages)

Week Three

Monday, September 19
first week of commonplacing! post by 2 pm

Tuesday, September 20
Michael Frayn, *Copenhagen*, complete
Response Paper 2

Thursday, September 22
C. P. Snow, from *The Two Cultures*, 1–16
Finish discussion of *Copenhagen*
Due by class time today: second ePortfolio assignment. Please list all of your classes this semester and write a short reflection (200–300 words) on what you expect and hope to learn in our course (i.e., just Science and Literature).

Week Four

Monday, September 26
commonplace by 2 pm

Tuesday, September 27
Norbert Wiener, “Progress and Entropy,” 20–26
Peter Coveney and Roger Highfield, “The Arrow of Time,” 147–155

Thursday, September 29
In-class work towards Paper 1; please draft your introduction and bring a printed copy to class.
Finish discussion of “Entropy”

Friday, September 30
Due at 6 pm: Paper 1

Unit 2: The Sociology of Science

Week Five

Monday, October 3
commonplace by 2 pm
Tuesday, October 4
RadioLab Podcast: “Leaving Your Lamarck”

Thursday, October 6
Andrea Barrett, “The Particles,” 164–186
Response Paper 3 (instructions on Paper 2 handout)

Week Six

Monday, October 10
no commonplacing today

Tuesday, October 11
Amitav Ghosh, The Calcutta Chromosome, to p. 79

Thursday, October 13
Ghosh, The Calcutta Chromosome, to p. 154

Week Seven

Monday, October 17
commonplacing due by 2 pm

Tuesday, October 18
Ghosh, The Calcutta Chromosome, to p. 230
Steve Woolgar, from Science, the very idea, 15–29 + 53–66
Response Paper 4 (instructions on Paper 2 handout)

Thursday, October 20
Ghosh, The Calcutta Chromosome, complete
Ray Kurzweil, from The Singularity is Near (excerpts; 17 pages)

Friday, October 21
Field trip to the New York Botanical Garden in the Bronx. Time and further details to be announced in class.

Unit 3: Literature and Ecology

Week Eight

Please submit this week’s commonplacing assignment by 2 pm on Wednesday

Tuesday, October 25
no class today

Thursday, October 27
Zakes Mda, The Heart of Redness, to the end of chapter 4 (p. 90)
Response Paper 5 (instructions on Paper 3 handout)
Week Nine

Monday, October 31
commonplacing due by 2 pm

Tuesday, November 1
visit from Yevgenia Traps to discuss first-year registration

Thursday, November 3
Mda, *The Heart of Redness*, to the end of chapter 6 (p. 152)

Friday, October 28
Due at 6 pm: Paper 2

Week Ten

Monday, November 7
commonplacing due by 2 pm

Tuesday, November 8
Mda, *The Heart of Redness*, to the end of chapter 8 (p. 204)

Thursday, November 10
Mda, *The Heart of Redness*, complete (to p. 277)
Rob Nixon, “Environmentalism and Postcolonialism,” 233–43

Unit 4: Evolution and Literature

Week Eleven

Monday, November 14
commonplacing due by 2 pm

Tuesday, November 15
H. G. Wells, *The Time Machine*, to p. 70
Charles Darwin, from *On the Origin of Species*, 63–86 + 104–106
E. Ray Lankester, from *Degeneration: A Chapter in Darwinism*, 11–17, 28–33, 50–62

Thursday, November 17
*Time Machine*, complete
Benjamin Kidd, from *Social Evolution*, 31–46 + 56–62
Due in class: Response Paper 6 (instructions on Paper 3 handout)

Week Twelve

Monday, November 21
commonplacing due by 2 pm

Tuesday, November 22
Thomas Hardy, *Tess of the d'Urbervilles*, through Chapter XI, end of Phase the First (to p. 83)

Thursday, November 24 • Thanksgiving Break; no class
Week Thirteen

Monday, November 28
commonplacing due at 2 pm

Tuesday, November 29
Tess of the d’Urbervilles, through Chapter XXIII (to p. 163)
Response Paper 7

Thursday, December 1
Tess of the d’Urbervilles, through Chapter XXX (to p. 209)

Week Fourteen

Monday, December 5
commonplacing due at 2 pm

Tuesday, December 6
Tess of the d’Urbervilles through Chapter XXXIX (to p. 284)

Thursday, December 8
Tess of the d’Urbervilles, through Chapter XLVII (to p. 352)
Huxley, Evolution and Ethics (excerpts; about 40 pages total)
Response Paper 8 (instructions on Paper 3 handout)

Week Fifteen

Monday, December 12
no commonplacing; instead, please complete your third ePortfolio assignment
by 2 pm: write an End-of-Term reflection in which you reflect on what you’ve
learned in our class that you think you can take forward into other classes and
into your concentration

Tuesday, December 13
no class (classes meet on a Monday schedule)

Thursday, December 16
Tess of the d’Urbervilles, complete