New York University
College of Arts and Science
First-Year Seminar
Ways of Thinking and Knowing
Syllabus in Brief
Spring 2021

The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.

-Albert Einstein

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Course Description. This seminar introduces students to fundamental epistemological questions and concepts, both historical and new: what do we know and how do we know it? The academy has long divided knowledge and its pursuit into the Arts and the Sciences. Likewise, popular notions of the human brain suggest that those fissures run through individual minds: the analytical, science-minded "left brained" and the artistic, philosophical-minded "right brained." It is thought that the so-called left brains—analytical, logical, objective—become engineers, biologists, and bankers while right brains—intuitive, thoughtful, subjective—are the painters, philosophers, and social workers of the world. In practice, both in the science lab or in the artist's studio, these distinctions are more porous than we popularly believe. This seminar explores the interplay between reasoning, knowledge, belief, discovery, and creativity, the various acts of mind common to all fields in the academy and, essentially, all human endeavors. As we wrestle with conundrums which resist easy solution, whether presented to us in the "real world," the sciences, the arts, or philosophy, we will simultaneously be thinking about thinking. What "habits of mind" promote problem solving? Which of these habits limit innovation and novel insight? We'll traverse many fields—logic, physics, neurology, psychology, artificial intelligence, literature, film, visual and performance art—as we hunt for approaches to understanding that we then put into practice. We will work towards the goal of "understanding our understanding," as the artist and essayist Matthew Goulish phrases it, in order to exploit the twinned powers of rationality and creativity. Trips to MoMath (Museum of Mathematics), MoMA, and other outings are planned. Readings to include Martin Heidegger, David Hume, Thomas Kuhn, Lynda Barry, Oliver Sacks, Nassim Taleb, Daniel Dennett, and others.

Course Goals. We might say that the university is a “knowledge factory.” We are in the business of passing our collected knowledge to new generations in the classroom as well as the production of more in the laboratory or in the pages of new writing. Epistemology is a branch of philosophy concerned with knowledge. A fundamental question in epistemology is “how do we know what we know?” It is a simple question which points to many complexities: what are the processes of attaining knowledge? how do we know if we are
“right”? what in our knowledge is verifiable through rigorous testing? what is intuition? what seemingly bedrock knowledge is formed out of social and cultural constructs? what are the processes of discovery? are we unnecessarily limiting ourselves from additional discovery because of limitations in our processes? Our main goal is to not just investigate these questions, but to put them to use. By the end of the semester you will have identified a “problem” worthy of investigation. You will research the history of the problem, and formulate a myriad of modes to investigate it, modes which will reveal, if only in part, a potential “solution.”

All of this work will be catalogued in a research journal, and then, finally, be communicated in a presentation and in a research project. This work will lead you to more fully understand your own idiosyncratic modes of intellection as well as offer you a choice of approaches to utilize in future coursework.

Requirements:

1. Portfolio of all class work (30%). Portfolio: weekly writing assignments, reading responses, in-class writing and other work, project journal
2. Class Presentation on project (15%)
3. Research project (Annotated Bibliography 10%; Draft 1: 10%; Final: 10%; 20%)
4. Participation, including conferences, attendance (15%)

Research Project Options:

The bulk of your work during the semester will be related to your research project. Early in the semester you will locate an interesting and compelling “problem,” one which both fascinates and frustrates you. The problem will arise out of your reading of the “real world,” the arts, the sciences, professional disciplines, or from a combination of these categories. You will then approach this problem in a series of exercises, ranging from strict empiricism to playful subjectivism. You will then choose one of the methods below as a way to further explore and then present on the problem.

- Humanities Research Paper: 12-15 pages
- Philosophical Treatise with Research Component: 12-15 pages
- Creative Project with Written Component: the “piece” plus 3-5 pages
- Design and Write Experimental Research Proposal: 12-15 pages
- Design and Write Field Study Proposal: 12-15 pages
- Public Policy Proposal with Research Component: 12-15 pages
- Project of your own design (needs prior approval)

Assignments:

There will be reading and writing assignments due every week, including occasional portfolio and research journal reviews. Assignments will be posted on our NYU Classes course site.

Attendance:
Attendance is required. Please arrive on time. Attendance will be taken at the beginning of class. We will have occasional class outings during class times, such as a trip to MOMA and MOMath. Attendance for these trips is also required.

Readings and Texts:

There will be readings assigned for every class meeting. Many of your readings will be provided, but you may need to purchase additional materials or acquire them through NYU Libraries in order to satisfy the needs of your research project.

Required Text: *What It Is* by Lynda Barry; tickets to MoMath and MoMA (MoMA is free to NYU students).

A Brief Sketch of the Semester

Additional Assignments and Readings will be included on the Official Syllabus

Week 1: Introduction to the course: What is Thinking? Conceptions of Mind, Brain, and Self

Reading: “What is Called Thinking?” Martin Heidegger, Ch. 1-3, pg. 3-36

“Epistemic Value and What We Care About,” Linda Zagzebski, pg. 4-24 from *On Epistemology*.

Read the Introduction to “The Structure of Scientific Revolution” by the physicist Thomas Kuhn (found under the Resources Tab of Classes).

Week 2: Self and Society: Where are We? Who are We?

Reading: “Toys,” by Roland Barthes from *Mythologies*.

"Is the Universe a Simulation?" by Edward Frankel

*What It Is*, by Lynda Barry pg. 1-16

Week 3: Self and Agency in the World: Identifying, Defining Problems (Practical and Research)

Research Project: Brainstorm Due

*What It Is*, by Lynda Barry pg. 17-43

Week 4: "The Normal Well-Tempered Mind" by Dan Dennett.

Research Project: Narrowing the List and Going Deeper Due

Week 5: Approaches to Problem Solving: Induction and Deduction

Research Project: Pitching the “Problem”
Week 6: Visiting MoMath

Research Project: Expanding or Dismantling the Conceptual Box Due

Week 7: Mind and Memory, Self-hood and Living, Oliver Sacks, “The Lost Mariner.” Elizabeth Loftus, Lynda Barry Read pages 33-40 of *What It Is. The Case of Clive Wearing*

Research Project: Continuing the Search and Focusing the Proposal Due

Week 8: Finding More Sources: Hitting the Archives, the Stacks, and the Databases

Research Project: Mini Conference/Research Journal and Portfolio Check

Week 8: Visiting MoMA

Week 9: The Intelligence Problem and Measuring Aptitude, Neural Plasticity

Reading: “Electrifying the Brain,” by Elif Batuman

Week 10 Visiting the NYU MEG Brain Imaging Lab

Annotated Bibliography Due

Week 11 Start of Presentations

Research Project Draft 1 Due

Week 12 Presentations Completed

Week 13 Research Project Draft 2

Week 14 Conclusions and Reflections on the Course