

THE GEORGE WASHINGTON UNIVERSITY

IAFF 290.13

Forward Engagement:

The Study of Long-Range Developments as Factors in Contemporary National Policy

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Spring Semester 2010
Tuesdays, 5:10pm – 7:00pm
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Class meets: 1/12, 1/19, 1/26, 2/2, 2/9, 2/16, 2/23, 3/2, 3/9, [spring break], 3/23, 3/30, 4/6, 4/13 4/20, 4/27, and 5/4 (final presentation)

All examinations, reports, and other graded work products and assignments are to be completed in conformance with The George Washington University Code of Academic Integrity.

Please note that, while core requirements and grading standards are set, elements of this syllabus may evolve as the semester progresses. Student feedback is encouraged.

Course Mission Statement:

The rate of major historical change is accelerating, in ways that challenge the capacity of democratically governed societies to adapt. To offset this trend, it is vital to combine methods of forecasting with mechanisms for policy making. I call this process “Forward Engagement.” The first principle of “Forward Engagement,” is to encourage early awareness of potentially major trends or events, in order to support earlier actions designed shape them. The objective of this course is to explore how this might be done.

Students will:

- Explore basic forecasting methodologies.
- Apply these methods for the study of potentially major trends and events in fields related to students' major field of study, among: science/technology, economics/environment, defense/security, and governance/government.
- Examine complexity theory as a means for understanding interactions among simultaneously unfolding events.
- Examine network theory as a basis for considering how to boost the performance of government in the presence of complex events.
- Examine ways in which to meld long-range assessment and policy, including concepts developed by their predecessors in this class, as well as by various ongoing projects promoted by NGOs.
- Participate in a scenario-based exercise to develop and demonstrate their own approach to Forward Engagement, as applied to a major public issue, including both its domestic and international dimensions.

Methodology:

Readings, lectures, class discussion, individual writings, group work, guest speakers, and **self-initiated** contact with experts.

Grading Output:

Grades are based on individual student papers, group papers, one final collective class paper, and a power-point briefing. The briefing is to be delivered to an invited panel of guests, including some who are theoreticians, but may, as in previous classes, include others who have held a senior policy-level responsibility in government. Class performance is also taken into consideration.

Each assignment is due by noon on the day before the corresponding class session. Papers should be emailed to evan.faber@forwardengagement.org. Any changes will be announced in class or via email. ***Please be sure to include your name, the date and assignment number on each submission.*** Expectations for each assignment appear on the following pages.

Work Schedule:

The course is arranged in four interlocking blocks, presented below. The presentation of each block begins with a statement of premise, followed by: a layout of the subject matter to be covered in each lecture; work assignment for the intervals of time between lectures, and the recommended sequence of readings. Where readings are concerned, students will have their own methods. I am suggesting, however, which materials are "best read" as of a certain date.

[CD] = Reading material is available in the Welcome Kit CD in the "Weekly Readings" folder

Block I: Orientation and Introduction to Forecasting and Futuring

Premise: Accelerating events are threatening to overtake the response time of democratic systems of governance. To offset this, we need to make more effective use of forecasting methods in order to shorten our response time. This section surveys standard and advanced forecasting methods.

SESSION #1 – Jan 12: Discussion of objectives and organization of the course. Discussion of methodology. Organization of the class into four working groups: science and technology; economics and the environment; defense and security; and governance and society. Establish a “scanning” process (systematic search of publications for ideas about longer-range events). Begin selection of class leader and working group chairs (conclude this during the second session).

Work interval Jan 12 – Jan 19:

- Students are invited to meet individually with Prof. Fuerth in the opening two weeks (arranged through Evan Faber)
- **Best read by the end of this interval:**
 - World Future Society Report: *The Art of Foresight* [CD]
 - Fuerth: “Forward Engagement: A New Wrinkle in Time?” [CD]
 - Fuerth: “Strategic Myopia: The Case for Forward Engagement” [CD]
- **Watch:** <http://www.chrismartenson.com/crashcourse/chapter-19-future-shock>
- **Browse:**
 - Welcome Kit (CD containing selected readings organized by theme, provided by Professor)
 - Forward Engagement Website <http://www.forwardengagement.org>
 - Browse websites under the “Links” tab
 - World Future Society Website <http://www.wfs.org>
 - Shaping Tomorrow Website <http://www.shapingtomorrow.com/>

SESSION #2 – Jan 19: First of two presentations by professor on forecasting methodologies starting with an overview of the field of futures studies and then focusing on the first two of four basic methods – prediction and projection.

Work interval Jan 19 – Jan 26:

- **Assignment#1:** Students prepare short, 3-4pp individual papers on forecasting characteristics of Prediction or Projection (choose one). Papers should explore the use of chosen forecasting method in the development of a policy issue. Choose a policy issue of interest; papers may examine an actual issue, whether in the past or ongoing, or may examine a hypothetical, as opposed to an historical case. Students can draw upon papers from earlier classes for ideas (these papers can be found in the Welcome Kit CD). This assignment is designed to build awareness of how, by their nature, forecasting methods can shape perceptions of events. The only constraint on choice of topic is that students must pick examples that are pertinent to their working groups. Papers are to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Jan 25.
- **Best read by the end of this interval:**
 - RHAS: Thinking about the Future Sections 2 and 3 [CD]
 - William Halal (article): *Emerging Technologies and the Global Crisis of Maturity* [CD]
 - Kurzweil: “The Law of Accelerating Returns” [CD] (you may skip the section on SETI)

SESSION #3 – Jan 26: Class discussion with professor of student papers on Prediction and Projection. Professor presents the third and fourth basic forecasting methods – Delphi method and Scenario. Overview of advanced methods: e.g. mathematical, agent-based models.

Work interval Jan 26 – Feb 2:

- **Assignment#2:** Students prepare short, 3-4 pp individual papers on forecasting characteristics of Delphi method or Scenarios (choose one). Papers should explore the use of one or the other of these forecasting methods in the development of a policy issue. Papers may examine an actual issue, whether past or ongoing. Alternatively, papers can construct and examine a hypothetical case. The only constraint on topic selection is that students must pick examples that are pertinent to their working groups. Papers are to be emailed to evan.faber@forwardengagement.org by noon on Monday, Feb 1.
- **Best read by the end of this interval:**
 - National Intelligence Council Report: *Global Trends 2025* [CD]
 - David Rejeski: *Government Foresight: Myth, Dream, or Reality?* [available on loan from Prof. Fuerth]
- **Browse:**
 - TechCast, LLC <http://www.techcast.org/>
 - KurzweilAI <http://www.kurzweilai.net>
 - The Millennium Project <http://www.millennium-project.org/>

SESSION #4 – Feb 2: Class discussion of papers on Delphi Method and Scenarios. Introduction by professor to the concept of Future Contingencies of Interest (FCIs) and “STEEP” method for analyzing and comparing their effects on social systems.

Work interval Feb 2 – Feb 9:

- **Assignment#3:** Students prepare short, 4-5pp individual papers on FCIs, and apply the STEEP methodology to them. Students need to develop only one FCI per person. They should pick FCIs that are pertinent to their working groups’ field of interest. Assignment is intended to get students to think long-range, look for events that arguably will have transformative impact on society, then use a method (STEEP) for characterizing the effects and interactions. Only constraint on choice of topic is that students must pick examples that are pertinent to their working groups. Papers are to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Feb 8.
- **Best read by the end of this interval:**
 - Two National Science Foundation Reports on Converging Technologies
 - “Converging Technologies for Improving Human Performance” 2002
 - “Managing Nano-Bio-Info-Cogno Innovations: Converging Technologies In Society” 2005[CD] and also available at: <http://www.wtec.org/ConvergingTechnologies/>
- **Browse:**
 - Institute for Ethics and Emerging Technologies <http://www.ieet.org>
 - Thoughtware.tv <http://www.thoughtware.tv>

Block II: Complexity and Policy Formation

Premise: Trends and events and their impacts on society are highly interactive, and cannot be understood if this characteristic is overlooked. This section presents complexity theory as best method for thinking about the nature of these interactions and their implications for efforts to manage events through policy.

SESSION #5 – Feb 9: Class discussion of student papers on FCIs. Professor introduces subject of "policy," including "issues analysis" as foundation of policy.

Work interval Feb 9 – Feb 16:

- **Assignment#4:** Students will prepare individual papers on policy topics of interest to themselves, but relevant to their working groups. These will be in the form of short papers (2-3pp), including a statement of the policy followed by identification of "issues" in bullet form. The goal is to unpack all the issues and questions relevant to the topic. Papers are to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Feb 15.
- **Best read by the end of this interval:**
 - Verrastro and Landislaw: "Providing Energy Security in an Interdependent World" [CD]
 - James Rosenau (article): "Many Damn Things Simultaneously: Complexity and World Affairs" [CD]
 - Interactivity Foundation 2006 Report: "Anticipating Human Genetic Technology" [CD]
 - *This report presents concept of "issues" and methodology for isolating them*
 - Social Tsunamis – Working Groups 2006 and 2007 (Conference Proceedings) [CD]

SESSION #6 – Feb 16: Discussion of student papers on policy. Professor presents on basic complexity theory as core factor in both policy formation and execution. Professor and students will discuss complexity in relation to issues identified in assignment #4.

Work interval Feb 16 – Feb 23:

- **Best read by the end of this interval:**
 - Bar-Yam: "Complexity Rising" [CD]
 - Chapman: *Systems Failure* [CD]
- **Browse:**
 - Welcome Kit CD articles on Organization & Complexity [CD]
 - New England Complex Systems Institute <http://necsi.org/>
- **Assignment#5:** This is a group assignment; students will operate together in working groups. Within each working group, students should review the FCIs they have developed in their individual papers. Each working group should select one FCI that is, in their view, particularly long-range and consequential. Each working group should develop their FCIs according to a standard format: (1) state the FCI; (2) present a STEEP Matrix; (3) briefly describe a policy response to the FCI; and (4) present a list of issues relating to the policy response. *To the extent this work has already been done for previous assignments, take advantage of that work and any class discussions in response to the original analysis.* In the fourth part (outlining the issues), working groups will be "testing" their FCIs to determine if they represent problems that are either complicated or complex. If a problem is merely complicated, then you should be able to show how your proposed policy will resolve the

problem in ways that are predictable. No matter how intricate the process, you should be able to expect linear cause and effect. If the problem is complex, the simpler approach won't work, and you will be able to identify how your proposed policy solution can lead to complex outcomes. This part (4) should be done in bullet format. The end result should be one 4-5pp submission from each working group. Each working group should be prepared to present its findings to the class. Papers are to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Feb 22.

SESSION #7 – Feb 23: Continued discussion of complexity theory as framework for thinking about FCIs, Issues, and policies. Discussion of economic crisis as example of complexity-induced systems collapse. Professor presents on “legacy” systems for policy-making and execution in the U.S., and system failure.

Work interval Feb 23 – Mar 2: Reading on systems failure and networked systems organization

■ **Best read by the end of this interval:**

- PNSR Report “Forging a New Shield” [Parts I, IV and V](#) [CD]
- RHAS: Thinking about the Future [Sections 1](#) [CD]
- Three Financial Times articles on the economic crisis [CD]
 - “Fixing Cracks in the Crystal Ball” (Editorial)
 - “Unfounded Panics and Unexpected Disasters” (Michael Skapinker)
 - “Kudos for the Contrarian” (John Kay)
- Paul Krugman: “How did Economists Get It So Wrong?” *available at:*
http://www.nytimes.com/2009/09/06/magazine/06Economic-t.html?_r=1&em

■ **Browse:**

- RHAS Overview [Presentation] [CD]
- Singapore Risk Assessment and Horizon Scanning http://rahs.org.sg/t2_home.html
- The Project on National Security Reform <http://www.pnsr.org>

Block III: Networking and Governance

***Premise:** As discussed in Block II, conventional (“legacy”) forms of organization are failure-prone (i.e. “systems failure”) when confronted by complexity. Both theoretical literature and a growing body of practical application, suggest that networking is an effective way to help organizations deal with complexity and avoid systems failure. Forward Engagement suggests that networked systems may be particularly well suited for the American political and organizational culture. This section looks at the networking concept and discusses its implications for governance.*

SESSION #8 – Mar 2: Professor presents on networked systems as response to complexity. Discussion of PNSR, Project Horizon, Solarium projects, and strategic planning in Singapore.

Work interval Mar 2 – Mar 9:

■ **Best read by the end of this interval:**

- Networked Governance (Conference Proceedings) [CD]
- 2009 Forward Engagement Conference Proceedings: “Futurity in Governance; and Governance in Crisis” [CD]
- Fuerth: “Foresight and Anticipatory Governance” [CD]
- Fuerth: “Operationalizing Forward Engagement: Toward Anticipatory Governance” [CD]

SESSION #9 – Mar 9: Professor presents on Anticipatory Governance, which combines foresight, networking and feedback. Professor presents this semester’s scenario as test demonstration of this concept, in light of semester’s work.

Work interval Mar 9 – Mar 23: *[spring break interval]*

■ **Assignment#6:** Students review integration proposals by previous classes, and prepare to present (orally) their preliminary assessments of these proposals. Under direction of class chair, students will break into “task forces” and develop presentations that review earlier ideas for reform. Each task force develops point papers analyzing past student recommendations for FCI/Policy integration. The purpose of this section is to acquaint class members with progression of thinking by students in previous classes, and to encourage new thinking about how to upgrade systems. Presentations to be done in bullet format – they may be submitted by each task-force, or in a combined class document – and e-mailed to evan.faber@forwardengagement.org **by noon on Monday, Mar 22.**

■ **Best read by the end of this interval:**

- Past Student Reports [CD] or www.forwardengagement.org

SESSION #10 – Mar 23: Students and professor conduct discussion and critiques of earlier proposals for institutional mechanisms to blend forecasting and policy and design “anticipatory governance.”

Work Interval Mar 23 – Mar 30: Students draft loose outline of final report: Full class effort, under guidance of “chair.” Professor provides oversight and guidance. **The outline is to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Mar 29.**

Block IV: Upgrading Systems

Premise: *There are practical ways to develop systems that are able to integrate complex information and policy within a networked operational framework. Forward Engagement argues that, although there may be ways to bring this about in a one-step reform, deep systemic change can also be brought about by incremental steps. This section involves a student activity to experiment with ideas about such an approach, as part of a scenario exercise. The scenario will focus on a particular significant complex of public policy issues, to be selected by agreement among students. Results will be presented to a panel of invited guest experts.*

SESSION #11 – Mar 30: Discussion of concept paper in loose outline form with professor.

Work interval Mar 30 – Apr 6: Students draft dense outline of final report: Full class effort under guidance of “chair.” Professor provides oversight and guidance. **The outline is to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Apr 5.**

SESSION #12 – Apr 6: Discussion of dense outline with professor.

Work interval Apr 6 – Apr 13: Students develop and draft critical analysis sections of final report: Full class effort, under guidance of “chair.” Professor provides oversight and guidance. **The draft is to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Apr 12.**

SESSION #13 – Apr 13: Discussion of critical analysis sections with professor.

Work interval Apr 13 – Apr 20: Students create first full draft of final report, with recommendations: Full class effort, under guidance of “chair.” Professor provides oversight and guidance. **The draft is to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Apr 19.**

SESSION #14 – Apr 20: Discussion of first draft paper with professor.

Work interval Apr 20 – Apr 27: Students complete second draft w/ executive summary: Full class effort under guidance of “chair.” **The draft is to be e-mailed to evan.faber@forwardengagement.org by noon on Monday, Apr 26.**

SESSION #15 – Apr 27: Discussion of second draft paper with professor.

Work interval Apr 27 – May 4: Students complete final report w/ executive summary and PowerPoint: Full class effort under guidance of “chair.” **The final report is to be e-mailed to evan.faber@forwardengagement.org by noon on Friday, Apr 30.** PowerPoint should be completed and rehearsed by class in advance of final presentation.

FINAL SESSION – May 4: *Final Presentation by Students to Invited Guest Panel*