This course explores the proposition that the frontiers of modern science, especially Complexity Science has increasing relevance to the study of real policy cases, offering social scientists a common set of thinking tools for observing and abstracting patterns of social behavior and ultimately for adapting policy mechanisms to address the wickedly hard questions of contemporary, global political economy.

This course seeks to integrate both well-known and cutting-edge methodologies and theoretical frameworks and seeks the interface between various academic disciplines and policymakers. The goal is to facilitate decision-making in a constantly changing environment. Potential topics include but are not limited to the following:

1. Complexity methods, application and analysis for policymakers.
2. Complex systems approach to World History
3. Governance in complex social systems
4. Management of financial networks
5. Smart cities, mobility, and towns in complex urban environments
6. Dynamic risk management in complex scenarios
7. Design and analysis of complex sociotechnical systems for public services

**REQUIRED BOOKS**


LEARNING OUTCOMES:

This course will help students discover new ways to form and advance:

1) Global governance mechanisms and multilateral processes.

2) Preparations for a rapidly changing geopolitical landscape.

3) Identification of multi-stakeholder measures to deliver sustainable and inclusive economic development in the face of lower growth rates, declining productivity and skills gaps both nationally and internationally.

4) Assessments of social and economic transformations occurring in all regions.

5) Understanding of transformations in the global business environment that will shape new industry ecosystems and help job seekers, industry and government leaders prepare for processes that are transforming the global economy.

6) What ideas and innovations that will have the greatest impact in reshaping global system.
COURSE REQUIREMENTS:

Students are expected to keep up with each week’s required readings and to participate in class discussion.

20% - Class discussion and one class presentations of a title in the syllabus.

30% - Short weekly writing submissions (No more than 750 words on each week’s assigned readings)

50% - Term Paper (2,500 words)

WEEK 1: January 23, 2019

Topic: What is Social Complexity: Building Blocks to Examine Global Political Economy and Complexity

“Theories of complex social systems are tested on massive scales everyday, when governments implement various policies that often involve substantial resources and ultimately have tremendous impacts on the lives of countless citizens” (Miller and Page 2007: 235). Scholars from many disciplines are applying perspectives from the study of dynamical systems to problems of global and international public policy. How will this affect some of the basic paradigms of governance, development policy, foreign policy and international relations?

Social Complexity 1: Overview: via@YouTube (youtu.be/kkcGr3y70bk?a via @youtube) This module will provide a quick overview to the application theory to the social sciences. See Complexity Academy@Complexityacad


WEEK 2: January 30, 2019

Topic: Transition of the Nation-State


WEEK 3: FEBRUARY 6, 2019
**Topic: The Economy as a Complex Adaptive System**


**WEEK 4: FEBRUARY 13, 2019**

**Topic: Networks**


**WEEK 5: FEBRUARY 20, 2019**

**Topic: Global Finance**

This module will cover financial contagions and cascades of failures among organizations linked through a network of financial interdependencies. The prevalence of financial crisis leads us to emphasize the risks created by networks of interdependencies. Understanding these risks is crucial to designing incentives and regulatory responses that can diffuse cascades before they are imminent.

**Required Reading:**


**WEEK 6: February 27, 2019**

**Topic: Culture, Cognition and Social Evolution**


**WEEK 7: MARCH 6, 2019**

**Topic: Oil’s Political Economy**

Presentation: Suleyman Altiparmak

**Required Readings:**


Recommended Reading:


**WEEK 8: MARCH 13, 2019 Spring Break**

**WEEK 9: MARCH 20, 2019**

*Topic: Great Transitions in Economic History*

Root, Hilton L. 2019. *Networks in Economic Transitions*, chapter 1, 6


**WEEK 10: MARCH 27, 2019**

*Topic: Law for a Complex Global Economy*


**WEEK 11: APRIL 3, 2019**

*Topic: The Rise of China and the Bifurcation of Global Capitalism*

Root Hilton, 2013. *Dynamics Among Nations*


**WEEK 12: APRIL 10, 2019**

*Topic: International Development*

WEEK 13: APRIL 17, 2019

Topic: Military Engagement for Complex World


WEEK 14: APRIL 24, 2019

Topic: The coming instability


WEEK 15: MAY 1, 2019
Student Presentations

WEEK 16: MAY 8, 2019

Term paper submission