

## **WR 150: Dissecting the Nineteenth Century: Science in Victorian Literature and Culture**

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“Michael Faraday, Lecture in the Theatre at the Royal Institution,” c. 1856. The Royal Institution, London, UK / Bridgeman Images. License purchased 18 May 2018.

### **COURSE DESCRIPTION**

WR 100 and WR 150 make up a two-semester sequence of writing courses required of most Boston University undergraduates. They are designed to help all students acquire skills and habits of mind essential both to their academic success and to their future personal, professional, and civic lives. WR 100 and WR 150 are taught as small, topic-based seminars. Different sections of these courses address a range of different topics. The specific topic of this section of WR 150 is as follows:

Much of what we now think of as “science” – its practices, its disciplines, and even the term “scientist” itself (coined in 1833 by the British polymath William Whewell) – can be traced back to Victorian England (1837-1901). With the shift from an agricultural to an industrial economy came a growing urban population and an almost unprecedented need for rapid advancements in technology, medicine, and mathematics. As the middle classes gained more time for intellectual pursuits and educational reforms created a new population of readers, science found eager and curious audiences, who attended lectures, read periodicals, and visited museums. The explosion and consolidation of new fields of study – from anatomy and biology, to geology and astronomy, to optics and acoustics – resulted largely from the Victorians’ desires to confront their changing world and better understand their place in it.

These new scientific developments incited delight, anxiety, and confusion. At the same time that brain scientists hailed the unique complexities of the human mind, evolutionary theorists discovered humans' kinship to microscopic bugs and cells. At the same time that the new profession of the "doctor" emerged to heal the body, anatomists dissected corpses and severed limbs. At the same time that technologies of sight and sound were helping humans to see and hear, environmental scientists realized that industrial pollution and urban noise were ruinous to the senses.

In this course, we will explore Victorian literary responses to this burgeoning scientific world. While we now often think of science and literature as disparate fields, these two disciplines were closely linked in the nineteenth century. Victorian writers found in science exciting new ideas and images to incorporate into their fiction and poetry. By the same token, scientists seeking to reach a wide, public audience used literary techniques (metaphors, images, analogies) to enhance the appeal and readability of their work. How did Victorian writers absorb, question, critique, or reject the new discoveries that pervaded their world? What did science explain that literature could not – and vice-versa? What might the Victorians tell us about the relationship between the humanities and the sciences – and the possibilities afforded by their intersection – today?

### COURSE GOALS

Although they vary in topic, all sections of WR 100 and WR 150 have certain goals in common. In WR 100, you developed your abilities to:

- craft substantive, motivated, balanced academic arguments
- write clear, correct, coherent prose
- read with understanding and engagement
- plan, draft, and revise efficiently and effectively
- evaluate and improve your own reading and writing processes
- respond productively to the writing of others
- express yourself verbally and converse thoughtfully about complex ideas.

In WR 150, you will continue developing these abilities while also learning to conduct college-level research and work intensively on your prose style. The papers you will write for WR 150 will be similar in kind to those you wrote for WR 100, but they will be longer and more complex. In WR 150, you will:

- *learn how to **search** for materials using contemporary online search tools and databases*
- *learn how to **access** materials online or in the library, **including archival sources***
- *develop your abilities to **evaluate** the authority and reliability of sources*
- *develop your abilities to **make critical choices** among the materials at your disposal.*

### COURSE REQUIREMENTS

As a writing seminar, WR 100 requires both a good deal of reading and writing and your active involvement in a variety of class activities. Specific course requirements are:

- self-assessment
- additional exercises as assigned
- three major papers
- final portfolio
- at least two conferences with your instructor
- attendance and participation

### COURSE MATERIALS

Otis, Laura, ed. *Literature and Science in the Nineteenth Century: An Anthology*. 2002. Oxford: Oxford University Press, 2009. Marked [L&S] on syllabus. ISBN: 978-0-19-955465-2.

Shelley, Mary. *Frankenstein, or The Modern Prometheus*. 1818. Ed. Maurice Hindle. New York: Penguin, 2003. ISBN: 978-0-141-43937-1.

Stevenson, Robert Louis. *The Strange Case of Dr. Jekyll and Mr. Hyde and Other Tales of Terror*. 1886. Ed. Robert Mighall. New York: Penguin, 2003. ISBN: 9780141439730.

Turabian, Kate L., Gregory G. Colomb, and Joseph M. Williams. *Student's Guide to Writing College Papers*. Chicago: University of Chicago, 2010.

Our class also has a Blackboard site that contains the syllabus, assignments, and other course-related materials. You can log in to our Blackboard page at: <http://learn.bu.edu/>  
Materials marked [BB] on the syllabus will be available on Blackboard.

### ASSIGNMENTS

You will be given a range of assignments in this course, including a self-assessment, various reading and writing exercises, three major papers, and a final portfolio. Much of this work will not be graded, but that does not mean it is unimportant. Students who prepare diligently for class, participate actively, and take the homework exercises and drafts seriously generally learn more and write better final papers than those who do not.

**Self-Assessment:** At the beginning of the semester, you will be asked to submit a written self-assessment in which you take stock of your reading and writing abilities and establish some personal goals you wish to pursue over the course of the semester. For grading purposes, your self-assessment will be considered your first exercise.

**Exercises:** We will use the term *exercises* to refer to various low-stakes assignments and activities that you will be asked to complete over the course of the semester. You will do some of these exercises in class; others will be given as homework. I recommend that you purchase a notebook to contain your in-class writing and that you bring this notebook with you to class each day. Your exercises will not receive explicit grades, although you will receive credit for

completing them on time. Your performance on these assignments may also affect your participation adjustment (see below).

**Major Papers (drafts and final versions):** We will use the term *draft* to refer to unfinished or preliminary versions of your three major papers. You will be required to write two drafts of Paper 1 and at least three drafts of Papers 2 and 3. For Papers 2 and 3, one of your drafts will receive comments from me, either in written or verbal form; the other will receive feedback from your classmates. Drafts will not receive explicit grades, although you will receive credit for completing them on time. Remember that you are more likely to write a better final paper if you write a substantive draft. All drafts and final papers must be word-processed and be documented in MLA style.

Your **first two papers (Papers 1 and 2)** will respond to a prompt about a course text. These papers will require close-reading and scholarly research – skills we will practice throughout the semester. For your **final research paper (Paper 3)**, you will conduct original research on a scientific movement of your choice and discuss its relationship to a work of nineteenth-century literature. (You may write about a work we read earlier in the semester or choose your own text, in consultation with me.) You will use both archival and scholarly sources to make an original argument.

**Portfolio:** At the end of the semester, you will be asked to submit a portfolio containing your self-assessment, major papers (drafts and final versions), other supporting artifacts, and an introductory essay. The portfolio provides you with an opportunity to document and reflect on your development as a reader and writer over the course of the semester. Your portfolio will contain work that has already been graded. This work will not be re-graded in the portfolio. Rather, your grade for the portfolio will be based on those things that make the portfolio itself a coherent work: the introduction, any additional framing (annotations, captions, etc.), the selection and arrangement of artifacts, and overall organization.

**Sharing of Student Writing:** Experienced writers routinely share their work with others, because they understand that the best way to improve a piece of writing is to test it out with actual readers. In this class, you will learn how to respond productively to the writing of others and how to use feedback from others to improve your own work. All students in the class will be required to share at least one draft of each paper. If you are concerned about sharing your writing, please talk with me about your concerns.

### GRADING AND EVALUATION

Participation, attendance, and engagement:	10%
Paper 1:	15%
Paper 2:	25%
Paper 3:	40%
Final Portfolio:	10%

**Late and Missed Assignments:** Unless you make other arrangements with me in advance, graded assignments will be penalized by one-third of a letter grade for each class day they are

late. If you submit a homework exercise or draft late, I cannot promise to read it in time for my comments to be useful to you. If you do not turn in drafts, you are still responsible for turning in final versions of your papers when they are due. Please note too that we will regularly work with our exercises and drafts in class. If you are habitually late with your assignments, you will be unable to participate fully in the class.

As your instructor I am committed to providing you with timely written or verbal feedback on one draft of each major paper and written feedback and a grade on the final version of each major paper.

**Participation and Attendance:** Since this course is a seminar, your regular attendance and participation are essential both to your own learning and to your classmates' learning. Under ordinary circumstances, missing more than one week of class will lower your final grade. Missing more than two weeks of class may lead to a failing grade in the course. Note that these absences need not be consecutive.

### CAS CENTER FOR WRITING

At the CAS Center for Writing (100 Bay State Road, 3<sup>rd</sup> floor with a satellite office at Mugar Library) students enrolled in WR courses can receive one-on-one consultations about their writing with well-trained tutors familiar with WR assignments. When you visit the center, you should expect to be actively involved in your session. Tutors will work with you at any stage in your writing process, but they will not edit or correct your paper for you. Rather, they will work with you to help you do your own best work. The center is a resource for all WR students. Whether you consider yourself to be a strong writer or a weak one, you can benefit from consulting with a tutor.

The CAS Center for Writing is open Monday through Friday. Hours for the current semester are posted on the website below (common hours are between 9 a.m. and 5:15 p.m. or 7:30 p.m.). While the center accepts walk-in visits, you are strongly encouraged to make an appointment in advance. Because of the high demand for consultations, students are limited to one reservation per week. You may schedule a session online:

<http://www.bu.edu/writingprogram/the-writing-center/>

You may also schedule a session in person at the CAS Center for Writing or by calling 617-358-1500. Cancellations must be made at least 12 hours in advance.

### *WR*

The CAS Writing Program publishes an online journal of exemplary writing from WR courses. If you are interested in looking at samples of successful WR papers, or if you just want to read some good essays, I encourage you to visit the journal:

<http://www.bu.edu/writingprogram/journal/>

## PLAGIARISM

Plagiarism is the passing off of another's words or ideas as your own, and it is a serious academic offense. Cases of plagiarism will be handled in accordance with the disciplinary procedures described in the College of Arts and Sciences Academic Conduct Code. All WR students are subject to the CAS code, which can be read online:

<http://www.bu.edu/academics/resources/academic-conduct-code/>

Penalties for plagiarism can range from failing an assignment or course to suspension or expulsion from the university. In this class, we will discuss conventions for using and citing sources in academic papers. If you have any questions about plagiarism, I invite you to speak with me.

## RESOURCES

CAS Writing Program: Administers all WR courses and the CAS Center for Writing. You may contact the Writing Program if you have any concerns about your WR class.

100 Bay State Rd., 3<sup>rd</sup> Floor  
617-358-1500  
<writing@bu.edu>

Boston University Libraries: Offer a wealth of online and print resources. Research Librarians will introduce you to the many resources the library offers in any field of research. They can work with you to develop a research plan and organize your sources. The Research Center welcomes you for walk-in consultations on the first floor of Mugar Memorial Library or at any other library on campus.

Research appointments can be made at <http://www.bu.edu/common/request-an-appointment/>.

Mugar Memorial Library  
771 Commonwealth Avenue  
Phone: 617-353-2700  
<http://www.bu.edu/library>

Educational Resource Center: Offers tutorial assistance to all undergraduate students in a range of subjects, including writing. You should use the Writing Program's Center for Writing for your WR classes, but you may wish to visit the ERC for tutorial assistance in other subjects.

100 Bay State Rd, 5<sup>th</sup> floor  
Phone: 617-353-7077  
<http://www.bu.edu/erc>

CAS Academic Advising: A central resource for all questions concerning academic policy and practice in the College of Arts and Sciences. The office is headed by the Associate Dean for

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Student Academic Life and has a staff of fifteen faculty advisors and five academic counselors. All students can receive academic advice about and assistance through this office. Students who have not yet declared concentrations can receive pre-registration advising through this office.

100 Bay State Rd. 4<sup>th</sup> Floor  
Email: [casadv@bu.edu](mailto:casadv@bu.edu)  
Phone: 617-353-2400  
<http://www.bu.edu/casadvising/>

Here are links to the advising offices of other BU colleges:

CFA: <http://www.bu.edu/cfa/resources/advising/>  
CGS: <http://www.bu.edu/cgs/students/fact-sheets/academic-advising/>  
COM: <http://www.bu.edu/com/current-students/student-services/>  
ENG: <http://www.bu.edu/eng/current-students/ugrad/advising/>  
SAR: <http://www.bu.edu/sargent/current-students/academic-services-center/>  
SED: <http://www.bu.edu/sed/faculty-staff/handbook/admin-and-org/> (see Student Affairs Offices)  
SHA: <http://www.bu.edu/hospitality/academics/advising/>  
SMG: <http://management.bu.edu/undergraduate-program/academics/advising/>

Office of Disability Services: Responsible for assisting students with disabilities. If you have a disability, you are strongly encouraged to register with this office. You may be entitled to special accommodations in your courses, such as additional time on tests, staggered homework assignments, or note-taking assistance. This office will give you a letter outlining the accommodations to which you are entitled that you can share with your teachers. If you require accommodations, you must present me with an official letter from Disability Services.

19 Deerfield Street, 2nd floor  
Phone: 617-353-3658  
<http://www.bu.edu/disability>

## SCHEDULE

Note: readings and assignments are listed on the day they are *due*.

### Week 1: A Century of Discovery

- T: Introductions and overview; in-class reading of Thomas Henry Huxley, from *Science and Culture*, pp. 4-6 [L&S]
- Th: Laura Otis, "Introduction" to *Literature and Science in the Nineteenth Century*, pp. xvii-xxviii [L&S]; Bernard Lightman, "Science and Culture," pp. 12-42 [BB]

### Week 2: Bodies, Animal and Human

- T: **Self-Assessment due**; Luigi Galvani, from "De Viribus Electricitatis;" Humphry Davy, from "Discourse, Introductory to a Course of Lectures on Chemistry" [L&S]
- Th: Mary Shelley, *Frankenstein*, vol. I

### Week 3: Bodies, Animal and Human (cont.)

- T: *Frankenstein*, vol. II
- Th: *Frankenstein*, vol. III

### Week 3: Evolution

- T: Charles Darwin, from *On the Origin of Species*; Herbert Spencer, from *Principles of Biology* [BB]; Gillian Beer, *Darwin's Plots*, pp. 1-22
- Th: **First draft of Paper 1 due**; George Eliot, from *Middlemarch* [BB]

### Week 4: Evolution (cont.)

- T: George Meredith, "Ode to the Spirit of the Earth in Autumn;" Gerard Manley Hopkins, "Nature is a Heraclitean Fire;" Thomas Hardy, "Hap," "At A Bridal" [BB]
- Th: **Final draft of Paper 1 due**; May Kendall, "The Lay of the Trilobite" [L&S]

### Week 5: Geology

- T: Charles Lyell, from *Principles of Geology* [L&S]; Brenda Maddox, from *Reading the Rocks*; Martin J. S. Rudwick, from *Scenes from Deep Time*; opening of Charles Dickens, *Bleak House* [BB]
- Th: J.M.W. Turner, "Vesuvius in Eruption;" William Dyce, "Pegwell Bay;" Alfred, Lord Tennyson, from *In Memoriam* [BB]

### Week 6: Astronomy

**\*Monday and Tuesday: conferences with me about Papers 1 & 2\***

- T: Lord Byron, "Darkness;" John Keats, "Bright Star;" Gerard Manley Hopkins, "The Starlight Night;" E.L. Trouvelot astronomical drawings [BB]; William Herschel, from *On the Power of Penetrating into Space by Telescopes* [S&L]
- Th: **First draft of Paper 2 due**; Thomas Hardy, from *Two on a Tower*; Anna Henchman, "Hardy's Stargazers," pp. 131-6 [BB]

### Week 7: Mathematics



- T: Ada Lovelace, *Sketch of the Analytical Engine*; George Boole, from *An Investigation of the Laws of Thought*; John Venn, from *The Logic of Chance* [S&L]
- Th: Lewis Carroll, from *Through the Looking Glass* and *The Game of Logic* [S&L]

**Week 8: Technology – Communication**

- T: View Samuel B. Morse, First Telegraphic Message ([Library of Congress](#)); look through LOC [Alexander Graham Bell Collection](#); Rudyard Kipling, “The Deep-Sea Cables” [L&S]
- Th: **Final draft of Paper 2 due**; Bram Stoker, from *Dracula* [BB]

**Week 9: Technology – Transportation**

- T: Wolfgang Shivelbusch, from *The Railway Journey* [BB]
- Th: Dickens, from *Dombey and Son* [BB]; Walt Whitman, “To a Locomotive in Winter” [L&S]

**Week 10: Medicine**

- T: Browse [Buchan’s Domestic Medicine](#); Louis Pasteur, *On the Organized Bodies Which Exist in the Atmosphere* [L&S]; Eliot, from *Middlemarch* [BB]
- Th: Excerpts from Florence Nightingale, *Notes on Nursing*; Mary Seacole, *Wonderful Adventures of Mrs. Seacole in Many Lands* [BB]

**Week 11: (Mis)uses of science (class)**

- T: Edwin Chadwick, “An Inquiry into the Sanitary Condition of the Labouring Population of Great Britain;” Henry Mayhew, from *London Labour and the London Poor*; Elizabeth Gaskell, from *North and South*; Matthew Arnold, “East London” and “West London” [L&S]
- Th: **Research question for Paper 3 due; in-class trip to Howard Gottlieb Archival Research Center for introduction to archives (libraries and online)**

**Week 12: (Mis)uses of science (race, sex)**

- T: Robert Knox, from *The Races of Men*; Francis Galton, from *Inquiries into Human Faculty and its Development*; Max Nordau, from *Degeneration* [L&S]; George Du Maurier, from *Trilby* [BB]
- Th: **Annotated bibliography for Paper 3 due**; Richard von Krafft-Ebing, from *Psychopathia Sexualis*; Edward Carpenter, from *The Intermediate Sex*; Havelock Ellis, from *Sexual Inversion*; Anon., from *Teleny: A Physiological Romance of Today*

**Week 13: Pseudo-science**

- T: George Combe, from *Elements of Phrenology*; Harriet Martineau, from *Letters on Mesmerism*; Robert Browning, “Mesmerism” [L&S]
- Th: **First draft of Paper 3 due; come to class with “elevator speech;”** Du Maurier, from *Trilby*

**Week 14: The Science of Detection**

- \*Monday and Tuesday: paper conferences with me\***
- T: Arthur Conan Doyle, “A Scandal in Bohemia;” “Science, Technology, and the Law”

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Judith Flanders, from *The Invention of Murder* [BB]  
-TH: Watch *Ripper Street*, “Pilot”

**Week 15: Science Gone Wrong**

-T: **Second draft of Paper 3 due; peer review;** Robert Louis Stevenson, *The Strange Case of Dr. Jekyll and Mr. Hyde*, chs. 1-5  
-Th: *The Strange Case of Dr. Jekyll and Mr. Hyde*, chs. 6-10

**Week 16: Exhibitions: Final Papers**

-T: Audrey Jaffe, “On the Great Exhibition” [*BRANCH*, liked on BB]; look at images of Crystal Palace; read female life writing accounts of Crystal Palace exhibition [BB]  
-Th: **Final draft of Paper 3 due; in-class presentations begin**

**Week 17: Exhibitions: Final Papers (cont.)**

-T: **In-class presentations (cont.)**  
-Th: **Final Portfolio due**