

SySc 513: Systems Approach (4 cr hr)

Fall Quarter, 2006, TuTh 4:00-5:50pm, 203 OND

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Course Web Site:<http://www.sycs.pdx.edu/classes.html> -- select Systems Approach

SYLLABUS

This course provides a practitioner-oriented definition of systems, including importance of observer dependence and context, and ideas of meta-systems and subsystems (Lendaris); philosophical foundations, human dimensions, value systems and associated optimization/sub-optimization, casuistry, and aspects of life-cycle project management (Hall); inquiring systems (Mitroff & Turoff); key aspects of human learning organizations, systems thinking, and systems modeling (Senge); qualitative tools for the systems practitioner, including various graphical tools (Delp); structural modeling (Warfield); and the multiple perspectives aspect of the systems approach, both “horizontal” and “vertical” (Lendaris, Hall, and Linstone).

This course fulfills a core SySc requirement.

Readings (at Bookstore, [except as noted]):

- Delp, et al, *Systems Tools for Project Planning*, Indiana Univ., 1977, excerpts. [SmartCopy]
- Hall, A.D., *Metasystems Methodology, A new Synthesis and Unification*, Pergamon Press, NY, 1989. Course Pak at Bookstore. (Ch. 1, 2, 4-8, 10)
- Lendaris, G.G., “On Systemness and the Problem Solver: Tutorial Comments,” *IEEE, Vol. SMC-16, No.4*, July/August, 1986. [pdf file on class Web site]
- Lendaris, “On Human Aspects of Structural Modeling,” *Technology Forecasting and Social Change, Vol. 14, pp 329-351*, 1979, excerpt. [pdf file on class Web site]
- Linstone, H.A., *Decision Making for Technology Executives*, Artech House, Boston, 1999. (Ch. 1-5, 9, A.5)
- Mitroff & Turoff, two articles re. Enquiring Systems a la Churchman. [pdf files on class Web site]
- Rabow, et al, *Learning Thru Discussion*, Sage, Beverly Hills, CA, 1994. (Full book)
- Senge, P.M. *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday, 1990. (Full book)
- Warfield, *Societal Systems*, Ch.3. [pdf file on class Web site]

Prerequisites: Graduate status or permission of the instructor.

Teaching Style: Students read assigned papers and prepare “Cognitive Maps” as described in Rabow, et al, *Learning Thru Discussion*. Students participate in class dialogue of material.

Grade basis:	Homework	1/3
	Class Participation	1/3
	Final Exam (take-home)	1/3

Homework format:

Upper left corner: Last name, First name.

Homework identifier (e.g., Linstone, Ch 3, Cog Map)

Due date for assignment.

Use 12 pt. type font for all text, and print on only one side of paper.

For assignments with with multiple components, start each component on a new page.

Use full citation format to identify article or chapter being reported on.

E-Mail to instructor: For any e-mails to me, please use (only) "SySc 513" in the Subject line.
9/26/2006