Senior Seminar: Science, Literature, & Popular Culture

Dr. Everett Hamner
Western Illinois University, Spring 2014
ENG 476, Wednesdays 9-11:30, QC Riverfront 118, westernonline.wiu.edu
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General Catalog Description & Prerequisites

Intensive exploration of a major issue, era, author, or text, culminating in the writing of a substantial scholarly essay. Writing Instruction in the Discipline (WID) course. Prerequisite: ENG 280, ENG 299 with a grade of C or better, senior standing, or consent of department chairperson.

Specific Description & Goals

This senior seminar touches on many intersections of science and literature while focusing on the stories we tell about human biology. What can fictional and nonfictional narratives tell us about the impact of biotechnology? How is genomic science changing conceptions of personhood and the relative influence of inheritance and environment? Conversely, how are new forms of bodily knowledge transforming the very structures of our stories?

In pursuing answers to these questions and others, this course lays a groundwork with several weeks spent examining twentieth-century American attitudes toward science and medicine (partially via Sinclair Lewis) and digesting the basics of contemporary synthetic biology. Soon we turn to some of the most prescient and revealing work of twenty-first-century literature and film. Written from the UK and Canada, Zadie Smith’s and Margaret Atwood’s feminist portraits of genomically-engineered life are in turns amusing, disturbing, and insightful, while American Richard Powers’s 2009 novel represents perhaps the most extensively scientifically informed and literarily complex genomic fiction to date.

Coursework includes four reading/viewing quizzes, a unique media artifacts research project, and a conference-length argumentative paper developed across the semester. Our main goals include:

- Exploring various ways twenty-first-century science and storytelling rely upon one another.
- Enjoying more nuanced understandings of specific literary, graphic, and filmic texts, especially those that might resist us without a layperson’s grasp of emerging capacities of bioengineering.
- Expanding our sensitivity to science’s roles in confirming and undercutting assumptions about gender, sexuality, sexual orientation, race, class, nation, religion, and dis/ability.
- Evaluating the potential for narratives about science to both hinder and facilitate public understanding and support of new research and technology.
**Meeting, Reading/Viewing, & Assignment Schedule**

**PLEASE NOTE:** Any article (etc.) below not listed under “texts for purchase” on p. 6 will be available on Western Online under “Content.”

| Question 1: In what measure can a genomic lens provide meaningful information to individuals? How do our stories reflect, caricature, enable, and inhibit such potential? |
| 1st WEEK, JAN 15TH: ENTERING THE GENOME AGE |
| IN CLASS: | ~*Gattaca* (1997)  
| | ~Self-introductions (using introductory survey handout)  
| | ~Syllabus review and discussion of goals and assignments |

| MON, JAN 20TH: ALL-DAY BUS TRIP TO SHEDD AQUARIUM, CHICAGO |

| 2nd WEEK, JAN 22ND: GENOMICS, FATE, & CHOICE |
| READING: | ~Octavia Butler, “The Evening and the Morning and the Night”  
| | ~Michael Bérubé, *Life As We Know It: A Father, A Family, and an Exceptional Child* (ch. 1-2)  
| | ~Richard Powers, “The Book of Me” |
| WRITING: | ~Online media archive and discussion board opens (through week 8) |
| IN CLASS: | ~“The Scale of the Universe” and online learning modules via Cold Spring Harbor Labs  
| | ~Kira Peikoff, “I Had My DNA Picture Taken, with Varying Results”  
| | ~Angelina Jolie, “My Medical Choice” |

| Question 2: Where are emerging controversies about personal genomics actually new? How do earlier fictions illuminate present tensions between cells and selves, bodies and souls? |

| 3rd WEEK, JAN 29TH: THE GIFT OF KNOWLEDGE |
| READING: | ~Sinclair Lewis, *Arrowsmith* (ch 1-20) |
| IN CLASS: | ~Historical contexts: the Scopes Trial of 1925 and the Intelligent Design trial of 2005  
| | ~In-class genomics primer continued …  
| | ~Overview of the argumentative paper assignment |

| 4th WEEK, FEB 5TH: THE LURE OF HUBRIS |
| READING: | ~Sinclair Lewis, *Arrowsmith* (ch 21-40) |
| IN CLASS: | ~Quiz #1: all materials and lectures since week 1, including *Arrowsmith*  
| | ~Medicine vs. research: the evolution of a false binary  
| | ~In-class genomics primer continued … |
**Question 3:** Where do popular novels and films about biological self-knowledge and transformation reveal core truths and common fallacies about microbiological reality?

**5th WEEK, FEB 12TH: NO CLASS (LINCOLN’S BIRTHDAY)**

**READING:** ~Michael Sandel, “The Case Against Perfection”  
~Excerpts: George Church & Ed Regis, *Regenesis* (Prologue and “Epigenetic Epilogue”)  
~Excerpts: Ronald Green, *Babies by Design: The Ethics of Genetic Choice* (ch. 4, part of ch. 8)

**WRITING:** ~Paper Step 1: 1-2 pages exploring possible texts, topics, & questions due online Fri 2/14

**Question 4:** Where is genomic narrative about future possibilities and where is it about present injustice? Why does it matter to those uninterested in scientific and technological details?

**6th WEEK, FEB 19TH: CARBON COPY CLONE CATASTROPHE**

**VIEWING:** ~*Never Let Me Go* (2005)  
~*Moon* (2009)

**IN CLASS:** ~“What is Cloning?” and “Stem Cells & Human Cloning” sites  
~Clone thrillers of late twentieth century fiction  
~Excerpt from Kazuo Ishiguro’s novel *Never Let Me Go*

**7th WEEK, FEB 26TH: SYNTHETIC BIOLOGY’S SINISTER SIDE**

**READING:** ~Margaret Atwood, *Oryx and Crake* (ch. 1-7, pp. 1-169)

**IN CLASS:** ~GMOs: truly dangerous? bad rap?

**8th WEEK, MAR 5TH: THE LIMITS OF UTOPIA, DYSTOPIA, AND SATIRE**

**READING:** ~Atwood, *Oryx and Crake* (ch. 8-15, pp. 173-376)

**WRITING:** ~Online media archive and discussion board closes (after week 8)  
~Paper Step 2: revision and expansion of Step 1 after further consideration, due Fri 3/14

**IN CLASS:** ~Quiz #2: all materials and lectures since week 4’s quiz  
~Atwood’s sequels and MaddAddam’s World on FlipBoard

**MAR 12TH: NO CLASS (SPRING BREAK)**

What does it mean that trans-species biological and biotechnological images are becoming intrinsic to novels and films about transnational migration and globalization—and vice versa?

**9th WEEK, MAR 19TH: MULTIGENERATIONAL IMMIGRANT NARRATIVE**


**IN CLASS:** ~Biological and cultural definitions of “race”
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<th>Week</th>
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<td>FRI Apr 6: Abstract Submission Deadline for Undergrad Research Day (4/18)</td>
<td>How does the blurring of fiction and nonfiction reposition inheritance, environment, and individual choice? How is literary structure coevolving beside biotechnological transformations—reimagining science’s nature and reach?</td>
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<td>13th, Apr 16th: Undergraduate Research Day Trip to Macomb</td>
<td>~Paper Step 5: half-page brief summaries and analysis of three relevant scholarly articles’ main arguments due Fri 4/18</td>
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<td>14th, Apr 23rd: “Creative Nonfiction”</td>
<td>~Generosity: An Enhancement (parts 3-5, pp. 130-296)</td>
<td>~Quiz #4: all materials and lectures since week 11’s quiz ~Course evaluations ~The strategy of reverse outlining and other key revision questions</td>
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<td>15th, Apr 30th: Writing Time &amp; Individual/Group Consultations</td>
<td>~Paper step 6: revised full-length draft due by class time (bring hard copy)</td>
<td>~Group writing workshop time</td>
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FINALS WEEK, MAY 7TH: PAPER DISCUSSIONS

WRITING: ~Final papers due online before class

IN CLASS: ~Formal presentations of papers and final assessment of course

Please note:
Prices below are rounded off from recent amazon.com new prices. In many cases, used copies can be purchased less expensively (try bookfinder.com). Other materials will be posted or linked via Western Online and may be printed on campus at no cost.

~Films to borrow, stream, rent, or buy (available via Amazon and Netflix, in public libraries, and on the reserve shelves in Riverfront computer lab (overnight checkout OK):
- Never Let Me Go (2005)
- Moon (2009)
- Code 46 (2003)

Additional Recommended Texts

FICTION
Mary Shelley, Frankenstein
Nathaniel Hawthorne, “The Birthmark,” “Rappaccini’s Daughter”
H. G. Wells, The Time Machine, The Island of Dr. Moreau
Aldous Huxley, Brave New World
Arthur C. Clarke, Childhood’s End
Ira Levin, The Boys from Brazil
Pamela Sargent, Cloned Lives
Kate Wilhelm, Where Late the Sweet Birds Sang
Octavia Butler, Lilith’s Brood, Fledgling
Richard Powers, The Gold Bug Variations
Nancy Kress, Beggars in Spain, Beggars and Choosers, and Beggar’s Ride
Greg Bear, Blood Music, Darwin’s Radio, and Darwin’s Children
Robin Cook, Chromosome Six
Michael Crichton, Next
Michael Byers, Long for this World
Jeffrey Eugenides, Middlesex
Elizabeth Moon, The Speed of Dark
Jennifer Rohn, The Honest Look
David Mitchell, Cloud Atlas
Kim Stanley Robinson, 2312
Margaret Atwood, The Year of the Flood and MaddAddam

GRAPHIC NARRATIVE & VIDEO GAMES
Brian Vaughan, Y: The Last Man
Bioshock, Bioshock 2, and Bioshock Infinity

MORE FEATURE FILMS
Jurassic Park X-Men series The Fountain Spiderman
Splice Transfer Limitless
NONFICTION & SCHOLARLY BOOKS
Misha Angrist, *Here is a Human Being at the Dawn of Personal Genetics*
Alice Wexler, *Mapping Fate: A Memoir of Family, Risk, & Genetic Research* and *The Woman Who Walked into the Sea: Huntington’s and the Making of a Genetic Disease*
Karla FC Holloway, *Private Bodies, Public Texts: Race, Gender, & a Cultural Bioethics*
Ann Jurecic, *Illness as Narrative*
Jackie Stacey, *The Cinematic Life of the Gene*
Bill McKibben, *Staying Human in an Engineered Age*
Barbara A. Koenig, Sandra Soo-Jin Lee, & Sarah Richardson, eds., *Revisiting Race in a Genomic Age*
Karen-Sue Taussig, *Ordinary Genomes: Science, Citizenship, and Genetic Identities*
Catherine Waldby and Robert Mitchell, *Tissue Economies: Blood, Organs, and Cell Lines in Late Capitalism*
Susan Merrill Squier, *Liminal Lives: Imagining the Human at the Frontiers of Biomedicine*
Jonathan Glover, *Choosing Children: Genes, Disability, and Design*
Rebecca Skloot, *The Immortal Life of Henrietta Lacks*
Donna Haraway, *Simians, Cyborgs, and Women*
Gillian Beer, *Darwin’s Plots: Evolutionary Narrative in Darwin, George Eliot and Nineteenth Century Fiction*
Judith Roof, *The Poetics of DNA*
Richard Lewontin, *The Triple Helix: Gene, Organism, and Environment*
Hamner, Dean, *The God Gene: How Faith is Hardwired into Our Genes*
Katherine Hayles, *How We Became Posthuman*
José Van Dijck, *Imagenation: Popular Images of Genetics* (ch. 5 on Human Genome Project)
Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity*
Jon Turney, *Frankenstein’s Footsteps: Science, Genetics and Popular Culture*
Carl N. Degler, *In Search of Human Nature: The Decline & Revival of Darwinism in American Social Thought*
Dorothy Nelkin and M. Susan Lindee, *The DNA Mystique: The Gene as a Cultural Icon*

ARTICLES & BOOK CHAPTERS
Briggs, Laura and Jodi I. Kelber-Kaye. “’There is No Unauthorized Breeding in Jurassic Park’: Gender and the Uses of Genetics.” *NWSA Journal* 12.3 (Fall 2000): 92-113.
Goss, Theodora and John Paul Riquelme. “From Superhuman to Posthuman: The Gothic Technological Imaginary in Mary Shelley’s *Frankenstein* and Octavia Butler’s *Xenogenesis* [Lilith’s Brood].” *MFS: Modern Fiction Studies* 53.3 (Fall 2007): 434-59.


Womack, Kenneth and Amy Mallory-Kani. “‘Why don’t you just leave it up to nature?’: An Adaptationist Reading of the Novels of Jeffrey Eugenides.” *Mosaic* 40.3 (Sept 2007): 157-73.
Grading Criteria

~ An **A** recognizes broad and deep understanding of the course material, regular and insightful discussion contributions, and very strong written work—a major impact on the course’s success.

~ A **B** indicates good commitment to coursework, demonstrable contributions and achievements in both verbal and written analysis, and tangible positive impact on other students’ learning.

~ A **C** reflects adequate completion of coursework, including satisfactory participation and writing.

~ A **D** or **F** denotes incomplete or unsatisfactory coursework, unsatisfactory participation (missing more than 20% of class time or >3 classes), and/or detraction from course goals (via plagiarism or otherwise).

I will figure final grades using the university scale (A, B, C, D, or F, with pluses/minuses) and the values below (with minor adjustments as needed). Please note the “My Grades” function on the course website, which lets you track assignment grades and estimate your current overall grade at any point.

40% 4 quizzes (10% each)  
10% Contributions to online media archive (through week 8)  
10% Discussion contributions online and in-class (through week 8)  
40% Argumentative research paper (30%), including final presentation (10%)

Brief Looks at Assignments

**Quizzes:** These will neither be picky, insignificant-detail interrogations, nor such easy affairs that one could prepare sufficiently by reading summaries. The idea is that anyone who recently read/viewed all of the assigned texts with good comprehension will average 70-80% of the points available (i.e., earn a “B” or better). Students sometimes grumble about my quizzes initially, but soon agree they provide valuable accountability and lead to higher-quality discussions because everyone is well-prepared.

**Contributions to the online media archive:** During the course’s first half (through week 8), a section of the website (under “Discussions”) will collect links, images, and other media that uniquely represent human futures and genomic science. Each submitted item should include its source (with link) and a statement about its significance, related materials in the same location, etc. This should be an enjoyable source of discovery that also shows how much biotechnological rhetoric and imagery is appearing within our daily lives. Plan on making a contribution every week, but I understand that inevitably some people will post more items at a time. Keep in mind that quality and significance matter here as much as quantity. Impress me with what you dig up!

**Discussion contributions online and in-class:** Like the online media archive, this informal discussion board will be open through week 8. Here we will expand conversations begun in classroom meetings and launch new ones as well. After completing a week’s reading, offer a few thoughts and questions. When you find a connection to something from another course or elsewhere, share it. This should serve as a casual virtual space that complements the physical classroom. As with the online media archive, plan on making some kind of contribution each week; of course I’ll expect that you will post more on some occasions than others. Again, quality and significance matter here as much as quantity.

**Argumentative paper:** A very carefully revised 2500+ word (8-10 pp.) argumentative paper about the representation of science in one or a few novels, films, or other texts, and whether featured in the course or not (outside texts require preapproval early in the process). Each student should engage materials that are individually interesting and reference other critics’ arguments about key texts. Consultations about theses (whether via email or in person) may begin at any point, but be sure this happens by week 10. More details and prior examples will be discussed during week 3’s meeting.

**PLEASE NOTE:** There are intermediate due dates for a 1-2 pp. rough planning document (in outline or other form, as you prefer), a half-length draft, and a full-length draft. These submissions are not individually graded, but I do consider work in these stages when a student’s final course grade is on the border between two possibilities. While I will not automatically respond to most of these postings, I will gladly reply when students ask specific questions in the online comment boxes.
My Teaching Philosophy and Habits

Like every student, every teacher has unique strengths and weaknesses. Often these are closely related: a tendency appreciated by some can be problematic for others. Either way, the more that is transparent from the beginning, the more quickly we will develop a strong rapport, so here are a few of my values:

~I want students to be honest and authentic with me and each other. I very much hope this course will prove pleasurable and enriching, and that will be most likely insofar as we both tactfully and directly share reactions to controversial materials and topics. I intentionally raise such issues because a public university classroom can be an ideal setting for the frank but gracious disagreements that yield genuine insights and move a culture forward. I want us to develop a community in our classroom that you look forward to participating in, one that spills into other interactions well beyond the semester’s end.

~At the same time, I want students to be professionally responsible. I encourage you to approach this course as part of your job, with tasks that are yours and yours alone. While I am very understanding that it will not be easy to balance this course and others, part-time or even full-time jobs, childrearing, and other worthwhile endeavors, my duty is to challenge you beyond your comfort zone and to honestly assess the quality of your work. Please trust that I am interested in your growth personally and professionally regardless of the grade I might assign your quiz or paper on a given day.

~Our backgrounds all feature unique advantages and limitations, and while most of our time will be spent studying fields in which I am relatively expert, I plan to learn just as much as you. Wisdom is not just knowledge, but humility, a deepening awareness of how much one does not know. I spent over a decade earning several graduate degrees not in order to hoard power, but so as to empower others. Thus I see you as major contributors to what lies ahead: what you get out of this course will be directly related to what you put into it, both during and especially outside of our meeting times.

Attendance & Participation

My courses differ substantially from those requiring regurgitation of memorized information. Instead, our goals include learning new interpretive approaches, understanding diverse people and ideas, expanding critical thinking and creative abilities, strengthening analytical and writing skills, and benefiting from each other’s unique backgrounds of experience. As a result, preparation for each session, regular attendance, and thoughtful discussion participation are crucial commitments for all concerned. Except in life-threatening or extreme circumstances, chronic absence and/or lateness (missing more than 20% of class-time, or more than 3 meetings) will automatically lower final grades by one full letter. Additional non-attendance is very likely to lower a course grade further and may result in an “F” for the course.

Classroom Courtesies

Please excuse yourself when necessary; transitions between activities are the best time. Also, please turn off/mute cell phones, mp3 players, and other potential distractions before class (occasionally I forget too). While laptops and other electronic devices should not be used during quizzes, otherwise I trust you to employ them to advance your learning (at least unless given reason to think otherwise). Finally, please wait to put away materials until we call it a day; I will respect your schedules as well.

Making Contact

When you have a question about the course not addressed on the syllabus or in class discussions, please check first with a peer if possible, then feel welcome to contact me. I encourage you to email questions I can answer briefly; when there are larger issues, approaching me after class or arranging to meet during office hours is appreciated. Email is almost always the best means; while I receive dozens of
messages daily, I try to respond within three business days, whereas I check voice mail less regularly. Finally, I do use email to make class announcements, so make sure I have an address you check daily.

**General Writing Assignment Guidelines**

I will provide further information about goals and grading criteria for each paper, but it is worth familiarizing yourself now with a good style guide. I use MLA style most often, but other styles (Chicago, APA, or another with pre-approval) are fine as long as they are consistently applied. Also, please use this page setup on all assignments, unless specified otherwise: 1” justified margins on all sides; size 12, Times New Roman font; and double-spacing. Finally, provide a cover page including paper title, course title and my name, your name, and date, as well as a list of works cited or a bibliography (depending on the style you employ and the assignment).

**The Writing Center**

The Writing Center offers free individual instruction from experienced professionals. Areas of writing help may include generating ideas, suggesting organization, and working through grammatical issues. While walk-ins are welcome, appointments are recommended. See [www.wiu.edu/qc/writing_center/](http://www.wiu.edu/qc/writing_center/).

**Late Work**

If you anticipate special difficulty in meeting a deadline, discuss this with me well in advance so that if warranted, we can consider special arrangements. Because readings and assignments are in many ways cumulative, it is important that you keep up; at the same time, we lead busy lives and things happen. Balancing those realities, I have a one-time one-week’s grace policy: I do not penalize work submitted within a week of the due date on the first occasion (with the exception of finals week), but beyond that exception, assignments lose one-third of a letter grade per week late.

**Academic Dishonesty**

Plagiarism, cheating, and other forms of academic dishonesty are among the most serious violations of a student’s integrity and of relationships with the instructor, fellow classmates, and the university. In the humanities, plagiarism most often involves presenting another person’s specific words or ideas as one’s own, whether by copying or closely paraphrasing, and without citing the source. Please be aware that such an offense will lead automatically to an “F” on the assignment and possibly for the course. We will briefly review proper citation in class, but if you have questions about how to credit an idea or information source, ask! If you are unsure about definitions or consequences of academic honesty, consult WIU’s Student Academic Integrity Policy at [www.wiu.edu/policies/acintegrity.php](http://www.wiu.edu/policies/acintegrity.php).

**Accommodations**

“In accordance with University policy and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. For the instructor to provide the proper accommodation(s) you must obtain documentation of the need for an accommodation through Disability Support Services and provide it to the instructor. It is imperative that you take the initiative to bring such needs to the instructor’s attention, as he/she is not legally permitted to inquire about such particular needs of students. Students who may require special assistance in emergency evacuations (i.e. fire, tornado, etc.) should contact the instructor as to the most appropriate procedures to follow in such an emergency. Contact Disability Support Services at 298-2512 for additional services” (from Official University Policy Manual at [www.wiu.edu/policies/syllabus.php](http://www.wiu.edu/policies/syllabus.php)).

**Student Rights & Responsibilities**

For further information on expectations for both students and university personnel, please see [www.wiu.edu/provost/students/](http://www.wiu.edu/provost/students/).