The thing that we all love to blame— the SYSTEM— will be our guide to the changing shape of knowledge in the West from Galileo to quantum computation. We’ll discover, for example, when systems first became something that could be blamed, for systems have assumed many guises since the word first appeared in English in the early 17th century. Systems have described what we see (the solar system), they’ve operated computers (Windows 10), and they’ve been made on a page (the fourteen engineered lines of a sonnet). In all of these different forms, system has shaped our experience of the world by mediating our efforts to understand it. Beginning with Galileo’s sighting of Jupiter’s lunar system, we’ll follow system in and out of its social as well as intellectual incarnations, from Newton’s “system of the world” and the many written systems (e.g., Wealth of Nations) that generated the Enlightenment to the modern disciplines (your majors) that emerged from it to Darwin’s algorithmic system of survival and our own explosion of new uses for, and kinds of, system—including network, nervous, computing, and communication systems, as well as systems theory, self-organizing systems, and system professionals. Our readings will cross subjects and genres, from treatises of natural philosophy to novels and verse to provide this venture into Texts and Ideas with a scope adequate to the astonishing range of human explanations.

TEXTS AND IDEAS  The College’s approach is unusual among institutions with a core curriculum because it affords faculty members great freedom to determine the content of their individual courses. The Core Curriculum is based on a shared sense of purpose rather than fixed canons of readings. It enhances your liberal arts education through encounters with works of various kinds that have been influential in shaping the contemporary world. It is designed to extend your education beyond the focused studies of your major, preparing you for the futures you anticipate and those you don’t.

THE JOURNEY— FROM THE SYSTEM OF THE WORLD TO A WORLD FULL OF SYSTEMS

Jan. 22  Introduction to the course: What’s at stake in taking this journey now?

Jan. 24  Messages from the Stars

Galileo Galilei, Starry Messenger (Sidereus Nuncius, 1610),
pdf in Resources (R) and Essential Galileo, 67-84

How we explain the world: from the father of the quantum computer, David Deutsch (R)

STOP 1: THE NEED FOR SYSTEMS

Jan. 29  When knowledge got stuck I: System as a tool
Francis Bacon, *The New Organon* (1620), 1-34, 222-238

Jan. 31  *When knowledge got stuck II: “What the system of the world could really be”*  
Galileo and Copernicus, from *Essential Galileo*, 147-152, 183

Feb. 5  **INTERLUDE**  2-3pp paper (theorize & classify) on “What is a system?” and class discussion on that topic

Feb. 7  **Knowledge and print: The rise of systems**  
Walter Ong, “System, Space, and Intellect” (1956) (R)

Feb. 12  **The handshake of modern knowledge**  
Francis Bacon, frontispiece to *Advancement of Learning* and “literary history” (R)

**STOP 2: CHOOSING SYSTEM—THE SHAPE OF KNOWLEDGE**

Feb. 14  **Newton’s “System of the World” I: A question of readership**  
Isaac Newton, the 1728 “System of the World” (R)

Feb. 19  **Newton’s “System of the World” II: Playing by the rules**  
From Newton, *Principia*, Book 3 “The System of the World” (1687) (R)

Feb. 21  **Newton’s “System of the World” III: Philosophy, communication, and system**  
Letters, Newton and Robert Hooke (R)

**STOP 3: USING SYSTEM—HOW SYSTEM SHAPES US**

Feb. 26  **The gaze and the system**  
Mary Astell, *A Serious Proposal to the Ladies* (1701) (R)

Feb. 28  **Secretly seeking system**  
*An Account of the Fair Intellectual Club* (1720) (R)
Mar. 5  **INTERLUDE  5-page paper (analyze) due on “Gender and system?” and class discussion on that topic**

Mar. 7  **The love of system**

From Adam Smith, *The Theory of Moral Sentiments* (1759), 1-11, 139-172

http://www.earlymoderntexts.com/assets/pdfs/smith1759.pdf

From Adam Smith, *Essays on Philosophical Subjects* (1795), 45-56, 103-105, 242-254

Mar. 12 and 14  **SPRING BREAK**

**STOP 4: BLAMING THE SYSTEM**

Mar. 19  **MASTER SYSTEMS**

From Adam Smith, *The Wealth of Nations* (1776), 10-30, 428-451 (R)

Mar. 21  **System and its rivals: Zooming out to zoom in (many texts and many ideas)**

Systems and histories from the 18th century (Tectonics) (R)

Discussions of the History of Mediation, the History of the Real, the History of Blame

Mar. 26: **MIDTERM EXAM**

Mar. 28  **Haunted by system**


Apr. 2  **The system is us I: Guilt**

William Godwin, *Things as They Are or The Adventures of Caleb William* (1794)

Apr. 4  **The system is us II: Liberalism**

From Thomas Macaulay, debate on the Reform Bill (1832) (R)

Apr. 9  **INTERLUDE  7-page paper (research) due on “Finding Systems” and class discussion on that topic**

**STOP 5: SYSTEM AND THE FORMS OF MODERNITY**

Apr. 11  **The formation of the disciplines**

Prefaces to the 1st and 3rd editions of the *Encyclopedia Britannica* (1771, 1797) (R)

Apr. 16  **The Invention of Culture I: “Writing upon system”**

William Wordsworth, Preface to *Lyrical Ballads* (1798) (R)

Apr. 18  **The Invention of Culture II: Erasing system**

Matthew Arnold, “Wordsworth” (1879) (R)
**April 23** The Invention of Darwin: Algorithmic Systems

From Charles Darwin, *On the Origin of Species* (1859)

[http://darwin-online.org.uk/Variorum/1859/1859-1-dns.html](http://darwin-online.org.uk/Variorum/1859/1859-1-dns.html)

Introduction pages 1-6 and then, in Chapter 4, pages 80-87

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**STOP 6: SYSTEM AND THE FUTURE**

**April 25** Do systems model the world or is the world a system? I: Virtual reality

From David Deutsch, *The Fabric of Reality* (1997) Chapters 5, 6, 8

**April 30** Submit 5 pages of revised prose

Do systems model the world or is the world a system? II: Quantum Computation

David Deutsch, “It from Qubit” (2002) (R)

**May 2** The computational universe

From Seth Lloyd, *Programming the Universe* (2006) (R)

**May 7** CONCLUSION

(For the Final Exam per NYU Schedule)

(R) = PDF in Resources in NYU Classes

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**TEXTS**

Please buy the following from the NYU Bookstore:


All other texts are available as PDFs in Resources in NYU Classes

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**Requirements**

- **ATTENDANCE IS ABSOLUTELY CRUCIAL**—There is no textbook for the history of system. To miss class is to miss the content of the course. Do not take this course if you are not committed to attending every lecture. Any absences will adversely affect your grade.

- Discussion in class and especially in recitations is an important part of the class and your grade.
  - This is especially true of the “Interludes”—the classes when papers are submitted will feature the opportunity for you to share what you have discovered with the class.
The recitation sessions depend on your thoughtful and energetic participation. You can pay attention and participate only if you do the reading and think about it beforehand. Take notes as you read, underline important parts of each text, and write comments or questions in the margins of your copies.

Please have texts read by the date that appears on the syllabus.

Please turn in papers at the start of the class on the due date. If you have a seemingly insurmountable difficulty in finishing the paper, do not skip class—that will only compound the problem. Contact your recitation instructor to discuss any difficulties. Unexcused lateness will be penalized. Please submit an electronic copy of each essay to NYU Classes. Then print a hard copy and bring it to class with you on the day it is due.

Grading distribution:

- Attendance and Participation: 25%
- Papers: 45%
- Midterm Exam: 15%
- Final Exam: 15%

Academic Integrity: Policies regarding plagiarism/academic integrity can be reviewed online at cas.nyu.edu/page/ug.academicintegrity. These policies are strictly enforced.

TEACHING ASSISTANTS (Recitations and Office Hours)

- Elizabeth Bejarano (ehb254@nyu.edu)
  - Recitation 1: Friday, 11:00 a.m. - 12:15 p.m. 25 W 4th St., Room C12
  - Recitation 2: Friday, 12:30 p.m. - 1:45 p.m. 25 W 4th St., Room C12
  - My office hours will be held from 2 - 4 p.m. on Fridays and by appointment in room 410 at 244 Greene St.

- Zane Koss (zane.koss@nyu.edu)
  - Recitation 1: Friday, 9:30 a.m. - 10:45 a.m. Bobst, Lower Level 151
  - Recitation 2: Friday, 11:00 a.m. - 12:15 p.m. Bobst, Lower Level 151
  - Office Hours: Friday, 1:00 p.m. - 3:00 p.m. or by appointment in Room 610 at 244 Greene St