FRAMEWORKS AND MODELS IN ENGINEERING SYSTEMS
ENGINEERING SYSTEMS DESIGN (ESD.04J / 1.041J)

SPRING 2007

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FAMES—POSSIBLE SPECIALTY AREAS

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We plan to give lectures on various methods that we anticipate being of value to you in the class project. These include

> The CLIOS Process
> Risk Assessment
> Benefit-Cost Analysis

However, as I mentioned in class, there are other methods/concepts that could be of value and that individual students might find of value to learn something about with an eye to applying them to the project. Below, you will find a list of such methods/concepts. Please indicate which ones you have an interest in below. We will try to work with individual students—providing references and some out-of-class time—to build up your knowledge base so that you can apply the methods/ concepts within your group on the project. This doesn't obligate you to anything! We just want to get the lay of the land. Thanks.

NAME: _____

Methods / Concepts

☐　System Dynamics (Sterman, et al)

☐　Agent-Based Modeling (ABM)

☐　Strategy Processes

☐　Probabilistic Simulation Methods

☐　Network Design (e.g. routing and schedules)

☐　Scenario Planning (Peter Schwartz, et al)

☐　Stakeholder Analysis (Hoffman, et al)

☐　Organizational Design and Transformations

☐　Institutional, Legal and Political Issues

☐　Environmental Policy

☐　Energy Policy

☐　Nuclear Issues (e.g. energy source, proliferation, etc.)

☐　Others? Please indicate: _____