BENEFITS

Systems Engineering is an interdisciplinary approach and means to enable realization of successful systems. By focusing on what the customer needs, how it should function, defining the requirements, and then design synthesis, validation, and verification, real solutions to complex problems can impact every type of system.

COURSE OBJECTIVES

Engineers and scientists are on the forefront of invention and generating valuable intellectual property for their employers. This course not only trains students to produce such inventive material, but also explores how the different sciences and engineering disciplines connect. This course focuses on the appropriate application of “patterns for patenting” together with intuition, inspiration, and de-mystifying “inventing” as applied to science, engineering and technology. Successful students will learn to:

- Evaluate the “patterns for patenting” and how to use them to enhance creativity
- Analyze linkages among different sciences and engineering disciplines
- Demonstrate ability to write a patent filling
- Understand the different types of intellectual properties created during product development

INSTRUCTOR BIO

Dr. Simske is a CSU Professor, an HP Fellow emeritus and a previous Director in HP Labs. As of November 2017, he is the author of more than 400 publications and more than 170 US patents (many more worldwide). He is an IS&T Fellow and an honorary professor at the University of Nottingham. Dr. Simske was a member of the World Economic Forum Global Agenda Councils from 2010-2016, including Illicit Trade, Illicit Economy and the Future of Electronics. At HP, he directed teams in research on 3D printing, education, life sciences, sensing, authentication, packaging, analytics, imaging and manufacturing. His book “Meta-Algorithmics” addresses intelligent systems. He is currently co-authoring books on Industrial Inkjet Printing (Wiley), Fundamentals and Applications of Hardcopy Communication (Springer), and Meta-Analytics (Elsevier). He has degrees/Post-Docs in biomedical, electrical and aerospace engineering.