SYSE 580A2 APPLIED SYSTEMS THINKING FOR THE REAL WORLD

Offered in Spring

Prereqs: None

DESCRIPTION

Application of systems thinking language, tools, and frameworks for solving complex, real-world problems in fields such as aerospace, energy, biomedicine, cybersecurity, and project management.

BENEFITS

Systems-thinking is more than just a collection of tools and methods – it’s also an underlying philosophy and rigorous framework for solving complex problems.

By learning and applying systems-thinking, we can improve our odds of success when dealing with complex socio-technical problems in various fields, including health care, social science, business, and engineering.

COURSE OBJECTIVES

Topics include an overview of systems thinking and tools associated with rigorous application of systems thinking.

Successful students will learn to:

- Classify failures or fiascoes that are due to a lack of systems thinking
- Classify successes that are due to good systems thinking culture
- Use necessary systems thinking skills and rigorous tools to improve odds of success when dealing with complex real-world problems
- Reflect on key systems principles involved in a very broad range of industrial case studies