Science and law are two powerful social institutions, central to our understandings of truth and justice. This course analyzes their intersections in American society, with special attention to a few key topics: the rules of demarcation that courts have used to distinguish between scientific and pseudo-scientific evidence; the translation of raw data into legally relevant testimony; the performance and deconstruction of expertise on the witness stand; the changes in the criminal justice system brought about by DNA forensics and the neurosciences; and the historical role of courts in dealing with “creationism” and “intelligent design.” We will analyze in detail some landmark cases and judicial decisions, courtroom performances, and the sociological and anthropological literature on the juncture of scientific knowledge and legal process.

EVALUATION

Analytical Assignments (75%)

This is a discussion- and reading-intensive seminar. Students are expected to write 3 short analytical essays (4-6 pages double-space) during the course, and 1 final research paper (around 12-14 pages) to be submitted on the last day of classes.

- The three short analytical essays will be responses to questions presented by the instructor; students must formulate a response based on the readings and discussions of the class.
- The topic for the final research paper is free. The essay must explore in some depth one or several themes addressed in class. It must offer a reasoned and structured argument, and it must include some original research (sources and materials beyond the course syllabus). The research paper is due the last week of classes (December 12), but a draft outline of the paper – including a working thesis, and tentative structure and some of the sources the student plans to use must be submitted by November 16. Each short essay will represent 15% of the final grade. The research paper will account for 30%.

Attendance and Class Participation (25%)

Students are expected to attend all classes and be prepared to discuss the readings. Multiple absences or habitual lateness will lower your final grade. Regular, punctual, and active presence is absolutely essential.
*** Statement of Academic Integrity ***

Please review the College’s Statement of Intellectual Responsibility:  
https://cms.amherst.edu/academiclife/dean_faculty/policiesprocedures/sir  
as well as the information on academic honesty and plagiarism:  
http://www.amherst.edu/~dos/plagiarism/  
In writing the analytical assignments it is essential that you reference your sources and attribute quotes and  
ideas to their authors. If in doubt about the applicability of these norms, please ask.

SCHEDULE OF TOPICS AND READINGS

9/5 Organizational meeting


1 WHAT IS SCIENCE?

9/7 Traditional conceptions: (how) is science different?


9/12 “Science” and boundary-work


2. RULES OF ADMISSIBILITY

9/14 The Frye rule

• [Court Decision] Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923)  

9/19 “Junk Science” in the courtroom?

• Peter Huber, Galileo’s Revenge: Junk Science in the Courtroom (Basic Books, 1993): chapter 1, 3, 7 & 11.

9/21 The Daubert Rules

3. FORENSICS, GUILT & INNOCENCE

9/26 Framing “raw evidence”: the Rodney King case [first analytical essay due]


9/28 Fingerprinting


10/3 DNA: Introduction


10/5 DNA under challenge: The O.J. Simpson case

- Film: ‘The O.J. Verdict’

10/10 The Innocence Project (I)

- B. Scheck, P. Neufeld and J. Dwyer, Actual Innocence, chapters 1, 4 & 7.

10/12 The Innocence Project (III)

- Film screening: ‘After Innocence’

10/17 Anything wrong with DNA evidence?

- Donald Kennedy, “Forensic Science: Oxymoron?”, Science, 5 December 2003
- Recommended: American Society of Law, Medicine, and Ethics, project on forensics and civil liberties: http://www.aslme.org/dna_04.

10/19 Review
5. THE BRAIN AND THE LAW

10/24 Neuroscience: a legal revolution? [second analytical essay due]


10/26 Freewill and legal responsibility


10/31 Brain scanning and mental privacy


6. SCIENCE AND PROPERTY

11/2 Law and private science


11/7 Patent Lawyers and Scientists in the courtroom


7. LAW AND THE ‘CREATIONISM’ DEBATE

11/9 Introduction: The 1925 Scopes Trial (I)

- Film: Inherit the Wind

11/14 The Scopes Trial (II)

11/16  **The 1982 Arkansas case (I)  [outline of final paper due]**


11/21  [Thanksgiving break]

11/23  [Thanksgiving break]

11/28  **The 1982 Arkansas case: the philosophers’ struggle  [third essay due]**

• Michael Ruse: “Creation-Science is not Science,” *Science, Technology & Human Values* 7(41) (Fall 1982)

11/30  **2005 Kitzmiller v. Dover**

• Margaret Talbot, “Darwin in the Dock”, *The New Yorker* 12.5.2005

12/5  **Kitzmiller v. Dover (II)**

• [Court Decision] *Kitzmiller v. Dover Area School District*

12/7  **A philosopher on the witness stand**

• Steve Fuller, Testimony and “Rebuttal Report” (deposition in *Kitzmiller et al. v. Dover Area School Board*).
• Kevin Lambert, “Fuller’s Folly.” *Social Studies of Science* 36/6 (December 2006): 827-834.

12/12  **Last day of classes: review  [final paper due]**