

Fall 2019

# HSS 404-005: Biotechnology and the Law

Rosanna Dent

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# HSS 404:

## Biotechnology and the Law

**Class Time & location** Tuesdays and Thursdays, 11:30-12:50  
Cullimore Hall, Lecture 2

**Instructor** Rosanna Dent  
**Pronouns** she/her/hers  
**E-mail** [rdent@njit.edu](mailto:rdent@njit.edu)

**Office** Cullimore Hall, 322  
**Office Hours** Tuesday 16:00-17:00; Thursday 13:00-14:00 and by appointment.  
Please sign up on my [Google Cal](#) to assure a spot, but feel free to drop by too.

**Overview** The twentieth century saw the rise of a host of new ways for humans to intervene in life and living systems, from recombinant DNA, to GMOs, to monoclonal antibodies for pharmaceutical use, to in-vitro fertilization. This senior research seminar will introduce students to the social, political, and legal implications of biotechnology in the context of globalization. We will tackle questions such as: how did biotechnologies challenge categories such as “natural,” “living,” and “human” in the twentieth century? How has the law mediated ownership over living matter and what are the implications of patenting living organisms? How are the risks and benefits of the development and use of biotechnologies distributed around the globe, across categories of class, race, and gender, and what systems mediate this distribution? Students will leave this course with the ability to situate current debates regarding biotechnology in social, historical, and legal perspectives.

**Prerequisites** HUM 102 and one from among HUM 211, HUM 212 and HIST 213 or their equivalents, all with a grade of C or better. Completion of either the LIT/HIST/PHIL/STS or Open Elective in Humanities and Social Science, with a grade of C or better.

**Course Goals** Students who successfully complete this course will be able to:

- Raise pertinent questions regarding the political and social implications of biotechnology;
- Identify and summarize the main idea and key arguments of a textual source;
- Critically evaluate a source, situating it in its political or historical context and interpreting its broader relevance for historical and social interpretation;
- Communicate these summaries, questions, and analyses in clear written

- and oral form;
- Demonstrate information literacy through the use of appropriate source material and the ability to cite properly.

## Required Texts

All readings will be available online on Canvas.  
You are strongly encouraged to print the readings and bring them to class.

## Course Policies

### Academic Integrity

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at:

<http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. **Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.** If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu).

### Citation Expectations

Any words taken directly from a written source (assigned reading, website, book, article...) or from another individual (interview, podcast, youtube...) must be in quotation marks and cited. ALWAYS. Failure to do this **constitutes plagiarism**.

You must use Chicago Manual of Style format for citations, either Author-Date or Notes-Bibliography. You should use the system you select consistently. Davida Scharf is an expert researcher and our librarian for the History Department. She has prepared online research guides that you may find useful. She is available for help during her office hours, or by appointment. Her contact information, calendar, and research guides are available here: <http://researchguides.njit.edu/scharf>.

### Disability Services

Students who have special needs should contact NJIT's Student Disability Services to help procure accommodations in completing coursework. The center can be found at <http://www.njit.edu/counseling/services/disabilities.php>.

### **Computers and Personal Electronic Devices**

Since reading on paper (rather than screens) and taking notes by hand have been shown (in peer reviewed scientific studies) to improve learning outcomes, students are strongly encouraged to print readings, read them on paper, and bring them to class in physical form.

I reserve the front row for students who find other people's electronic devices distracting – no electronic note taking in the front row please. If you choose to use a computer, tablet, or phone in class, I expect you to use these tools responsibly. No texting, no gchatting, no facebook, email etc. If I observe an improper use of devices, you will lose participation credit for that day. If students cannot conduct themselves without these distractions, I may ask you to leave or disallow the use of computers.

*Note: I reserve the right to make changes to the syllabus that I deem necessary.*

## Assignments and Grading

Please prepare all assignments in Times New Roman, size 12 font, with 1-inch margins, double spaced. The bibliography is not included in the target page count, and should be single spaced.

**Submission:** All assignments should be submitted electronically through canvas, which interfaces with turnitin.com, an online service used by NJIT instructors to detect plagiarism. Only the following file types are accepted: pdf, doc, docx. (I.e. Google docs are not accepted – make a pdf.) In some cases, I will also ask you to submit assignments in printed form.

**Late Submissions:** Assignments (other than reading responses and presentations – see below) will lose one grade for every day late (A to A-, A- to B+). Assignments will not be accepted more than 1 week late.

**Golden Ticket:** Life can be complicated for all of us at times. All students have one “Golden Ticket,” which can be used for a no-questions-asked 3-day extension on one major assignment. Simply indicate at the top of the first page that you are using your Golden Ticket, and you will not be marked down. This may not be used for the class discussion leading assignment, as your group members are counting on you. If you use this on a rough draft, it is STILL your responsibility to give timely peer edits, and to make arrangements for your work to be edited so as not to lose points.

**Exceptional Circumstances:** If there are medical, family, or other pressing issues affecting your ability to complete class work, please get in touch with me. I can help most effectively if you contact me early. I also strongly encourage you to reach out proactively to the Dean of Students’ office.

<b>Participation</b>	<b>(35%)</b>	<b>Grading Scale</b>
Reading Responses (15%)		A= 89.5 to 100
In-class work (10%)		B+= 86.5 to 89.4
Class facilitation (10%)		B= 79.5 to 86.4
<b>Diamond v. Chakrabarty paper</b>	<b>(15%)</b>	C+= 76.5 to 79.4
<b>Research Paper</b>	<b>(50%)</b>	D= 59.5 to 69.4
Proposal (10%)		F= 59.4 to 0
Rough draft and peer editing (10%)		
In-class presentation of research (10%)		
Final draft (20%)		

### **Participation (35%)**

Attendance and participation are central to your success in this course. Participation includes speaking, listening, and demonstrating careful preparation for class including completing all assigned reading. Full participation in this class includes:

- (a) All students will be required to post a **response to the readings** by 11:20am on Tuesday for most weeks during the semester. I will post a prompt and guidelines for the response by the Friday before at 12pm. These responses must demonstrate both comprehension and critical thinking about the readings. Each week will be slightly different, but you will be required to quote and correctly cite the readings, and incorporate reflections in relation to the broader themes of the class. All responses that meet the requirements of the prompt will receive full credit. Responses that fail to meet all of the directions will receive partial credit. Late

responses will receive half credit until Thursday at 11:20am, after which they will receive no longer be accepted. Students can drop their two lowest reading response grades.

- (b) **In-class participation** can take many forms, such as speaking during full-class discussion, group work and leadership during class activities, pre-prepared questions or comments, in-class writing assignments, among other options. You must be present to participate. If you tend to be shy or quiet in class I encourage you to talk to me about it early in the semester.
- (c) All students **must attend office hours** or meet with me by appointment to discuss your research papers at least once during the semester.
- (d) **Class facilitation:** Students will sign up to help lead one class session in groups. You will be required to prepare a guide to the week's reading (due Thursday before your assigned week), as well as lead a 20-30 minute activity. Guidelines for this assignment will be distributed.
- (e) Disruptive behavior such as texting, social media, etc. is distracting to the other members of the class and will result in loss of all participation points for that class period.

If you are concerned about your participation, come speak with me during office hours as early as possible in the semester.

#### **Diamond v. Chakrabarty Paper (Due Fri., Oct. 4) (15%)**

The first module of this course focuses on the landmark Supreme Court case *Diamond v. Chakrabarty*. You will be assigned a roll (Petitioner, Respondent, Judge, Journalist). Working with primary sources from the case and secondary sources about the case, you will have to re-argue/judge/report on a mock trial version of the case. You will work in groups for the argument, judgment, and reporting, but will each write an individual 5-page paper from your assigned position. This project will help you develop your research and citation skills.

#### **Final Paper (50%)**

- Proposal (rough draft) (ungraded) (due Thurs, Oct. 17)
- Proposal (10%) (due Thurs, Oct. 24)
- Rough draft and peer editing (10%) (due Tues, Nov. 19 & Sun, Nov. 24)
- Presentation of research (10%) (due Nov. 26- Dec. 5)
- Final draft (20%) (due Dec. 12)

The final paper for this course will be a 3800-4500 word (approx. 12-15 page) research paper on a key case or law relating to biotechnology.

#### **Proposal (due Thursday Oct. 24)**

The paper proposal will help you prepare to write your final papers. For this assignment, you will identify the law or court case you plan to research, identify the primary and secondary sources you plan to use and how you plan to use them, and sketch out what you think your argument might be. You will also provide a correctly formatted annotated bibliography of sources. This is worth 10% of your grade.

#### **Rough draft and peer editing (due Tues, Nov. 19 and Sun, Nov. 24)**

Writing improves dramatically with multiple drafts and thoughtful feedback. You will be responsible for working with two classmates to peer edit well developed rough drafts of your final papers. This will be graded on the basis of (a) having a rough draft of at least 10 pages on time; (b) giving careful

feedback to your peers. We will discuss and practice effective peer editing in class, and you will turn in your edits on your partners' paper. This is worth 10% of the final grade.

**Presentation of Research**

10 minute presentation of your findings from your research to the class in the final weeks of the course. This is worth 10% of your grade.

## Schedule of Topics and Assigned Readings

\*\*Response papers for the listed readings are due on TUESDAY of the week listed unless otherwise noted\*\*

<b>Week 1</b>	<p><b>Introduction</b></p> <p>Good, Mary Jo DelVeccio. "The Biotechnical Embrace." <i>Culture, Medicine, Psychiatry</i> 25, no. 4 (2001): 395-410. [Note, this is not the full article. Just the first sections.]</p> <p>Tues, Sep. 3 <i>Biotechnology and Law, and the Biotechnical Embrace</i></p> <p>Thurs, Sep. 5 <i>Bacteria and Cells as Technologies</i> **Self-introduction due**</p>
<b>Week 2</b>	<p><b>Science v. Law</b></p> <p>Jasanoff, Sheila. "The Intersection of Science and Law," and "Encounters with Genetic Engineering," in <i>Science at the Bar: Law, Science, and Technology in America</i>, 1-23 and 138-159. Cambridge: Harvard University Press, 1997. [45 pages]</p> <p>Tues, Sep. 10 <i>Science v. Law; Research Methods &amp; Intro to Final Papers</i></p> <p>Thurs, Sep. 12 <i>Genetic Engineering; Introduction to Mock Trial and Diamond v. Chakrabarty Paper</i> NOTE: Friday September 13<sup>th</sup> is the last day to add or drop a course.</p>
<b>Week 3</b>	<p><b>Reading <i>Diamond v. Chakrabarty</i></b></p> <p>Kerr, Orin S. "How to Read a Legal Opinion: A Guide for New Law Students." <i>The Green Bag</i> 11, no. 1 (2007): 51-63. [12 pages]</p> <p><i>Diamond v. Chakrabarty</i> – <a href="#">Syllabus</a>, <a href="#">Supreme Court Opinion &amp; Dissent</a> [11 pages] <a href="#">LISTEN</a> to Supreme Court Oral Arguments in <i>Diamond v. Chakrabarty</i> [59:34]</p> <p>Rogers, Michael. "The Frankenstein Patent." <i>Rolling Stone</i>, January 1, 1976. <a href="https://www.rollingstone.com/culture/culture-news/the-frankenstein-patent-231869/">https://www.rollingstone.com/culture/culture-news/the-frankenstein-patent-231869/</a>. [7 pages]</p> <p>Tues, Sep. 17 <i>How to read a legal opinion; Following a case through the courts</i></p> <p>Thurs, Sep. 19 <i>Patenting Life Forms</i></p>
<b>Week 4</b>	<p><b>Arguing Patent Politics</b></p> <p>Parthasarathy, Shobita. "Confronting the Questions of Life Form Patentability," in <i>Patent Politics: Life Forms, Markets, and the Public Interest in the United States and Europe</i>, 51-80. Chicago: University of Chicago Press, 2017. [29 pages]</p> <p><i>Diamond v. Chakrabarty</i> (Read the following documents with an eye to preparing for your role in the Mock trial, and for your upcoming paper): Petitioner's Brief; Respondent's Brief; Reply Brief for the Petitioner; Sample Amicus Curiae (choose two of four available)</p>



Tues, Sep. 24	<i>Policy and the Moral Questions of Life Form Patentability</i>
Thurs, Sep. 26	<i>Mock Trial Preparation</i>
<b>Week 5</b>	<b>Mock Trial</b> <b>**No Reading Response**</b>
Tues, Oct. 1	<i>Mock Trial</i>
Thurs, Oct. 3	<i>Napëpë film viewing and discussion</i>
	<b>Friday, Oct. 4, 11:59pm **Diamond v. Chakrabarty Paper Due**</b>
<b>Week 6</b>	<b>Biotech and Human Rights</b>  Tsosie, Rebecca. "Indigenous Peoples and Epistemic Injustice: Science, Ethics, and Human Rights." <i>Washington Law Review</i> 87, no. 4 (2012): 1133–1201. [68 pages] [NOTE: This is a long article. Use strategic reading to understand main points.] <i>Havasupai Tribe v. Ariz. Bd. of Regents</i> , 220 Ariz. 214  Optional: TallBear, Kim. <i>Native American DNA: Tribal Belonging and the False Promise of Genetic Science</i> . Minneapolis: University Of Minnesota Press, 2013. Chapter 4.
Tues, Oct. 8	<i>Epistemic Injustice</i>
Thurs, Oct. 10	<i>Collecting Cells, Appropriating Ancestry</i>
<b>Week 7</b>	<b>Patenting Human Genes, Owning Human Cells</b>  Skloot, Rebecca. "Taking the Least of You." <i>The New York Times</i> , April 16, 2006, sec. Magazine. <a href="https://www.nytimes.com/2006/04/16/magazine/taking-the-least-of-you.html">https://www.nytimes.com/2006/04/16/magazine/taking-the-least-of-you.html</a> . Landecker, Hannah. "Between Beneficence and Chattel: The Human Biological in Law and Science." <i>Science in Context</i> 12, no. 1 (1999): 203–25. <a href="https://doi.org/10.1017/S0269889700003367">https://doi.org/10.1017/S0269889700003367</a> .  Optional: Benjamin, Ruha. "Eggs for Sale" in <i>People's Science: Bodies and Rights on the Stem Cell Frontier</i> . Stanford, California: Stanford University Press, 2013.
Tues, Oct. 15	<i>Cell Lines, Spleens, and Sex Cells</i>
Thurs, Oct. 17	<i>IVF and Racial Imaginaries</i>  <b>**Rough Draft of Proposal Due in Class**</b>

<b>Week 8</b>	<p><b>Surrogacy and Labor</b></p> <p>Radiolab, "Birthstory" <a href="https://www.wnycstudios.org/story/birthstory2018">https://www.wnycstudios.org/story/birthstory2018</a></p> <p>Vora, Kalindi. "Biopolitics of Trust in the Technosphere: A Look at Surrogacy, Labor, and Family." <i>Technosphere Magazine</i>, August 19, 2018. <a href="https://technosphere-magazine.hkw.de/p/Biopolitics-of-Trust-in-the-Technosphere-A-Look-at-Surrogacy-Labor-and-Family-nx8Dq5RnoXnQCnGJ6w3cx">https://technosphere-magazine.hkw.de/p/Biopolitics-of-Trust-in-the-Technosphere-A-Look-at-Surrogacy-Labor-and-Family-nx8Dq5RnoXnQCnGJ6w3cx</a> .</p> <p>Choudhury, Cyra Akila. "Transnational Commercial Surrogacy: Contracts, Conflicts, and the Prospects of International Legal Regulation." <i>Oxford Handbooks Online</i>, December 5, 2016. <a href="https://doi.org/10.1093/oxfordhb/9780199935352.013.38">https://doi.org/10.1093/oxfordhb/9780199935352.013.38</a>.</p> <p>Tues, Oct. 22 <i>Kinship, Family, and Surrogacy</i></p> <p>Thurs, Oct. 24 <i>Surrogacy Law: National and International</i></p> <p><b>** Proposal due**</b></p>
<b>Week 9</b>	<p><b>Schedule an appointment to discuss your project with me.</b></p> <p>Tues, Oct. 29 No Class: Individual Meetings</p> <p>Thurs, Oct. 31 No Class: Individual Meetings</p>
<b>Week 10</b>	<p><b>Human Enhancement</b></p> <p>Elliott, Carl. "The Cellular Apocalypse." <i>Believer Magazine</i>, January 01 2004. <a href="https://believermag.com/the-cellular-apocalypse/">https://believermag.com/the-cellular-apocalypse/</a>.</p> <p>Wong, Alice. "Resisting Abelism: Disabled People and Human Gene Editing." <i>Stanford Medicine X</i>. Accessed January 19, 2019. <a href="https://www.youtube.com/watch?v=_vdeeR5DOSo&amp;app=desktop">https://www.youtube.com/watch?v=_vdeeR5DOSo&amp;app=desktop</a>.</p> <p>Benjamin, Ruha. "Interrogating Equity: A Disability Justice Approach to Genetic Engineering." <i>Issues in Science and Technology</i> 32, no. 3 (2016): 51–54.</p> <p>Specter, Michael. "The Gene Hackers." <i>The New Yorker</i>, November 9, 2015. <a href="https://www.newyorker.com/magazine/2015/11/16/the-gene-hackers">https://www.newyorker.com/magazine/2015/11/16/the-gene-hackers</a>.</p> <p>Tues, Nov. 5 <i>Eugenic Origins</i></p> <p>Thurs, Nov. 7 <i>The Biotechnical Embrace Revisited</i></p> <p>NOTE: Monday November 11<sup>th</sup> is the last day to withdraw from a course.</p>
<b>Week 11</b>	<p><b>Regulating Biotech Pharma</b></p> <p>White Junod, Suzanne. "The FDA and Clinical Drug Trials: A Short History." In <i>A Quick Guide to Clinical Trials</i>, edited by Madhu Davies and Faiz Kerimani, 25–55. Washington, D.C.: Bioplan Inc, 2008.</p> <p>Kevles, Daniel J. "Why Is Medicine So Expensive?," <i>The New York Review of Books</i>, February 21, 2019. <a href="http://www.nybooks.com/articles/2019/02/21/why-is-medicine-so-expensive/">http://www.nybooks.com/articles/2019/02/21/why-is-medicine-so-expensive/</a>.</p>

	Greene, Jeremy A., and Kevin R. Riggs. "Why Is There No Generic Insulin?: The Historical Origins of a Modern Problem." <i>New England Journal of Medicine</i> 372, no. 12 (2015): 1171–75.
Tues, Nov. 12	<i>The Rise of Pharma Regulation</i>
Thurs, Nov. 14	<i>Testifying to the FDA</i>
	Guest speaker: John Dent, PhD. (Yep, that's my dad.) Former vice-president of R&D for Consumer Healthcare, Glaxo SmithKline
<b>Week 12</b>	<b>Rough Drafts and Peer Editing</b>
Tues, Nov. 19	<i>Rough Drafts Due</i>
Thurs, Nov. 21	<i>No Class: Peer edits of Rough Drafts due Sunday Nov 24<sup>th</sup> at 11:59pm</i> <i>Prepare for Presentations</i>
<b>Week 13</b>	
Tues, Nov. 26	<i>Student Presentations</i>
Thurs, Nov. 28	<b><i>Thanksgiving Break</i></b>
<b>Week 14</b>	
Tues, Dec. 3	<i>Student Presentations</i>
Thurs, Dec. 5	<i>Student Presentations</i>
<b>Week 15</b>	
Tues, Dec. 10	<i>Course wrap-up</i>
Thurs, Dec 12	<i>No class meeting: Saturday classes meet</i> <b>**FINAL Papers Due**</b>
<b>Dec 14 - 20</b>	<b>Final Exams</b>