

***New Global Understanding Elective:***  
**SYST 100- Engineering Systems in a Complex World**

***George Mason University***

***Department of Systems Engineering and Operations Research***

***Fall 2011***

SYST 100 - Engineering Systems in a Complex World

CRN 80349 R 0430-0710pm

**Professor:** Dr. Larrie D. Ferreiro Daytime Phone: 703-805-5423 primary

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***Course Syllabus***

***Purpose and Goals:*** This course introduces students to the engineering profession and its place in global society. Students will use case studies and historical analyses to think strategically and globally about the management and execution of engineering systems in the context of culture, environment, politics and economics, and learn how to employ such analyses as engineering decision-making tools. Students will be required to critically analyze articles and books, and will work in groups to investigate and present topics of current national and international relevance.

At the conclusion of this course, the student will have demonstrated:

- A strategic understanding of the mutual impact, interaction and interconnectedness between systems engineering and society, culture, environment, politics and economics at a global scale;
- The ability to critically analyze how different societies and cultures apply the tenets of systems engineering to their specific challenges and needs.

***Methodology:*** The course will consist of lectures, case studies, class discussions, independent book reviews, group research and presentations. Class discussion will require each student to come prepared with their written responses to questions on assigned reading, and to participate by sharing their understanding and interpretation of the material.

***Prerequisites:*** None

***Grading:***

Class Preparation & Homework	20%	Book Review	20%
Class Participation in Discussions	20 %	Group Project and Presentation	40%

***Materials:*** Readings for in-class assignments will be provided by the professor on BlackBoard. Students will use GMU library resources for books to review, and for performing group research and presentations.