This course serves as an introduction to two systems engineering methodologies that create effective and efficient paths to technical product development, and will discuss their respective advantages and limitations. One method is the classic top-down flow typically used in complex, large system product development as is found in defense industry firms. Traditional systems engineering management spans the complete product life cycle, from identifying user needs through product delivery and support. It includes event-driven technical reviews and audits that assess program maturity and determine the status of the technical risks associated with cost, scheduling, and performance goals. The other method is the Agile system development process, preferred by entrepreneurs and in Silicon Valley. Agile development emphasizes a design process that uses continuous input by customers/end users to define and refine their user needs which otherwise might not be captured by up-front design specifications.