

# THE GEORGE WASHINGTON UNIVERSITY

IAFF 290.17

## **Forward Engagement: Study of Long-Range Developments as Factors in Contemporary National Policy**

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Spring Semester 2007  
Wednesdays, 5:10pm – 7:00pm  
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Class meets: 1/17, 1/24, 1/31, 2/7, 2/14, 2/21, 2/28, 3/7, 3/21, 3/28, 4/4, 4/11, 4/18, 4/25,  
5/2

*Note: 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.*

### **Course Mission Statement:**

The rate of major historical change appears to be accelerating, in ways that could challenge our democratic society's ability to perceive events in time to debate and decide upon appropriate responses. If so, then there is a need to combine methods of forecasting with mechanisms for policy making, to create a process that could be called "Forward Engagement." The *basic premise* of "Forward Engagement," is that early awareness and early preparation for potentially major events is preferable to awaiting their unambiguous onset. The first "*corollary*" of Forward Engagement is that we actually can create the means to approach policy-making in this manner.

Students will explore long-range trends and events in science/technology, economics/environment, defense/security, and governance/society that could have a major impact on the United States and on the world in general, in the course of their careers. Emphasis will be placed, this semester, on the search for trends that are not only of potentially major consequence, but are more consistently longer-range. Participants in this course will explore whether such events could prove particularly challenging to democratic governance.

They will also analyze ways in which it would be possible, starting now, to modify policy in the hope of favorably influencing the course and impact of these developments. They will consider ways to improve the capacity of the government of the United States to perceive and respond to the accelerating rush of future events.

Finally, in the last phase of the course, students will apply what they have learned in a specific scenario (which will be provided) that will engage them in the role of the staff of a fictitious entity called the Center for Future Studies or CFS, preparing that entity's first report to the Congress. To do this, they will be asked—as have students in past semesters—to draw upon the work of previous classes, improved by their own insights. This semester's scenario is a lineal descendant of scenarios for all previous semesters, and presents an evolving “story-line.”

### **Methodology:**

Readings, lectures, guest speakers, contact with experts, class discussion, individual and group work.

### **Grading Output:**

Individual papers; group papers; one final collective class paper and briefing. Briefing is to be delivered to an invited panel of guests who have held a senior policy-level responsibility in government. Class performance is also taken into consideration.

### **Course Structure**

The course is broken into five phases:

#### **Phase I: Orientation and Introduction to Forecasting** **(Sessions 1-4, from 1/17-2/7)**

The objective of this phase is to familiarize students with Forward Engagement in general, and to introduce them to basic concepts relating to the field of Futures Studies, including standard approaches to forecasting. Students will produce short, individual papers that examine applications of forecasting to past, current or future issues. They will be asked to focus on the limitations as well as the particular capabilities of different approaches, and to spot ways in which these limitations can introduce not only insight, but serious error. This segment of the course will include an initial period for read-in time, for which a “welcome kit” of selected readings on CD is provided, along with the formal reading list.

#### **Phase I Class Schedule**

- **SESSION #1 –January 17:** Discussion of objectives and organization of the course. Brief explanation of the general Forward Engagement process by representatives from the previous class. Organization of the class into four working groups: science and technology; economics and the environment; defense and security; and governance and society. Selection of class leader and working group chairs.

**First work interval (from January 18<sup>th</sup> to January 23<sup>rd</sup>):** Students read into the Welcome Kit and course materials. Students are welcome to meet individually with Prof. Fuerth in the opening weeks—arrange through Justin Zorn.

- **SESSION #2 –January 24<sup>th</sup>:** Presentation by professor on forecasting in general, and then on prediction and projection as specific methods. Introduction of the STEEP method for cross evaluation.

**Second work interval (from January 25<sup>th</sup>- January 30<sup>th</sup>):** Students prepare individual papers on policy applications, present or future, of Prediction and Projection. Students can draw upon papers from earlier classes for reference. **Papers are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on January 30<sup>th</sup>.** *Please note that all papers are due by email noon the day before class. This is to ensure adequate time for selection of themes for class discussion.*

- **SESSION #3 –January 31<sup>st</sup>:** Class discussion with professor of student papers on Prediction and Projection. Presentation on Delphi method and Scenario by Prof. Fuerth.

**Third work interval (from February 1<sup>st</sup> to Feb 6<sup>th</sup>):** Students prepare individual papers on policy applications, present or future, of Delphi method and Scenarios. **Papers are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on February 6<sup>th</sup>.**

**SESSION #4 –February 7<sup>th</sup>:** Class discussion of papers on Delphi Method and Scenarios. Introduction to the concept of Future Contingencies of Interest (FCIs) by Professor Fuerth.

**Fourth work interval (from February 8<sup>th</sup> to February 13<sup>th</sup>):** Students read FCIs from work of earlier classes and National Science Foundation report on “Convergence.” NOTE: Each Working Group will review portions of the National Science Foundation report that are appropriate to its field of interest.

### **Phase I Readings:**

Cornish: *Futuring: The Exploration of the Future*

Loescher et. al: *Proteus: Insights from 2020*

Halal: Delphi <http://home.gwu.edu/~halal/Articles/articles.html> (case sensitive)

<http://www.techcast.org/>

Peterson: *Out of the Blue: Wild Cards and Other Big Future Surprises*

Schwartz: *The Art of the Long View: Planning for the Future in an Uncertain World*

Mazarr: *Global Trends 2005 (recommended)*

Wagner: *Foresight, Innovation, and Strategy: Toward a Wise Future (recommended)*

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## **Phase II: Identifying Future Contingencies of Interest (FCIs)** **(Sessions 5-7, from 2/14-2/28)**

During this portion of the course students will research and write about possible major future developments, selected by themselves in terms of magnitude of societal importance, and need for proactive, anticipatory response. The concept of complexity and convergent FCIs will be developed. Students can build on earlier findings by their predecessors.

### **Phase II Class Schedule**

- **SESSION #5 –February 14th:** Class discussion of earlier work on FCIs by previous groups. Presentation by Professor Fuerth on complexity and nodes.  
  
*Fifth work interval (from February 15<sup>th</sup> –February 20<sup>th</sup>):* Students prepare individual papers on FCIs. Paper is to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by **noon on February 20<sup>th</sup>**.
- **SESSION #6 –February 21<sup>st</sup>:** Discussion of student papers on FCIs. Presentation by Professor Fuerth on the concept of complexity and convergence.  
  
*Sixth work interval (from February 22<sup>nd</sup> – February 27<sup>th</sup>):* Students prepare an advanced matrix, incorporating convergent FCIs. Paper is to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by **noon on February 27<sup>th</sup>**.
- **SESSION #7 – February 28<sup>th</sup>** Class discussion of advanced matrix. Presentation by professor on overall nature of policy and governance and on methods for approaching statements of policy by first identifying issues.  
  
*Seventh work interval (March 1<sup>st</sup> – March 6<sup>th</sup>):* Students review earlier papers on policy by previous classes.

### **Phase II Readings:**

Bar-Yam: *Making Things Work*

Rosenau: “Many Damn Things Simultaneously: Complexity and World Affairs”  
“Societal Tsunamis” (Conference Proceedings)

National Science Foundation Report on Convergence

Weblink: <http://www.wtec.org/ConvergingTechnologies/> (case sensitive)

(Prof. Fuerth’s guide will be made available in class or over email)

Kurzweil: *The Age of Spiritual Machines* (**recommended**)

Dyson: *The Sun, The Genome & The Internet* (**recommended**)

Fukuyama: *Our Post-Human Future* (**recommended**)

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**Phase III: Identifying Thematic Policy Issues Relating to FCIs.**  
**(Sessions 8-9, from 3/7-3/14)**

During this phase, students will shift from considering what might happen (forecasting) to what ought to happen (policy). They will emphasize relatively neutral, non-partisan statements of “**policy issues**” as compared to prescriptive policy recommendations. The concept of thematic organization of FCIs and Issues will be introduced.

**Phase III Class Schedule**

- **SESSION #8 –March 7th:** Presentation of policy issues on science/ technology and economics/environment, with emphasis on concept of thematic organization..

***Eighth work interval (March 8<sup>th</sup> – March 20<sup>th</sup>):*** Working Groups prepare policy papers on science/ technology and economics/environment issues, thematically organized. **Papers are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on March 20<sup>th</sup>. NOTE: Spring break intervenes March 12-March 17.**

- **SESSION #9 –March 21st:** Review of papers on science and technology and economics policy issues. Presentation on defense/security and governance/society issues, thematically organized.

***Ninth work interval (from March 22nd- March 27th):*** Working Groups prepare individual policy papers on security and governance issues. **Papers are to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on March 27<sup>th</sup>.**

**Phase III Readings:**

**To be provided by the Interactivity Foundation.**

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**Phase IV: Focus on Methods for Policy/Forecasting Integration**  
**(Sessions 10-11, from March 28<sup>th</sup>-April 4th)**

Special attention will be paid to the findings of the last five classes (fall '04, spring '05, fall '05, spring '06, and fall '06 -- all focused on the Congress). There will be particular reference to the potential of **networked organization** as a response to complexity, and to the concept of **CLIP (Component -Level Implementation Process)**. These recommendations will be central elements of the last phase of the course, when students play out a scenario as members of a congressionally mandated Forward Engagement process.

#### Phase IV Class Schedule:

- **SESSION #10 –March 28<sup>th</sup>** : Discussion in class of papers on defense/ security and governance/society. Presentation by Professor Fuerth on approaches to integration of forecasting and policy, including networked organizational adaptation to complexity, and the use of CLIP.

**Tenth work interval: March 29<sup>th</sup> – April 3<sup>rd</sup>** Students review past papers on integration and prepare to present (orally) their preliminary conclusions on a Forward Engagement mechanism.

**SESSION #11 –April 4<sup>th</sup>** Students to conduct discussion and critiques of earlier proposals for institutional mechanisms to blend forecasting and policy. The focal point of this discussion will be student conclusions as to process and mechanisms for Forward Engagement. Class will be joined by graduates of earlier semesters, who will discuss their experience with the final paper and presentation (Phase V).

#### Phase IV Readings

Lempert: *Shaping the Next One Hundred Years*

Fuerth: *Strategic Myopia: The Case for Forward Engagement*

“Networked Governance” (Conference Proceedings)

“Welcome Kit CD” readings on Organization & Complexity

Waldrop: *Complexity: The Emerging Science at the Edge of Order & Chaos (recommended)*

McCarthy et. al., *Network Logic: Who governs in an interconnected world(recommended)*

Heller: *Who Will Pay? (recommended)*

Crichton: *Prey (recommended)*

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#### Phase V: Preparation of Final Paper and Presentation. (Sessions 12-15 April 11<sup>th</sup> May 2<sup>nd</sup>)

In this phase, students will shift completely into group mode, playing out a scenario, in the course of which they will operate as the staff of the Center for Future Studies to prepare and deliver a report to a panel comprising former members of the Congress (retired). Students will draw upon their own earlier work for substance, and they will follow (and where necessary, interpret) recommendations developed by the Fall 06 class for process. Details are provided in separate message on scenario, provided by professor.

**Eleventh work interval (from April 5<sup>th</sup>- April 10<sup>th</sup>):** The class prepares a loose outline of its overall class paper, working under the direction of the class leader. **This paper should be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon: April 10<sup>th</sup>.**

- **SESSION #12 –April 11th:** Discussion of dense outline with professor.

***Twelfth work interval (April 12<sup>th</sup>- April 17th):*** The class prepares a dense outline of overall paper. **Draft is to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon April 17th**

- **SESSION #13 –April 18th:** Discussion of first draft with professor.

***Thirteenth work interval (April 19<sup>th</sup>- April 24th ):*** Students prepare first full-up draft of overall paper. **This paper should be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by noon on April 24<sup>th</sup>.**

- **SESSION #14 –April 25th :** Discussion of second draft paper with professor.

***Fourteenth work interval (April 26<sup>th</sup> –May 1st):*** Students complete work on final paper, prepare executive summary and presentation. **This paper is to be e-mailed to [esialsf@gwu.edu](mailto:esialsf@gwu.edu) by 11:00pm. May 1st**

- **Session#15 –May 2nd: Final Presentation by Students to Invited Guest Panel** (Presentation will be scheduled to best accommodate potential panelists; more information will follow throughout semester)

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### **Key Assignments & Dates:**

**All assignments (excluding final paper) are due by Noon on the day before class (Tuesdays) at [esialsf@gwu.edu](mailto:esialsf@gwu.edu); any change in due dates will be announced in class or over email.**

Individual case studies on policy applications of Prediction and Projection – January 30

Individual case studies on policy applications of Delphi method & Scenarios – February 6

Individual papers on selected FCIs – February 20

Class group paper and matrix on FCIs, nodes and complexity – February 27

Science/technology group members prepare individual paper on policy issues –March 20<sup>th</sup>

Economics/Environment group members prepare individual paper on policy issues –March 20<sup>th</sup>

Defense/Security group members prepare individual paper on policy issues – March 27<sup>th</sup>

Governance/Society group members prepare individual paper on policy issues –March 27<sup>th</sup>

Loose outline of final report –April 10<sup>th</sup>

Dense outline of final report –April 18<sup>th</sup>

First full draft of final report –April 24th

**Complete final report w/ executive summary and PowerPoint by 11:00pm –May 1st**

**Final Presentation – May 2nd**