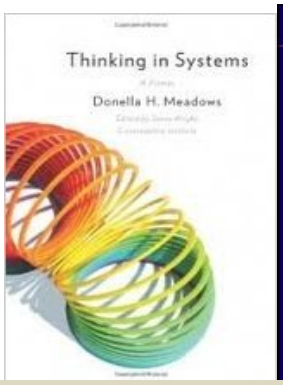
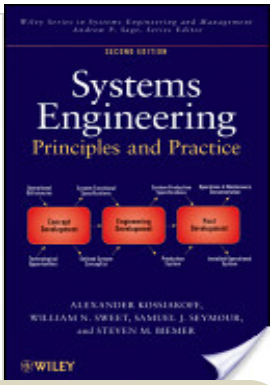
University of Alaska Anchorage
PM494E/PM694E -- T 5:30-9:00
Systems Engineering Fundamentals
Fall 2015

Project Management Department
University of Alaska Anchorage





System:

A combination of resources (people, machines, software, data, etc.) integrated to fulfill a specific goal…

It may exhibit adaptive, dynamic, goal-seeking, self preserving and sometimes evolutionary behavior

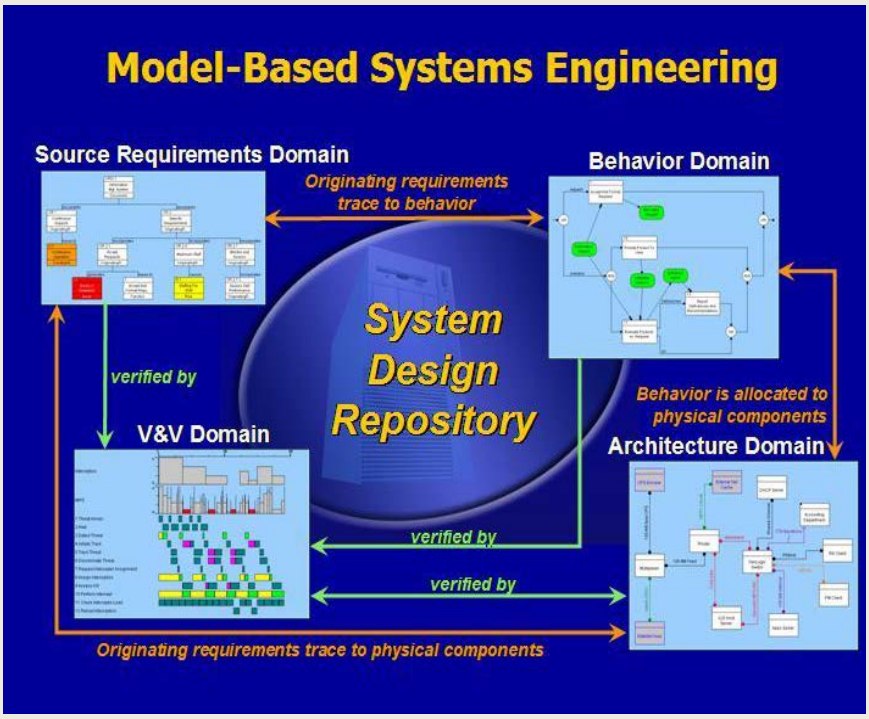
Textbooks

Donella Meadows
Thinking in Systems: A Primer *(Required)*

Alexander Kossiakoff
Systems Engineering: Principles and Practice *(Optional)*

About the instructor:
Bruno Legrand (MBA) has run his own consulting firm during many years in US and in Europe and will bring practical experience to the classroom

Build and Simulate your own System Model using a Systems Engineering Tool: CORE®



Developing systems requires an integrated support environment. Whether designing a commercial service or product, an IT service, or a complex control system, satisfying diverse customers under schedule and budget constraints requires an **integrated system model** to synchronize requirements, functional and behavior analysis, and architecture and to orchestrate all the disciplines for life-cycle design.

TOPICS

- System Behavior Modeling
- Process Modeling, BPR
- Process Simulation
- Requirements Engineering (Derive, Decompose, Trace…)
- Functional Analysis
- Software Specifications
- Functional Allocation and Architecting
- Trade-Offs & Decision Making
- Simulation and Validation/Verification