Principles and Practice *of* Innovation and Invention

COURSE TITLE: EGGG467: Principles and Practice of Innovation and Invention

COURSE CREDIT: 3 credits

COURSE OFFERED: Fall 2016

COURSE DESCRIPTION: Countless innovations throughout human history have enabled society to evolve to where it is today. This project-based course will enable students to develop a better understanding of innovation and invention by providing frameworks for recognizing opportunities, a discipline for evaluating potential solutions, and heuristics for identifying success and steps to achieving it. Innovation, as defined in this course, should be applicable and of interest to every discipline within a modern university.

COURSE MEETING TIME: 5:00 – 6:15PM on Tuesday and Thursday, ISE307

COURSE STRUCTURE: Cross-disciplinary group term projects, lectures, exercises, guest lectures and project guidance by industrial mentors. Grades will be based on class participation; demonstration of imagination, creativity, and viability of innovations generated by groups; and final project presentations.

PROJECTS FOR FALL 2016: Controlled delivery of aromas and fragrances; fireproof and waterproof textiles; precise temperature control for medical applications; magnetic arrays for apparel closure.

SELECTED TOPICS: Innovation, invention and civilization; characteristics of innovation; organizational dynamics; correlation vs. causation.

COURSE FACULTY: David Pensak, Babatunde Ogunnaike, Michael Vaughan. Faculty mentors include Yushan Yan, John Rabolt, Jenni Buckley, Cole Galloway, Dan Freeman, Fouad Kiamilev.

INDUSTRIAL MENTORS: Peter Popper, retired DuPont engineer; Joe Miller, former DuPont and Corning CTO; Donald McNeill, sales and marketing executive and educational game developer; Joseph Noonan, CEO VI Labs - software development (has four startups); Anthony Lunger, managing director, Wilmington Trust Company.

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