121L017 The Art of the Probable: Literature and Probability
A Category 2 HASS-D/CI-H subject

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Lectures: M 3-4 (56-114)
Discussion Sections: WF 3-4 (Raman: 56-167; Kibel: 56-180)
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Course Website: http://stellar.mit.edu/S/course/21L/fall/21L.017/

Overview

"The Art of the Probable" addresses the history of scientific ideas, in particular the emergence and development of mathematical probability. But it is neither meant to be a history of the exact sciences per se nor an annex to, say, the Course 6 curriculum in probability and statistics. Rather, our objective is to focus on the formal, thematic, and rhetorical features that imaginative literature shares with texts in the history of probability. These shared issues include (but are not limited to): the attempt to quantify or otherwise explain the presence of chance, risk, and contingency in everyday life; the deduction of causes for phenomena that are knowable only in their effects; and, above all, the question of what it means to think and act rationally in an uncertain world.

Our course therefore aims to broaden students' appreciation for and understanding of how literature interacts with – both reflecting upon and contributing to – the scientific understanding of the world. We are just as centrally committed to encouraging students to regard imaginative literature as a unique contribution to knowledge in its own right, and to see literary works of art as objects that demand and richly repay close critical analysis. It is our hope that the course will serve students well if they elect to pursue further work in Literature or other discipline in SHASS, and also enrich or complement their understanding of probability and statistics in other scientific and engineering subjects they elect to take.

Schedule of Classes and Readings (subject to change)

NOTE: (1) The discussions in the individual sections will vary, so the chart below is indicative and approximate – the exact reading for that week will be further specified by your section instructor.

(2) Normally, Lectures are on Mondays, while Wednesdays and Fridays are reserved for Discussion sections. However, there are exceptions, so please check schedule regularly.

(3) Further, the schedule below does not mean that the lectures will focus entirely on the readings listed -- their content and emphasis will vary from week to week, depending on the nature of the topic being covered and which faculty member is responsible for that week's lecture. But you are expected to keep up with the reading as described in the schedule.

Sep 7 (W) Sep 9 (F)	Introductory Session Discussion: Read Sophocles' *Oedipus Rex*

Sep 12 (M) Sep 14 (W) Sep 16 (F)	Lecture: Aristotle; Read extracts from Aristotle's *Physics* Discussion: *Oedipus Rex* and extracts from *Physics* Discussion: Read Cardano, extracts from Pascal's *Provincial Letters*, and Pascal-Fermat correspondence
Sep 19 (M) Sep 21 (W) Sep 23 (F)	Lecture: Pascal and *Hamlet*; Read Pascal's Wager and *Hamlet* Institute Holiday: No Class Discussion: *Hamlet*
Sep 26 (M) Sep 28 (W) Sep 30 (F)	Lecture: Newton; Read Newton extracts Discussion: Read Pope's *An Essay on Man* (selections) and Leibniz (selections from Theodicy). <u>ESSAY 1 DUE</u> Discussion: Pope, Leibniz; read additional Leibniz extracts
Oct 3 (M) Oct 5 (W) Oct 7 (F)	Lecture: Leibniz; Read Leibniz's "Neccessity and Contingency" Discussion: Read Voltaire's *Candide* Discussion: *Candide*
Oct 10 (M) Oct 12 (W) Oct 14 (F)	Columbus Day Holiday: No Class **Lecture**: Hume; read extracts from Treatise and Hume on probability Discussion: Hume;
Oct 17 (M) Oct 29 (W) Oct 21 (F)	Lecture: The Romantics; read Wordsworth's "The Thorn"; <u>ESSAY 1 REWRITE DUE</u>. Discussion: The Romantics; read Coleridge's "Rime" Discussion: The Romantics; read extracts from Byron's *Don Juan*
Oct 24 (M) Oct 26 (W) Oct 28 (F)	Lecture: Bernoulli and Bayes; read Bernoulli and Bayes Discussion: read Quetelet Discussion: read first half of Dostoevsky's *Notes from the Underground*
Oct 31 (M) Nov 2 (W) Nov 4 (F)	Lecture: Dostoevsky and Quetelet; read second half of *Notes from the Underground*; <u>ESSAY 2 DUE</u> Discussion: Dostoevsky's *Notes from theUnderground* Discussion: Read extracts from Darwin's *Origin of the Species*
Nov 7 (M) Nov 9 (W) Nov 11 (F)	Lecture: Darwin; read extracts from Darwins' *Descent of Man* Discussion: Darwin, Arbuthnot, Galton; read essays by Arbuthnot and Galton Veterans Day holiday: No Class
Nov 14 (M) Nov 16 (W) Nov 18 (F)	Lecture: Galton Discussion: Read H. G.Wells' *The Island of Doctor Moreau* Discussion: *Island of Doctor Moreau*
Nov 21 (M) Nov 24 (W) Nov 26 (F)	Lecture: Peirce and Mallarmé; read essay by Peirce and Mallarmé's poem Discussion: Borges; read "Lottery in Babylon" and "The Library of Babel" Thanksgiving Holiday: No Class

Nov 28 (M) Nov 30 (W) Dec 2 (F)	Discussion: read Borges' "Garden of the Forking Paths"; review Mallarmé's poem Discussion: read Pynchon's *The Crying of Lot 49* **Lecture** on The Crying of Lot 49; read essay by Boltzmann
Dec 5 (M) Dec 7 (W) Dec 9 (F) Dec 12 (M) Dec 14 (W)	Lecture: Topic and Reading yet to be determined Continued discussion of *The Crying of Lot 49* Discussion: Read Stoppard's *Rosencrantz and Guildenstern are Dead* **Discussion**: *Rosencrantz and Guildenstern are Dead*; <u>ESSAY 3 DUE.</u> No Class

Course Organization

21L.017 is structured to balance two sorts of learning experiences: while building upon a knowledge-base shared by everyone in the class, it seeks to replicate the environment of close small-group interaction that is distinctive of literary study at MIT. The class is divided into two roughly equal-sized sections, each led by one of the professors teaching this class. The entire class will meet on some Mondays to attend a lecture jointly attended by both sections. On the subsequent Wednesdays and Fridays, you will attend your own discussion section. Since what each discussion section covers will vary depending on who teaches it, you are not allowed to change discussion sections once you have been assigned to one. You will work throughout the term primarily with the faculty member in charge of your section. He will be responsible for reading and commenting on your papers, holding office hours for you, and so on -- as well, of course, for assigning your final grade. But you are always welcome to meet with the other faculty members teaching the class should the need arise -- should you wish, for instance, to discuss in more detail lecture material for which one of them was responsible.

Each week this subject pairs a literary text (or texts) with primary material relevant to the development of ideas related to probability. The schedule above lists the material to be covered in each class. Students are expected to read the indicated lecture readings before the Monday lecture. Likewise, you should have finished reading the additional texts assigned for the sections that follow the lecture before coming to section, so that you can explore in more detail both the literary text and the accompanying primary material.

Readings

There are two sorts of readings: texts to be purchased and others to be downloaded and printed from the Materials section of the class website.

NOTE: You will be expected to PRINT out the downloaded readings, read them in hard copy, and bring the printed texts to class. You will NOT be allowed to use your computer in class to access them: reading texts off the screen is generally not conducive to active and careful reading; you need to be underlining and taking notes as you read. And neither does a roomful of students speaking from behind their laptops make for good class discussion.

The texts to be purchased are the following (all are available at the COOP):
Sophocles, *Oedipus Rex*

William Shakespeare, *Hamlet*
Alexander Pope, *Essay on Man*
Dostoevsky, *Notes from the Underground*
H. G. Wells, *The Island of Dr. Moreau*
Thomas Pynchon, *The Crying of Lot 49*
Tom Stoppard, *Rosencrantz and Guildenstern are Dead*

We strongly prefer that you use the editions ordered.

Course Requirements and Grading

21L.017 is a HASS-D/CI subject. In this class, CI requirements will be satisfied by

1) A minimum of 20 pages of writing, in 3 assignments.
2) Revision and resubmission of one of the essays.
3) An oral component, to be satisfied by active classroom participation and one more formal oral assignment (details forthcoming).
4) Students will be required to meet with a writing tutor prior to all the essay assignments (schedule of meetings to be announced). Guidelines for working with tutors are available on the website.

Additional help may be received from The Writing and Communication Center (12-132), which offers free one-on-one professional advice from lecturers who are published writers about all types of academic, creative, and professional writing and about all aspects of oral presentations. Go to http://writing.mit.edu/wcc and click on "Appointments." The Center's core hours are Monday-Friday, 9:00 a.m.-6:00 p.m.; evening hours vary by semester--check the online scheduler for up-to-date hours.

Essay 1 (6+ pages)	(30% -- 5% first version, 25% revised version)
Essay 2 (8+ pages)	(25%); Optional Revision
Essay 3 (8+ pages)	(25%)
Attendance/Participation, Oral assignment(s)	(20%)

Literature Section policy on plagiarism

Plagiarism—use of another's intellectual work without acknowledgement—is a serious offense. It is the policy of the Literature Faculty that students who plagiarize will receive an F in the subject, and that the instructor will forward the case to the Committee on Discipline. Full acknowledgement for all information obtained from sources outside the classroom must be clearly stated in all written work submitted. All ideas, arguments, and direct phrasings taken from someone else's work must be identified and properly footnoted. Quotations from other sources must be clearly marked as distinct from the student's own work. For further guidance on the proper forms of attribution, consult the style guides available at the MIT's Writing and Communication Center (Building 12) and

useful citations links located here: .