Efforts to understand the universe as a unified, deterministic, system have been central to metaphysics since the classical beginnings of western philosophy. With the development of modernity, however, the theorization of systems became an element of practical, material projects aimed at creating limited, constructible “worlds” within whatever universal order can be said to exist. In this context the thinking of systems makes it possible to conceive of language, culture and time-based events as having structure and to give form to such immaterial things as social relations and networks of exchange or communication — thus opening all of these as sites for engineering, management and “design.” Various manifestations of “systems thinking” have been sharply critiqued, especially in instances where they have been turned back on themselves in attempts to reverse engineer ontological conclusions. Systems, however, persist as a subject of intense interest and hope for the potential of design and as a site of contestation, struggle and resistance.

This seminar will consider a selection of texts plotting a trajectory for systems thinking beginning with the nineteenth century utopian theories of Charles Fourier and Henri Saint-Simon and continuing into the current resurgence of interest in cybernetics and systems theory. As much as is possible, the texts mobilized will be drawn from the work of architects, artists, engineers and technicians who engage systems as a matter of material practice and projects from art, architecture and technology be discussed in parallel with theoretical concepts. The objectives of the seminar will be to both develop a historical account of systems thinking relevant in the contemporary context and to posit modes of design practice that engage with a world of dynamic elements continually in motion, in flux and in communication with one another.

In addition to reading and participating in discussion, course production will involve the observation and mapping of real-time, real world systems and the design and construction of apparatuses that document, model or intervene in these systems.
ARC 500.8: Systems and Their Discontents

Reading and Discussion

The course will be organized into two, out of phase, weeklong cycles. Tuesday course meetings will be devoted to the discussion of texts with reading assigned one week being discussed the next. Students will be asked to volunteer to present texts they are especially interested in however everyone should come to seminar having read all of the primary texts, looked at supplemental and resource texts and ready to participate in discussion.

In addition, students are asked to produce at least one diagram of the system being discussed in the assigned texts or situating the concepts and topics from the text in a historical to discursive system. Diagrams should be drawn by hand in black felt-tip marker and should comfortably fill a single 8.5” X 11” sheet of white paper. Diagrams will be collected and collated into a publication at the end of the course and participation grades will be based on the quality number of diagrams.

Optional Screenings
As there is interest, it will be possible to organize a series of film screening related to the course material. Screenings can be held at 120 East Genesee and will be completely optional and contingent on student interest and initiative.
Course Production

The second weeklong cycle will focus on constructed systems and material production, both as an object of critical enquiry and on the part of the students. A series of weekly lectures will situate the texts discussed in the first cycle in historical context and in relation to projects in art, architecture, and technology. Seminar projects will be in two phases.

The first phase will ask students to define a “system” that interests them and that can be observed and engaged with in the Syracuse area at the present time. These systems will be observed, their action recorded, and descriptively “mapped” in diagrams and text.

The second phase will offer the opportunity to develop this research in one of three directions:

- A proposal can be made to construct a working “mock-up” or “proof of concept model” that reproduces the action of the system mapped in the first phase.

- An experimental apparatus can be designed that when deployed as an intervention into the system considered will visualize its action and generate legible and recordable “data” or create a perceptible disturbance or disruption that can be documented.

- The mapping study from the first phase can be expanded and developed into a text that is somehow “published” or put into the world in a way that impacts, influences or disrupts the system under consideration.

An effort should be made to make the projects constructible and realizable with the resources at hand. In the case of ambitious projects that cannot be realized in actuality, detailed design projections will however be accepted. Each phase of the seminar project will be announced with a more detailed brief but students should begin planning their work immediately.
Disability-Related Accommodations
If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498, TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Religious Observances Policy
SU religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice/StudentServices/Enrollment/MyReligiousObservances from the first day of class until the end of the second week of class.

Grading
All course work is cumulative and grades will be assigned on the basis of work completed at the end of the seminar. It is therefore possible to revise and resubmit work submitted earlier in the semester as long as some version of each assignment was submitted on time.

Grades will be weighted as follows:
Seminar participation and systems diagrams  %25
Project phase 1  %25
Project phase 2  %50

Academic Integrity
Syracuse University’s Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the policy and know that it is their responsibility to learn about course-specific expectations, as well as about university policy. The university policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first offense by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of Academic Integrity Policy. The standard sanction for a first offense by a graduate student is suspension or expulsion.

For more information and the complete policy, see http://academicintegrity.syr.edu/academic-integrity-policy/
Week 01

01/14 Introduction — Systems: Art, Science, Political-Economy

Reading:
Keith Taylor, "Introduction" from Henri Saint-Simon, Selected Writings
Gateth Stedman Jones, Ian Patterson, "Introduction" from The Theory of The Four Movements
James Essinger, Jaquard's Web, Ch. 1-4

01/16 Lecture — The Enlightened Technocrats: Forrier, Saint-Simon and Origins of Socialism
Field Trip to Oenida, NY

Week 02

01/21 Discussion of 01/14 Reading

Reading:
Karl Marx and Friedrich Engels, The Manifesto of the Communist Party
Friedrich Engels, Socialism: Utopian and Scientific
Charles Babbage, Science and Reform (edited by Anthony Hyman), selections
Siegfried Gideon, Mechanization Takes Command, "The Springs of Mechanization"
Greg Siegel, "Babbage’s Apparatus: Towards and Archeology of the Black Box"

01/23 Lecture — Form, Structure and Relation in Industrial Capitalism
Project Phase 01 Introduced

Week 03

01/28 Discussion of 01/21 Reading

Reading:
Hanes Meier, "ABC Demands the Dictatorship of the Machine," "Building"
Ernst May, "City Building in the USSR"
Christina Kiaer, "Into Production!: The Socialist Objects of Russian Constructivism"
Alan Smart, "Sex and the Socialist City"
Nader Vossoughian, Otto Neurath: The Language of the Global Polis
F.T. Marinetti, "The Founding and Manifesto of Futurism"
Walter Benjamin, "The Author as Producer"
Sergi Eisenstein, "Montage and Architecture"

01/30 Lecture — Material Dialectics in Modernism
Screening: La Commune (Paris 1871), Peter Watkins

Week 04

02/04 <NO CLASS> Thesis/Thesis Prep Review

Reading:
Le Corbusier, The City of Tomorrow and Its Planning, selections
Siegfried Gideon, Space, Time and Architecture, CIAM section, Part VII, IX.
Mary McLoed, "Architecture or Revolution': Taylorism, Technocracy, and Social Change"
Nader Vossoughian, Otto Neurath: The Language of the Global Polis,

02/06 Discussion of 01/28 Reading, Lecture — Many Functions: Language and Systems in Modernist Architecture
Week 05
02/11 Discussion of 02/04 Reading
Reading:
Ferdinand de Saussure, Course In General Linguistics, Part 1, Ch. 1-2
Claude Lévi-Strauss, "Structural Analysis in Linguistics and in Anthropology"
Roman Jakobson, Six Lectures on Sound and Meaning
Christopher Alexander, "A City is not a Tree"
Christopher Alexander, "Systems Generating Systems"

02/13 Lecture — Struggles to Define Structuralism in Architecture

Week 06
02/18 Discussion of 02/11 Reading
Reading:
Ludwig von Bertalanffy, General Systems Theory, Into. Ch 1,
Norbert Wiener, Cybernetics,
Alan Turing, "Computing Machinery and Intelligence"
Zabet Patterson, "From the Gun Controller to the Mandela"

02/20 Lecture — Cybernetics and Systems Theory
Screening: Alphaville, Jean-Luc Godard

Week 07
02/25 Discussion of 02/18 Reading
Reading:
Reyner Banham, Megastructure
Kenzo Tenge, Aestheticism and Vitalism, A Plan for Tokyo, 1960
Peter Smithson, "Reflections on Kenzo Tange’s Tokyo Bay Plan"
Peter Cook, "Control-and-Choice Living"
Yona Freedman, "Towards a Coherent System of Planning"
Archigram, Archigram 9

02/27 Lecture — Metabolism and Megastructure
Screening: A Clockwork Orange, Stanley Kubrick

Week 08
03/04 Discussion of 02/25 Reading
Reading:
Lowell Cross, "'Reunion': John Cage, Marcel Duchamp, Electronic Music and Chess,"
Eva Diaz, "Experiment, Expression, and the Paradox of Black Mountain College"
Liz Kotz, "Post-Cagean Aesthetics and the 'Event' Score"
Pedar Anker, Buckminster Fuller as Captain of Spaceship Earth
Nicolas Bourriaud, "Relational Form"

03/06 Lecture — Fuller and Cage: Scripts, Games and Event

//////////////////////////////////////////////////////////////////// SPRING BREAK /////////////////////////////////////////////////////////////////////////////
Week 09
03/18 Discussion of 03/04 Reading
Reading:
Reyner Banham, "A Home is Not a House"
Reyner Banham, The Architecture of the Well-Tempered Environment, Ch. 1-3
Hans Hollein, "Everything is Architecture"
Gregory Bateson, Steps to an Ecology of Mind, selections
Peder Anker, "The Closed World of Ecological Architecture"
Craig Buckley, "Taking Possession in 'Alles ist Architektur'"
Gene Youngblood, Expanded Cinema

03/20 Lecture — Energy and Environment
Project Phase 01 Due, Project Phase 02 Introduced
Screening: The Mosquito Coast, Peter Weir

Week 10
03/25 Discussion of 03/04 Reading
Reading:
Buckminster Fuller, The World Game: Integrative Resource Utilization Planning Tool
Marshall McLuhan, Understanding Media
Mark Wigley, "Network Fever"
Felicity Scott, Architecture or Techno-Utopia, "Shouting Apocalypse"
Flora Lysen, “Spherical Consciousness in ... Stan VanDerBeek and Richard Buckminster Fuller"
Panayiota Pyla, "Planetary Home and Garden: Ekistics and Environmental Development Politics"
Ant Farm, Inflatocookbook

03/27 Lecture — World Systems

Week 11
04/01 Discussion of 03/25 Reading,
Reading:
Felicity Scott, "Discourse, Seek, Interact"
Eden Medina, "Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile"
Fred Turner, "The Politics of the Whole Circa 1968 — and Now"
Ulrike Meinhof, "Armed Anti-Imperialist Struggle"
Benjamin Buchloh, "Hans Haake: Memory and Instrumental Reason"
Luke Skrebowski, "All Systems Go: Recovering Hans Haacke's Systems Art"
Mercedes Bunz, "The Power of Information"
Joint Chiefs of Staff, Joint Publication 3-24: Counterinsurgency

04/03 Lecture — Homeostasis or Revolution
Screening: Der Baader Meinhof Komplex, Uli Edel

Week 12
04/08 Discussion of 04/01 Reading
Reading:
Felicity Scott, "Dataland and it's Ghosts"
Martin Beck, The Aspen Complex, "Statement Made by the French Group"
Michelle Fucault, Society Must Be Defended lecture 11, "Panopticism"
Jean-Francois Lyotard, The Inhuman, "Logos and Technè, or Telegraphy"
Donna Haraway, "A Manifesto for Cyborgs"
Fredric Jameson, The Prison House Of Language

04/10 Lecture — Cybernetic Bodies and the Logistics of Empire
Week 13

04/15 Discussion of 04/08 Reading
Reading:
Deluze, "Postscript on Societies of Control", "What is a Dispositif?", "Introduction: Rhizome"
Bruno Latour, Reassembling the Social, selections
Robert Smithson, The Collected Writings, "Entropy and the New Monuments"
Daniel Birinbaum, "Heliotrope"

04/17 Lecture — Rhizomes, Actor Networks and Post-Human Systems

Week 14

04/22 Discussion of 04/15 Reading
Reading:
Fred Turner, From Counterculture to Cyberculture, Selections
Alberto Toscano, "Gaming the Plumbing: High-Frequency Trading and the Spaces of Capital"
Maurizio Lazzarato, On the California Ideology/Utopia
Keller Easterling, "An Internet of Things," "Park" from Enduring Innocence,
Yates McKee, Haunted Housing: Eco-Vanguardism, Eviction, and the Biopolitics of Sustainability
Adam Bobbette and Seth Denizen, "It's All Here"

Screening: Up In the Air, Jason Reitman

04/24 Lecture — Living Within and Against Systems

Week 15

04/29 Discussion of 04/22 Reading

04/31 <<NO CLASS>>

Week 16

05/06 Final Presentations