



Stanford University

Career Building: Entrepreneurship / Intrapreneurship, People, Innovation, Decision-Making and Impact
ChemE 189/289

Instructor: Prof. Joseph M. DeSimone

Autumn quarter, 2021

This course is designed to enable graduate students and advanced undergraduate students in science and engineering to hone strategies for career success. Drawing strongly on entrepreneurial principles and lessons from industry, the course complements the traditional curriculum by focusing on career-building tools that students need to improve their professional prospects and achieve their goals. Relevant for those who plan to pursue careers in academia and industry alike, a central focus will be on managing one's career as if it were a start-up, emphasizing principles that empower individuals to take more control of their futures: investing in yourself, building professional networks, taking intelligent risks, and making uncertainty and volatility work to one's advantage. Through a series of in-classroom presentations and interviews—with professors, entrepreneurs, executives, athletes, investors, and thought leaders from diverse fields and sectors—students will gain important knowledge and practical strategies, with course modules on topics such as ideation and innovation, the skill of self-advocacy, the fundamentals of negotiation, building and managing teams, and effective communication and storytelling. Additional modules will focus on biotechnology and deep tech start-up companies, as well as strategies for cultivating a successful academic career. Guest lecturers will include investor, author, and LinkedIn Co-founder, Reid Hoffman; Chief Storytelling Officer at National Geographic, Kaitlin Yarnell; 2-time gold medalist and World Cup champion, Mia Hamm; 3-time Super Bowl champions, Brent Jones and Steve Young; researcher, entrepreneur, and Dean of the College of Natural and Agricultural Sciences at UC-Riverside, Kathryn Uhrich; researcher, entrepreneur, and Vice Dean of Innovation at Princeton University, Rodney Priestley; former CEO of Ford Motors, Alan Mulally; author and former Vice Chair of Innovation at GE, Beth Comstock; author, Case Foundation CEO, and Chair of the National Geographic Society, Jean Case; and CNN contributor, author, social entrepreneur, and social justice leader, Van Jones.

The idea for this course emerged from the instructor's reflections on 30 years of research, teaching, mentorship, and deep entrepreneurial experiences spanning the gamut of approaches to translational science—academic discovery, invention, conceiving of and leading multi-institutional research centers, building research and business teams, launching and financing start-ups, building business models to advance real-world applications of cutting-edge science, and seeing through research-based companies to success (including growing an idea into a multi-billion dollar company). For this course, students will be expected to complete relevant reading assignments, participate actively in class dialogue, and complete regular writing assignments focused on course topics as they relate to one's own career-building needs and professional aspirations. Students may also have opportunities to lead class discussions on topics of interest.