LEGAL STUDIES & HISTORY 477:
HISTORY OF FORENSIC SCIENCE

PROF. MITRA SHARAFI • SPRING 2019

Course information: TTh 11am-12.15 • Sewell Social Sciences 6116 • Canvas course webpage (accessible via UW Canvas webpage): https://canvas.wisc.edu/ (You must be registered for the course to have access.)

Instructor’s contact information: mitra.sharafi@wisc.edu • (608) 265-8428 • Office Hours: T 2.30-4pm or by appointment (by e-mail) • Office: Law 6112 (directions: enter the Law School from Bascom Mall and go up to the sixth floor on the right side of the building, not on the Law Library side of the building)

Course Description: This 3-credit course examines the intersection between the history of law, on the one hand, and the history of science and medicine, on the other. It focuses on the diverse and disturbing paths followed by forensic science (including forensic medicine or medical jurisprudence) in various times and places. The concept of evidence is central to both legal and scientific endeavor. This course investigates the many ways that these fields have worked together—or at cross-purposes—to generate and assess evidence at the crime scene, in the lab, in the courtroom, and beyond. Examining methods as diverse as judicial torture, autopsies, and DNA testing, we will follow the ways that criminal guilt or civil liability have been determined, noting tensions between the search for truth and the quest for justice. The course covers key institutions, personnel, and conflicts over expertise involving courts, lawyers, judges, juries, coroners, physicians and other scientific experts, forensic labs, detectives, police, and insurance. Next, it moves through a series of themes in the history of forensics, including the history of poisoning and intoxicating substances; sex and reproduction; and law and psychiatry. The course ends by considering contemporary issues, including wrongful convictions based on flawed forensic analysis and corporate responsibility for toxic torts. It takes a global view, focusing on the English-speaking world (including the British Empire) from the nineteenth century until the present.

Learning Outcomes:

By the end of this course, you should:

• be familiar with the history of legal institutions that involve scientific analysis and expertise;
• recognize the social, political, and cultural determinants and effects of forensic systems historically;
• appreciate the place and relevance of law, science and medicine within the humanities and social sciences;
• be aware of the cross-cultural and global aspects of forensic systems in history;
• be skilled at writing essays that make an argument in relation to secondary-source readings;
• be able to give an oral presentation based on independent research; and
• be able to productively contribute to in-class discussion.

If you are taking the graduate version of this course, you should additionally:

• be able to describe and critically assess historiographical developments in the secondary literature; and
• be able to advance an argument grounded in primary-source evidence in an extended research paper.

How this course meets credit-hour policy standards: This course meets as a group for two 75-minute sessions per week and carries the expectation that you will spend an average of 3 hours outside of class for each class period. In other words, in addition to class time, you should plan to allot an average of 6 hours per week for reading, writing, preparing for discussions, working on your research paper, and preparing the final reflection paper for this class.

Grades & Course Requirements:

Your final grade will be based upon the following:

• Reading responses and draft feedback (10%): You will be required to submit:
  a. three very short reading responses to class readings (max. 100 words) on the three days when you are “on call” (see below for description of this system). Your reading response should consist of: (1) a succinct response to the reading questions for the day (listed on the syllabus), and (2) a question of your own, prompted by the readings. You should type your reading response directly into Canvas. (You can alternatively e-mail it to me if there are any issues with Canvas.) You should do no outside research for the reading responses.
  b. one round of “track changes” feedback on classmates’ research paper drafts: Once everyone has selected topics, you will be assigned to Group 1-4 for our research paper-based presentation sessions (Classes 23-26). During one of these sessions, you will give a short presentation based on your research paper draft. During another session, you will read your classmates’ first drafts and use “track changes” to add edits and comments. Your classmates will then use this feedback to revise their papers and submit the final versions of the paper.

Your reading responses and draft paper feedback will be due electronically (submitted via our course website) Mondays by 12 noon for a Tuesday class or Wednesdays by 12 noon for a Thursday class. Each item will be graded out of 10 points (for reading responses, you will be able to see your grade and any comments on the Canvas website; for draft feedback, I will e-mail you). There will be a penalty for lateness (=work submitted after 12 noon but before 5pm on the day before class) and for reading responses that exceed the word limit. I will not accept
submissions received after 5pm on the day before class. I will also not notify you when your response or feedback is late or missing. *It is your responsibility to know when your submissions are due.* There will be one opportunity to make up for a missed reading response or feedback round: Class 28. To boost your participation grade, you may submit feedback on your classmates’ drafts on a session not assigned to you.

- **Midterm exam (30%)**: Our midterm exam will consist of two essay questions (out of a choice of three). It will take place during Class 15 (Tuesday, March 12) in Sewell Social Science computer lab, room 3218. *not in our usual classroom.*

- **Research paper (20%)**: You will analyze one particular case study, technique or school of thought from the history of forensic science in this short research paper (2,500-3,000 words, plus bibliography). Please identify your topic via the sign-up screen on our Canvas course page (max. one student per topic). I will provide a list of potential topics on the website, but you may also choose a topic that is not on the list if you obtain my prior approval. You may sign up via our Canvas course page any time during the one week after the opening of the list at 7pm on T, Feb. 5, 2019. You must have signed up for a topic by 7pm on T, Feb. 12, 2018. A penalty will be applied to your overall paper grade if you sign up late.

You must submit the first draft of your paper by midnight at the end of the day that is exactly one week before your in-class presentation (presentations will take place during Classes 23-26). For example, if your presentation is scheduled for Tuesday, April 16, then your first draft will be due by midnight at the end of the day on Tuesday, April 9. Your short oral presentation will summarize your paper. Your classmates assigned to your presentation class will read your first draft and provide you with written comments, which I will read first. The whole class will also have the chance to ask you questions on your work following your presentation. Using your classmates’ comments, you will revise your first draft and submit your final version of your paper by midnight one week after your in-class presentation. Continuing with the example above, this means that if you give your presentation on Tuesday, April 16, your first draft will be due by midnight at the end of the day on Tuesday, April 9 and your final version will be due by midnight at the end of the day on Tuesday, April 23. You must include with your final submission a cover note explaining changes made in response to your classmates’ comments. Up to 48 hours after the final paper deadline, late papers will be accepted with a 5-point penalty (the paper will be graded out of 100 points) for every 12 hours that the paper is late. Late papers submitted more than 48 hours after the deadline will not be accepted. *It is your responsibility to keep track of the scheduling deadlines associated with all stages of your paper.*

- **Final reflection essay (20%)**: There will be no final exam in this course. Instead, you will write a final reflection essay (1,500-2,000 words) which will be due at 2.25pm
on Tuesday, May 7, 2019. This piece will involve no outside research. It will give you an opportunity to explore how your own thinking on course themes has developed over the semester, particularly through our in-class discussions (including our jigsaw discussion sessions).

- **Class attendance (10%)**: Coming to class is essential. This means arriving punctually and staying until the end of class.
  
  o **Lateness**: Arriving more than 15 minutes late or leaving more than 15 minutes early counts as an absence from that day’s class. Arriving late (=up to 15 minutes after I have taken attendance) **three or more times** constitutes chronic lateness and will be factored into your attendance grade.
  
  o **Absences**: I will take attendance at the beginning of each day’s session. **You may miss up to two classes on days when you are *not* on call during the semester.** There will be no deductions for these two absences, and there is no need to let me know that you will be missing these classes. Beyond these two absences, however, missing a class will count as an unexcused absence. Exceptions include missing class for medical, military, or athletics-related reasons (all with documentation), or for religious reasons (with prior written notice). Missing class for a family vacation (beyond your two permitted absences) will count as an unexcused absence. **You will automatically fail the class if you have more than four unexcused absences** (i.e., without documentation for an exception listed above and beyond the two allowable absences) during the semester. If you have an ongoing medical condition that may cause periodic absences, please let me know (with documentation) as soon as possible during the semester. In such cases, we can set up alternative arrangements pertaining to attendance policy.

- **Class participation (10%)**: You are expected to contribute regularly to class discussions. If you are uncomfortable speaking in class, you should come to see me during office hours in order to express your thoughts on course materials in an alternative setting. Participation is particularly important for the days when you are “on call.” You should be aware that absences may have an adverse effect not only on your attendance but also on your participation grade, as you cannot participate if you are not present.

- **Graduate version of this course**: If you are taking this course as a graduate student, your grade will be based on the three reading responses described above (10%) and an extended research paper (5,000 - 6,000 words, plus bibliography) due on Friday, April 19, 2019 (50%), along with the final reflection essay (20%), attendance (10%) and participation (10%). You will not take the midterm exam, nor will you be required to give a presentation or attend Classes 23-26 (presentations by groups 1-4). Your final reflection essay will have the same deadline as for the rest of the class: **2.25pm on Tuesday, May 7, 2019.**
Grading scale:
- A: 90% and above
- AB: 85-89%
- B: 80-84%
- BC: 75-79%
- C: 65-74%
- D: 55-64%
- F: below 55%

Disabilities or other medical issues:
- If you have a disability, learning difficulty or other medical condition that you feel may affect your work, attendance or participation in our course, please let me know (with documentation) as early as possible during the semester. Any such discussions will remain confidential. The McBurney Disability Resource Center offers special facilities through which students may take exams (for instance, with time and a half), so it is important that you let me know of any special support you may require: http://www.mcburney.wisc.edu/ Where appropriate, we may also set up alternative arrangements pertaining to attendance.

“On Call” System:
- Groups: Our class will be divided into 5 groups of 4-5 students each (whether red, orange, green, blue, or purple). The list of names for each group will be posted on our course website.

- Rotations: Each group will be on call for three classes over the course of the semester. I have indicated which group will be on call for each class. It is your responsibility to know *when* you are on call, and to be well prepared for those classes especially. Your reading responses will be due by 12 noon the day before these classes. If you must miss a class when you are scheduled to be on call, arrange with a classmate to switch days and inform me of the change, or contact me at least one week in advance so that I can help you coordinate such a change.

Format for written work:
- Reading responses & feedback on classmates’ drafts: You should type your reading responses directly into Canvas in the dropbox for the relevant class number. You should submit annotated versions (using “track changes”) of your classmates’ research paper drafts to the relevant dropbox on Canvas.

- Research paper and final reflection essay: Your research paper and final reflection essay should be typed in 12-point font with 1-inch margins, double-spaced, and submitted electronically via our Canvas course page. If in doubt about whether your
submission has been properly submitted using Canvas, please also e-mail your paper to me. However, our Canvas dropboxes are my preferred method of submission.

Course materials:

- **All readings** for the course are available **electronically** through our Canvas course website. Because laptops may not be used in class (see below), I recommend that you bring summary notes to class if you want to avoid printing out the readings for each day’s class. Your summary notes should enable you to answer the reading questions for the day’s readings (posted on the syllabus for each class). I also recommend that after taking notes on a reading, you fill in the following headings in one sentence each: 1. summary of the main argument, 2. most important contribution, 3. most serious criticism, 4. how this reading fits with our other course readings and themes. Usually, bringing a record of these four summary headings (along with the answers to the reading questions) should be enough to enable you to participate in our in-class discussion.

Course content note:

- Please note that some of the course content is graphic and disturbing in nature, including material that relates to violence, blood, sexual assault, and abortion. If you suspect that specific material is likely to be emotionally challenging for you, I’d be happy to discuss any concerns you may have before the subject comes up in class. Likewise, if you ever wish to discuss your personal reactions to course material with the class or with me individually afterwards, I welcome such discussions as an appropriate part of our classwork.

Technology:

- **Laptop ban:** For pedagogical reasons, I do not allow the use of laptops or other electronic devices (including phones) in class. In order to ensure a full and engaged learning experience, the use of any type of electronic device in class is prohibited unless required for properly documented medical reasons and/or arranged through the McBurney Center. This includes the wearing of headphones during class. Any recordings made of our class (using the medical/McBurney exception) shall be for students’ own study purposes. Such recordings shall only be made with prior permission from me and are not to be made available to anyone outside of our class.

- **E-mail etiquette:** Please e-mail me with any procedural or logistical questions after you have consulted our syllabus and Canvas page and been unable to find the answer there. (If you notice that something is missing or incorrect on Canvas, I would appreciate an e-mail.) In general, you will get better quality feedback and substantive discussion by coming to office hours. All e-mails should include the appropriate form of greeting and be signed with your name. I will not reply to messages that do not include these basic courtesies. In this course (as in life), you
should aim to be clear and polite in your e-mails, delete automatic signatures that are not appropriate, and reread your messages before you send them.

Academic Misconduct:

- **The stakes:** You have a lot to lose if found to have committed academic misconduct. Misconduct during your undergraduate years may be recorded and submitted to future potential employers and institutions for post-graduate study. If you plan to apply to law school or graduate school, you should realize that any academic misconduct could prevent you from being accepted, or from pursuing your desired profession later on (e.g., practicing law). It is therefore critical that you familiarize yourself with UW’s policies and procedures governing academic misconduct: [http://www.students.wisc.edu/doso/academic-integrity/](http://www.students.wisc.edu/doso/academic-integrity/)

- **Plagiarism:** Any intentional attempt to claim the work or efforts of another person without authorization or citation constitutes academic misconduct. This includes cutting and pasting text from the web without quotation marks or proper citation, or paraphrasing from the web (or any other source) without crediting the original. I take such actions seriously, and **regularly do anti-plagiarism checks on student assignments.** If I suspect that you have plagiarized, I may request an in-person meeting and may penalize you in grading your assignment. Failure to meet with me in person to discuss these issues may result in an “incomplete” for the assignment and potentially for the course. In addition, I may pursue disciplinary measures.

- **Other forms of misconduct:** Because I grade on a curve, cheating by your classmates affects your grade directly. If you believe that a classmate has committed academic misconduct, report it to me.

Course Reading Schedule:

- **T, Jan.22, Class 1: Overview of the course** (no readings)

- **Th, Jan.24, Class 2: Introduction to the history of forensic science** (no readings)

- **T, Jan.29: Class 3: From judicial torture to lie detection (red group on call)**
  
  **Q:** How did a drug used in obstetrics become a tool for criminal investigation in the 1920s-40s, and what arguments were made (and by whom) for and against its use?

- **Th, Jan.31, Class 4: Jigsaw discussion #1—Forensic experts.** Do the ONE set of readings below that will be assigned to you by group (groups A-D to be determined before this class). Be prepared to explain this reading to classmates who have not done the same reading. For further details, see handout (to be distributed and posted in advance):
- **Group A**: Thomas T. Noguchi, *Coroner* (New York: Simon and Schuster, 1983), 54-86 (Ch.3: Medical Examiner’s Case No. 81128. Marilyn Monroe)
- **Group C**: Mary H. Manhein, *The Bone Lady: life as a forensic anthropologist* (New York: Penguin Books, 2000), 27-30 (Ch.3: Sis), 63-9 (Ch.12: Lost and Missing Children), 70-81 (Ch.13: Capitol, Ch.14: Indian Woman), 91-3 (Ch.18: Clouds and Horses), 125-37 (Ch.26: Civil War on the Bluff, Ch.27: For Those Who Wait)
- **Group D**: Walter Borden, *Wild Justice: Memoir of a Forensic Psychiatrist* (N. Charleston: Independent, 2017), xi-xiii, 33-57 (Ch.5: Eve, Ch.6: Beth, Ch.7: Crystal)

- **T, Feb. 5, Class 5: Police, detectives, & detection** *(orange group on call)*
  
  Q: How did the rise of Crime Scene Investigation change the approach to the detection of crime in 20th-century England, and how did the infamous Christie case make these changes visible?

- **T, Feb. 5: Sign-up list for research paper topics opens at 7pm (course website): sign up for a topic (max. one person per topic) during the next week**

- **Th, Feb. 7, Class 6: Jigsaw discussion #2—Detective fiction worldwide**
  Do the ONE set of readings below that will be assigned to you by group (groups E-H to be determined before this class). Be prepared to explain this reading to classmates who have not done this reading. For further details, see handout (to be distributed and posted in advance):
  - **Group F**: N. R. Gupta, “Holud Soytan (Yellow Devil)” in *Kiriti Omnibus*, vol.2 (Kolkata, 1972); translation from Bengali by Anwesha Maity (2018), 1-34

- **T, Feb. 12, Class 7: Courts & scientific experts** *(green group on call)*

Q: How has the role of forensic experts changed in the English-speaking world since the eighteenth century, and what key issues have arisen?

- **T, Feb.12:** Sign-up list for research paper topics closes at 7pm today (Canvas)

- **Th, Feb.14, Class 8:** Screening of clips from film, The Poisoner’s Handbook (PBS, 2014) with Dr. Elizabeth Lhost (no group on call)

- **T, Feb.19, Class 9:** Dogs & forensics. Guest class with Bureau of Alcohol, Tobacco, Firearms and Explosives Special Agent Canine Handler (SACH) Jason Salerno and Explosives Detection Canine (EDC) Jax (blue group on call)
  - People v. Hudson (Court of Appeals of Michigan, 2016), 1-5
  - Excerpts from full judgments:
    - People v. Perryman (Court of Appeals of Michigan, 1979), 1-6
    - Carr v. the State (Supreme Court of Georgia, 1997), 1-4

Q: What challenges have arisen in the criminal case law regarding the use of canine detection methods in a variety of forensic contexts?

- **Th, Feb.21, Class 10:** Insurance (purple group on call)
  - Sharon Ann Murphy, Investing in Life: Insurance in Antebellum America (Baltimore: Johns Hopkins U. Press, 2010), 77-96 (Ch.3. Lying, Cheating, and Stealing versus The Court of Public Opinion: Preventing Moral Hazard and Insurance Fraud), 232-7 (excerpt from Ch.8. Acting ‘in defiance of Providence’? The Public Perception of Life Insurance), plus notes

Q: Why were murder and suicide key challenges for the early American life insurance industry, and how did the industry respond?

- **T, Feb.26, Class 11: Signs of the body 1 (red)**

Q: Why was the use of fingerprinting as a forensic identification technique both powerful and problematic from the mid-19th to the mid-20th century?

- **Th, Feb.28, Class 12: Signs of the body 2 (orange)**
Q: How and why was Carrie Buck sterilized without her consent, and how did her story resemble those of thousands of other Americans in the mid-20th century?

• T, March 5, Class 13: Poisoning (green)
  o David Arnold, Toxic Histories: Poison and Pollution in Modern India (Cambridge: Cambridge U. Press, 2016), 1-7 (from Introduction) and 17-40 (Ch.1: The social life of poisons)
  Q: What cultural and religious narratives about poison have existed in the history of India, and how does poison fit into the history of gender, poverty, and medicine in India?

• Th, March 7, Class 14: Jigsaw discussion #3—Intoxicating substances: Do the ONE set of readings below that will be assigned to you by group (groups I-L to be determined before this class). Be prepared to explain this reading to classmates who have not done the same reading. For further details, see handout (to be distributed and posted in advance):
  o Group I: Deborah Blum, The Poisoner’s Handbook: Murder and the birth of forensic medicine in Jazz Age New York (New York: Penguin, 2011), 38-41 and 46-9 (from Ch.2: Wood Alcohol 1918-19), 152-64 (from Ch.7: Methyl Alcohol 1927), and 196-207 (from Ch.9: Ethyl Alcohol, 1930-1932)
  o Group J: Barron H. Lerner, One for the Road: Drunk Driving since 1900 (Baltimore: Johns Hopkins Press, 2011), 1-3 (from Introduction), 38-63 (Ch.2: Science and Government Enter the Fray)

• T, March 12, Class 15: Midterm exam in Sewell Social Science computer lab, room 3218. Please note that our exam will *not* be held in our usual classroom.

• Th, March 14, Class 16: Death investigation 1 (blue)
• Jeffrey M. Jentzen, *Death Investigation in America: Coroners, Medical Examiners, and the Pursuit of Medical Certainty* (Cambridge, MA: Harvard University Press, 2009), 1-30 (Introduction, Ch.1: Good and Lawful Men)

• *Q: How did the English coroner’s system operate in America, and what criticisms and reform attempts were made?*

• **Sat., March 16-Sunday, March 24: spring break**

• **T, March 26, Class 17: Death investigation 2. Guest class with Dr. Michael A. Stier, forensic pathologist and Assoc. Prof. of Pathology and Laboratory Medicine, UW School of Medicine and Public Health (purple)**
  o To watch in advance: Frontline documentary (53min.), *Post Mortem: Death Investigation in America* (PBS, 2011)
  http://www.pbs.org/wgbh/pages/frontline/post-mortem/
  *Q: What aspects of death investigation in the US today are problematic, and why?*

• **Th, March 28, Class 18: Sex & reproduction 1 (red)**
  *Q: Why did certain people living in Nazi Germany claim that the men assumed to be their biological fathers were actually not their fathers, and how did they try to prove it?*

• **T, April 2, Class 19: Sex & reproduction 2 (orange)**
  o Barbara Baird, “I had one too…” *An Oral History of Abortion in South Australia before 1970* (Bedford Park, Australia: Women’s Studies Unit, Flinders University of South Australia, 1990), 35-7 (The Interviewees), 39-45 (Why women wanted abortions), 47-57 (How women procured abortions), 77-91 (Backyard abortions, Self-induced abortion before 1970, Consequences: The Law)
  *Q: What do the oral history interviews in Baird’s study reveal about illicit abortion in South Australia before its decriminalization in 1970?*

• **Th, April 4, Class 20: Law & psychiatry 1 (green)**
  *Q: How did the concept of psychopathic nymphomania reflect gendered assumptions and change during the 20th century, and how did it affect relations between psychiatrists and the legal profession?*

• **T, April 9, Class 21: Law & psychiatry 2 (blue)**
Q: How did shoplifting come to be a “fashionable” form of crime in the Anglo-American world in the late 19th century, and what demographic patterns (especially class- and gender-based) were associated with the crime?

- **T, April 9 (by midnight): start of rolling submission deadline for first draft of research paper. Your first draft is due by midnight at the end of the day exactly one week *before* the date of your in-class presentation. Presentations will take place during Class 23-26.**

- **Th, April 11, Class 22: Corporate responsibility (purple)**
  - Q: What is the significance of the Gene Autry cowboy suit in US history, and how did flammable fabrics become a key arena for consumer protection efforts in the 20th century?

For classes 23-26: For the next four class sessions, you will present findings from your research paper (first draft) in a short presentation (no powerpoint), followed by Q&A from classmates. Another assigned group of students will read presenters’ first drafts in advance. They will use “track changes” to provide comments and questions. These annotated versions of each first draft will be read by instructor and forwarded to the authors shortly before their presentations. After their presentations, authors will revise their papers in light of their classmates’ written and in-class feedback. Authors must submit with their final draft a short cover note describing changes made in response to classmates’ comments. Students who are not in the group assigned to provide feedback may also read presenters’ first draft and submit comments and questions to instructor, who will forward them to the author. Providing feedback on this optional basis will be factored into your participation grade.

- **T, April 16, Class 23: Presentations of Group 1, with written feedback from Group 4 (feedback due the day before by 12 noon)**

- **Th, April 18, Class 24: Presentations of Group 2, with written feedback from Group 1 (feedback due the day before by 12 noon)**

- **T, April 23, Class 25: Presentations of Group 3, with written feedback from Group 2 (feedback due the day before by 12 noon)**

- **T, April 23 (by midnight): start of rolling submission deadline for final version of research papers. Your finished paper is due (with cover note explaining changes made in response to classmates’ comments) by midnight at the end of the day exactly one week *after* the date of your in-class presentation.**

- **Th, April 25, Class 26: Presentations of Group 4, with written feedback from Group 3 (feedback due the day before by 12 noon)**
• T, April 30, Class 27: Jigsaw discussion #4—Forensic science and wrongful convictions. Do the ONE set of readings below that will be assigned to you by group (groups M-P to be determined before this class). Be prepared to explain this reading to classmates who have not done the same reading. For further details, see handout (to be distributed and posted in advance):
  o Group M: (1) Excerpts from R. v. Sally Clark (UK, 2003), 1-26; (2) Caroline Gammell, “Alcohol killed freed mother Sally Clark,” Telegraph (7 Nov. 2007), PDF version: 1-2
  o Group N: David Grann, “Trial by Fire: Did Texas execute an innocent man?” The New Yorker (7 Sept. 2009), 1-34
  o Group O: Deborah Tuerkheimer, Flawed Convictions: “Shaken Baby Syndrome” and the Inertia of Injustice (New York: Oxford University Press, 2014), xi-xiv, 173-93 (Introduction and chapter 9; scan shared with author’s permission)

• Th, May 2, Class 28: Forensic science in current events [no group on call; make-up reading responses may be submitted for today’s class (optional)]
  o readings TBA (stories in the news during our semester together)
  Q: In what ways do today’s readings reinforce or complicate themes we have explored in this course?

• Tuesday, May 7, 2019 at 2.25pm: Final reflection essay due (to be submitted via our Canvas page). Please note that there will be *no final exam* held at the official exam location posted on the university’s timetable. (Our official exam time is 12.25pm-2.25pm on May 7, 2019. The essay is due at the end of this period.)