

Sample Syllabus

ENGINEERING LEADERSHIP PROFESSIONAL PROGRAM

University of California, Berkeley



Berkeley
LEADERSHIP FOR ENGINEERS



**Sutardja
Center**
for Entrepreneurship
& Technology

DESCRIPTION

UC Berkeley is ranked the #1 public university and #4 global university by US News and World Report. Since 2012, UC Berkeley's Sutardja Center has offered the ELPP program for technical professionals. This program explores key management and leadership concepts relevant to technical-dependent enterprises. Class participants undertake intensive study of actual business situations through rigorous case study analysis. There are two group projects in the program that allow class members to further explore approaches taught in the class. The program, intended to prepare program candidates for leadership at the executive level, is focused in three critical leadership areas for today's engineers:

- Technical Strategy
- Operational Innovation and
- Leadership/Communications

Case Study analysis, group interactive exercise and industry speakers are the key teaching components over the two sections of the program – Engineering Leadership I and II. Topics in Engineering Leadership I are focused on the process of innovation, such as opportunity recognition, strategies for effective R&D, marketing innovation, disruption, cognitive inertia, product management, market selection, standards wars, two-sided markets, attracting stakeholders, business models and pricing strategies. Engineering Leadership II focuses on key operational, leadership and financial concepts, including CFO-style interpretation of financial statements relevant to technology-dependent enterprises. The operational and leadership topics may also include direct and indirect sales, resolving channel conflict, logistics, talent management, negotiation, managing creativity and leadership styles.

CONTACT INFORMATION

Ikhtlaq Sidhu – *Chief Scientist and Founding Director*, Sutardja Center & Faculty Lead,
sidhu@berkeley.edu

Victoria Howell - *Associate Instructor, Director Executive Programs*, vhowell@berkeley.edu

FORMAT

This course will be composed primarily of case study analysis, guest speaker presentations and two team projects, as supported by video and further information found on the <http://engineeringleadership.net> website. Students will analyze one to two case studies per week. Class discussions will focus on issues raised in case studies, including analysis, brainstorming and recommendations. Industry guest speakers will provide insight based on real-world business experience. Over the course of the semester, participants will gain exposure to a wide variety of

managerial approaches, technologies, business models and personalities. Two group projects are designed for participants to analyze organization and strategic situations for private firms or government organization from a leadership perspective.

TEXTS AND REQUIRED SUPPLIES

- Selected case studies, available in Course Reader and online via Study.Net
- *Engineering Leadership: A Practical Guide to Creating Anything New* by Ikhlaq Sidhu (Version 1.1 2019)
- *Crucial Conversations: Tools for Talking When Stakes are High*, by Kerry Patterson, Joseph Grenny, Ron McMillan and Al Switzler (June 18, 2002)
- Public domain documents
- Online surveys and/or quizzes to be completed

GRADING, ATTENDANCE & WEEKLY FEEDBACK

Class attendance and weekly feedback, using Net Promoter Score (NPS) model is expected and tracked. Grading will be as follows:

Engineering Leadership Phase I:

- 25% Class participation, quizzes & attendance
- 25% Group Project #1

Engineering Leadership Phase II:

- 25% Class participation, quizzes & attendance
- 25% Group Project #2

DATES & LOCATION (see SCHEDULE below)

While we have previously held classes January through June, on Monday or Wednesday evenings in Silicon Valley, we are exploring an option that could include an in-person 2-day kick-off and graduation January and June, with a combination of online and virtual classes in between.

OFFICE HOURS & COMMUNICATIONS

Dr. Sidhu is available before most class sessions, as agreed via email, to meet with teams or individuals on specific questions or for general discussion on class materials or projects.

Date	Topic/Case	Instructor/ Potential Speakers
Class #1	Overview, Project Introduction & Mixer Psychology of Innovation #1 Mixer	Ikhtlaq Sidhu , UC Berkeley
Class #2	Technology Strategy Case Group Projects	Ikhtlaq Sidhu , UC Berkeley
Class #3	Technology Strategy Case and selection from Innovation <i>Engineering</i> Psychology of Innovation #2	Ikhtlaq Sidhu , UC Berkeley Cos Nicolaou , former Grail and Google Exec
Class #4	Technology Strategy Case Group Projects – Idea Shortlist/team formation	Ikhtlaq Sidhu , UC Berkeley Vinod Dham , former Intel exec and “Father of the Pentium Processor
Class #5	Operational Innovation Case Group Projects – Idea Shortlist/team formation	Don Proctor , Haas, UC Berkeley and former Cisco Sr. Exec
Class # 6	Operational Innovation Case	Naeem Zafar , UC Berkley and serial entrepreneur Marc Tarpinning , cofounder Tesla & partner, Spero Ventures
Class #7	Operational Innovation Case	Ikhtlaq Sidhu , UC Berkeley Charlie Giancarlo , CEO, Pure Storage
Class #8	Operational Innovation Case Psychology of Innovation #3	Ikhtlaq Sidhu , UC Berkeley Michael Marks , CEO and Chairman, Katerra and former CEO, Flextronics
Class #9	Operational Innovation Case Doing What Matters	Inder Sidhu , EVP, Nutanix and former Cisco Sr. Exec.
Class #10	How to Pitch Anything & Venture Financials Group Phase I Projects Mentoring	Gigi Wang , UC Berkeley and Director, BMoE
Class #11	Change Management	Ram Krishnan , former Invensense Sr. Exec. and CEO,
Class #12	Design Thinking Reimagined Introduce Phase II Projects	Anne Fletcher , Instructor, UC Berkeley and formerly of IDEO/Stanford Ikhtlaq Sidhu , UC Berkeley
Class #13	Operational Innovation Case Group Projects - -final input	Ikhtlaq Sidhu , UC Berkeley
Class # 14	Phase I Project Presentations	Ikhtlaq Sidhu , UC Berkeley & Panel of Experts/Judges
Class #15	Phase I Project Presentations	Ikhtlaq Sidhu , UC Berkeley & Panel of Experts/Judges
Class # 16	Leadership Communications	Cort Worthington , Haas, UC Berkeley
Class # 17	Managerial Accounting Part I	Suneel Udpa , Haas, UC Berkeley
Class #18	Managerial Accounting Part II	Suneel Udpa , Haas, UC Berkeley
Class #19	Gold Star/Blue Star Leadership	Pamela Park , UC Berkeley

Date	Topic/Case	Instructor/ Potential Speakers
Class #20	Influence & Shadow Negotiation	Holly Schroth , Haas, UC Berkeley
Class #21	Cross-Functional Corporate Negotiations	Holly Schroth , Haas, UC Berkeley
Class #22	Mentoring sessions to review Project II	Ikhlaq Sidhu , UC Berkeley
Last Class	Graduation Speaker and Dinner/Ceremony	Ikhlaq Sidhu , UC Berkeley