

First-Year Seminar

Ojia Boards to Big Data: Possibility, Probability, and Prediction

Dickinson College, Fall 2015
Monday, Wednesday, Friday 12:30-1:20, Denny Hall 311

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Office Hours: Wednesday, 2:00-3:30; Thursday 9:30-11:00, and by appointment

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Course Description and Learning Goals

The First-Year Seminar (FYS) introduces you to Dickinson College as a “community of inquiry” by developing habits of mind essential to learning. Across the entire college, the goals of the FYS program are to help students better:

- Critically analyze information and ideas
- Examine issues from multiple perspectives
- Discuss, debate, and defend ideas, including one’s own views, with clarity and reason
- Develop discernment, facility, and ethical responsibility in using information
- Create clear academic writing

For our FYS, we will examine how scholars, journalists, and others use data and mathematical principles to examine complex phenomena. First, we will specifically examine instances in which mathematical principles have influenced the outcome of judicial trials. Second, we will think critically about “big data”, including what it is and when it is (and is not) useful in making predictions in various realms. Finally, we will engage in data analysis of our own, thinking about and researching issues related to grades and grading at Dickinson College.

Course Materials

- Rosenwasser, David, and Jill Stephen. 2012. *Writing Analytically*. Boston: Wadsworth.
- Schneps, Leila, and Coralie Colmez. 2013. *Math on Trial: How Numbers Get Used and Abused in the Courtroom*. New York: Basic Books.
- Silver, Nate. 2012. *The Signal and the Noise: Why So Many Predictions Fail – but Some Don’t*. New York: The Penguin Press.

Additional readings are available on Moodle or online as specified in the syllabus.

What is Required of Me? (What all professors expect from Dickinson students)

You should complete all readings and writing assignments in advance of the class in which they will be discussed. Every professor has a slightly different way of writing a syllabus, so it is important that you ask questions and understand what is expected of you as quickly as possible. You don't want to miss a deadline or be unprepared for class simply because you didn't understand the syllabus.

In order for you to be successful in this class and in many others at Dickinson, you will want to do the following: (taken from the book Peer Instruction for Astronomy, by Paul J. Green, page 29)

- READ. Come to class prepared to discuss the material.
- RISK. Be open with your opinions and your questions. Listen to and encourage everyone's ideas so they can take risks too.
- RELAX. Don't take criticism of your own ideas personally. Change your mind when the evidence shows that you should.
- RESPECT. Act toward your peers as you would have them act towards you. Be civil. Be charitable.
- REASON. Play the skeptic, but be critical of reasoning, ideas, and data -- not of people.
- RESTATE. Try to paraphrase another's explanation in a way that makes sense. Focus on coming to the best possible answer.

Grading Overview

Your grade will be based on four papers, attendance and participation, a reading journal, a writer's questionnaire, and several information literacy assignments. Each component is discussed further below but the relative weight of each piece is as follows:

Attendance and Participation	15%	
Writers Questionnaire; Reading Journal; Information Literacy Assignments	25%	
Essay #1: Response Paper: <u>Math on Trial</u>	10%	Draft – September 16 Final – September 23
Essay #2: Response Paper: <u>The Signal and the Noise</u>	15%	Draft – October 16 Final – October 23
Essay #3: Research Proposal Narrative	15%	Final – November 13
Essay #4: Research Paper, including presentation	20%	Draft – November 20 Final – December 4

Final letter grades will be assigned in the following way:

A = 93-100	B- = 80-82	D = 60-69
A- = 90-92	C+ = 77-79	F = 0-59
B+ = 87-89	C = 73-76	
B = 83-86	C- = 70-72	

Attendance and Participation

The success of this course depends upon your regular contributions to class discussions. Since this a seminar-style class, we will spend the vast majority of class in conversation with one another about course readings and the writing process. Course attendance is not optional. That said, I know things sometimes come up and, as such, you may have three absences throughout the course without penalty. Missing class beyond that will result in a reduction of your attendance and participation grade. Just showing up for class, however, is not enough to guarantee a high participation grade. Your participation grade will be based on the degree to which you do the following:

- Come to class having done the day's reading
- Prompt discussion and/or respond to comments made by your peers
- Enter the conversation without dominating or silencing others
- Offer more than just personal opinion or anecdote, meaning that you root your comments in the text we are discussing.
- Work collaboratively with colleagues to achieve learning goals when you are placed in small groups
- Are present and engaged in every class, meaning that you take care of your needs before you come to class. Regularly excusing yourself in the middle of class to take a phone call, use the restroom, or fill a water bottle is distracting to others and will result in a decrease in your participation grade.

I recognize that some students are hesitant to speak in from of class. If this is the case, please come talk with me during office hours early in the semester. In addition, if extenuating circumstances arise that interfere with your ability to attend and/or participate in this class or others, please come see me as soon as possible. Dickinson has many resources available to you that might help you navigate a difficult time or difficult situation. As both your adviser and your professor, I am in a great position to help point you toward those resources. Don't hesitate to ask!

Writer's Questionnaire

This assignment will be completed during the first week of class and will serve as a way for me to begin to get to know you as a writer and a scholar.

Reference Librarians and Information Literacy

The library employs several reference librarians, who are trained professionals able to help library users find information. Whether it is for this course or any other over the next four years, you need never become frustrated by your research. Instead, you can ask a reference librarian to help you find sources related to your topic. They can help you find information (books, articles and more), choose the most relevant databases, improve your research strategy, critically evaluate information, and cite sources properly. Anna Kozlowska is the liaison librarian for our course, and there are reference librarians who can work with every major in the college. If you start at the Writing Center, their offices are on the parallel wall. The reference librarian on duty has a little red flag hanging from the top of the door.

The information literacy assignments in this course will be distributed and graded by our liaison librarian. Information Literacy encourages you to consider the following questions as you undertake any type of research project:

- Am I mindful that researching is a creative, intellectual, and iterative process?
- Who makes up my community of inquiry?
- Do I understand the rich array of paths I can take while exploring this question? What are all the ways I might want to address this question?
- Am I aware that the content I need may be found in a variety of formats?
- Am I familiar with the core sources used within the discourse of this discipline?
- Throughout the research process, am I thinking critically and reflectively?

(list created by Carleton College)

Papers and the Writing Process

Each paper will go through the invention, drafting, feedback, and revising process. The process of revision and ultimate success of the paper will depend upon a thoughtful first draft as well as a polished final draft. All papers must be typed and meet standard formatting practices: double-spacing; reasonable font size; reasonable margins; pages numbered; stapled; title and author's name on the first page. Throughout the paper, citations should be consistent.

Writing is a process and not an end product. As such, students will meet with me at least once during the semester to discuss writing. You will also be required to visit the Writing Center at least once over the course of the term.

The Writing Center at Dickinson

Writers of all levels and abilities need feedback in order to develop their ideas and grow as writers. Dickinson's trained writing tutors can help you generate ideas, begin drafting, revise a rough draft, figure out your professor's preferred documentation style, understand and respond to professor feedback, edit your writing – among other things. You can schedule an appointment online at this link: http://www.dickinson.edu/info/20158/writing_program/677/appointments

For more information about hours and policies, visit the web:

<http://www.dickinson.edu/academics/resources/writing-program/content/Writing-Center/>

Evaluation Policies for Writing Assignments

In each paper assignment, we will talk about specific goals and things to focus on in that particular assignment. In general, however, I will evaluate your writing by considering how well you have achieved the following goals (developed by the Writing Program at Dickinson):

1. The author crafts an introduction that identifies a question, frames the question, and states a thesis.
2. The author organizes the writing, demonstrates a progression of ideas, and maintains a consistent focus or thread.
3. The author contextualizes the question and supports it with evidence.
4. The author sustains analytical inquiry throughout the assignment.
5. The author effectively incorporates relevant outside information.
6. The author engages the intended audience with a consistent, distinctive voice appropriate to the task.
7. The author adheres to appropriate standards for language use.
8. The author conforms to appropriate formats for citation of source material.

Academic Integrity

From Dickinson College's Community Standards... "Respect for ideas — our own and others' — is a hallmark of academic integrity. We show respect by acknowledging when we have used another's words or ideas in our work. We expect others to acknowledge when they use our ideas or words in their work. Students are expected to do their own work on quizzes, papers, examinations, class assignments, etc. Normally, a paper may be submitted in fulfillment of an assignment in only one course. Exceptions require permission from the instructors. Collaboration must be noted in writing and requires the consent of all instructors."

(http://www.dickinson.edu/info/20273/dean_of_students/867/community_standards/2)

With respect to this course, I expect you to do your own work. We will discuss and workshop papers in class, and you may certainly talk with classmates about your paper ideas outside of class; however you must write all papers on your own. Additionally, you will be expected to cite any and all sources you use in researching and writing your papers. We will talk extensively about citation, but if you ever have any questions about what constitutes cheating or plagiarism, please feel free to ask.

Accommodations

Dickinson College makes reasonable academic accommodations for students with documented disabilities. Students requesting accommodations must make their request and provide appropriate documentation to the Office of Disability Services (ODS) in Biddle House. Because classes change every semester, eligible students must obtain a new accommodation letter from Director Marni Jones every semester and review this letter with their professors so the accommodations can be implemented. The Director of ODS is available by appointment to answer questions and discuss any implementation issues you may have.

ODS proctoring is managed by Susan Frommer at 717-254-8107 or proctoring@dickinson.edu. Address general inquiries to Stephanie Anderberg at 717-245-1734 or e-mail disabilityservices@dickinson.edu. For more information, see www.dickinson.edu/ODS.

I am committed to including all students in this course and am happy to discuss accommodations with students, provided that this conversation happens early in the semester and definitely before any papers are due or exams are scheduled.

Technology in the Classroom

A recent study conducted by psychologists Pam Mueller and Daniel Oppenheimer shows that students who take notes on a computer do less well answering conceptual questions than do students who take notes by hand (<http://www.vox.com/2014/6/4/5776804/note-taking-by-hand-versus-laptop>). Furthermore, since thoughtful listening and responding will be instrumental to the success of our course, I prefer that students not rely on laptops or tablets for note-taking purposes. However, if you feel strongly that the use of electronics is important to your success in the course, I encourage you to talk with me personally.

With respect to audio recording, Pennsylvania is a “two-party consent” state, meaning that it is a crime to “intercept or record a telephone call or conversation **unless all parties to the conversation consent**” (<http://www.dmlp.org/legal-guide/pennsylvania/pennsylvania-recording-law>). Practically, what this means is that you should not be using any device to record class lectures or discussions. If a student with an accommodation from ODS is permitted to record

class, all members of the class will be informed; students with ODS accommodations agree to strict guidelines with respect to how they use the recording.

Outline of the Course

August 27 – Welcome to Dickinson, Introduction to the course

August 29 – WA, Chapter 1, pages 5-21; Math, Introduction and Chapter 1, pages ix-22

- Journal = After reading the chapter, what do you think you will need to do differently in college than you did in high school when it comes to reading, researching, and writing?

August 31 – **Writers Questionnaire Due**; Math, Chapter 2, pages 23-38; WA, “Pointing”, pages 108-109

September 2 – Math, Chapters 3 and 4, pages 39-86

- Journal = Record three key sentences from today’s reading including page numbers. Write at least one sentence about why you included each passage.

September 4 – Math, Chapters 5 and 7, pages 87-105 and 121-145; WA, “Notice and Focus”, pages 24-26

- Journal = In today’s reading, what is interesting? What is strange? What is revealing?

September 7 – Discussion of Paper #1; Math, Chapters 9 and 10, pages 167-219; WA, “Asking ‘So What?’”, pages 33-35

September 9 – Math, Chapter 8, pages 147-166; WA, “Moving from Idea to Thesis Statement” and “Analyzing Evidence”, pages 228-231 and 207-213

- Journal = Brainstorm potential topics for Paper #1

September 11 – Math, Chapter 6 and Conclusion, pages 107-120 and 221-225

- Journal = Reflecting about Math on Trial, where do you think the authors answer the “So what?” question? What do you think is important to take away from the book? In other words, what do you identify as the “So what?” question?

September 14 – Richard Straub, “Responding – Really Responding – to Other Students’ Writing” (Available on Moodle)

September 16 – **Peer Review, Paper #1**

September 18 – Silver, Introduction and Chapter 1, pages 1-46; **Journal Check**

- Journal = Thinking about Chapter 1 from the Silver book, practice 10 on 1. Refer to the box on the bottom of WA page 215 for questions to get you started.

September 21 – **Academic Integrity Tutorial Due**; Silver, Chapters 2 and 3, pages 47-107

September 23 – **Paper #1 Due**; Library Session, Introduction to Sources

September 25 – Silver, Chapter 4, pages 108-141; WA, “Summaries”, pages 75-76

- Journal = Summarize Chapter 4 of the Silver book in one paragraph thinking about your writing as *focused description* (WA, 76).

September 28 – Silver, Chapters 5 and 6, pages 157-203; WA, “Summary”, pages 152-153

- Journal = Using one of the strategies described in WA on pages 152-153, make your summary from Friday’s journal entry more analytical. It should still be roughly one paragraph, but the paragraph should be more complex and more in depth. Alternatively, you may write a new, more analytical, summary of one of today’s chapters from the Silver book.

September 30 – Library Session, Finding Information in the Library

October 2 – Silver, Chapter 7, pages 204-231; WA, “Personal Response”, pages 153-155

- Journal = Using one of the strategies for personal response described in WA on pages 154-155, write a one-paragraph response to chapter 7 in the Silver book.

October 5 – Silver, Chapter 8, pages 232-261;

- Journal = Translate into your own words the feedback you received on your first essay. What higher order concerns to you need to work on? Copy three sentences with grammatical/mechanical errors; find the rules in WA Chapter 19 and paraphrase them; then rewrite the sentences correctly.

October 7 – Discussion of Paper #2; WA, “Reasoning from Evidence and Claims”, pages 165-189

October 9 – Silver, Chapters 9 and 10, pages 262-328; WA, “Paraphrase x 3”, pages 36-39

- Journal = Using a reading from ANOTHER class (not this one) copy a key sentence directly from the text. Then, using the guidance provided in WA, paraphrase the key sentence three different ways. Briefly answer the questions posted in steps 4 and 5 in WA page 36.

October 12 – Silver, Chapters 11 and 12, pages 329-411

October 14 – Library Session, Paraphrasing and Citation; **Journal Check**

October 16 – **Peer Review, Paper #2**

October 19 – **Fall Pause, No Class**

October 21 – Silver, Chapter 13, pages 412-445

October 23 – **Paper #2 Due**; Silver, Conclusion, pages 446-454

October 26 – Discussion of Papers #3 and #4; Selection of Readings on Grade Inflation (Available on Moodle)

October 28 – Visit from Associate Dean Brenda Bretz; Selection of Readings on Other Grading Issues (Available on Moodle)

October 30 – Research Questions/Topics; “Beginning the Research Process” from Political Science Research Methods (Available on Moodle)

- Journal = What are three possible research topics you are interested in examining based on what we have read and discussed so far this week?

November 2 – WA, “Using Sources Analytically: The Conversation Model”, pages 267-282

November 4 – WA, “Finding, Citing and Integrating Sources”, pages 283-314

November 6 – Library Session, Revisiting the Research Process

November 9 – Data Analysis Workshop

- Journal = Reflect on the library session from Friday. What was the most useful piece of information you learned? What else do you think you will need to do to make your research process successful?

November 11 – Data Analysis Workshop

- Journal = Choose a passage from one of your sources and make it speak (WA, 271-273)

November 13 - **Paper #3 Due**; Eliza Gray, Time Magazine Article, Available on Moodle

November 16 – Data Analysis Workshop

- Journal = Choose a passage from one of your sources and use it to raise a question (WA, 274-276)

November 18 – Data Analysis Workshop

- Journal = Choose two sources and place them into conversation with one another (WA, 276-278)

November 20 – **Peer Review, Paper #4**

November 23 – Giving Good Presentations; Selection of Readings on Presentations (Available on Moodle); **Journal Check**

November 25 – **Thanksgiving Break, No Class**

November 27 – **Thanksgiving Break, No Class**

November 30 – Presentations

December 2 – Presentations

December 4 – Presentations; Wrap Up; **Paper #4 Due by Midnight**