This seminar will consider the philosophical project intrinsic to the systems field. Fundamental to this project is Bunge’s conception of systems science as research aimed at the construction of “an exact and scientific metaphysics” (ESM), that is, a set of transdisciplinary ideas of broad generality and philosophical import, applicable to the sciences, and cast (or capable ultimately of being cast) in the exact language of mathematics.

The course attempts to integrate a broad range of theories into a coherent framework:

- information theory,
- game theory,
- thermodynamics,
- non-linear dynamics,
- decision theory,
- and more…

This integration is organized around the theme of fundamental problems, that is, difficulties (imperfections, modes of failure) encountered by many systems of widely differing types.

For more information contact:
Professor Martin Zwick (zwick@pdx.edu)