

Course Syllabus

ID 141: Leadership and the Sciences

Mon. 6- 9pm; Roberts South 102

Instructors:

Tony Fucaloro, Joint Sciences **office (Keck 213) hrs:**
Alex Rajczi, CMC Philosophy **office (Roberts N. 214) hrs: MW, 1-3**
David Finegold, KGI **office (KGI) hrs:**
Ron Riggio (Course Coordinator/Instructor of Record), CMC Psychology
 office (Seaman 237) hrs: M & Th 9:15-11am

Course Overview & Objectives

This course explores the art and science of being a leader in science and science-based organizations. Topics include: leadership in the creation of knowledge, building effective science-based organizations, ethical decisions in science, leadership in science-influenced public policy, leading knowledge workers/teams, and scientific entrepreneurship.

Leadership issues will be explored in classroom lecture and discussion, case study analyses, visiting experts from leadership roles in science, and student projects that emphasize practical applications/experiences.

Texts & Readings:

<u>Week</u>	<u>Topic</u>
1	Jan. 23: Introduction (Fucaloro & Riggio)
2	Jan. 30: Fundamentals of Leadership & Science (Fucaloro & Riggio) (Explores the nature of the scientific endeavor and how, why, and where decisions are made that impact the course of science, public policy regarding scientific issues, and the “business” of science.) Cohen, I.B. “The birth of a new physics” Lomborg, B. “The skeptical environmentalist: Measuring the real state of the world”
3	Feb. 6: The Moral Aspect of Good Leadership (Rajczi & Riggio) (Discussion of: (1) teaching methods for sections with Rajczi, (2) the relationship between good leadership and moral leadership, (3) what moral philosophy is, (4) why you should care about the study of ethics.)

Postman, excerpt from *Teaching as a Subversive Activity*
Rajczi, "Socratic Discussions"
Strong, excerpt from *The Habit of Thought*

4 Feb. 13: How Philosophers Solve Ethical Problems (Rajczi)

(Discussion of: (1) the methods used by scientists to find the truth, (2) the application of those methods to ethics, (3) the differences between good scientific reasoning and good ethical reasoning, (4) an overview of the moral issues related to science.)

Excerpts from Feynman, *The Meaning of It all*
James Rest, "The Four Components of Moral Behavior".

5 Feb. 20: Ethical Issues in Science: Details and Cases (Fucaloro)

(Detailed discussion of current ethical issues involving science. Presentation of specific topics and cases for analysis and discussion. Particular emphasis is on public policy issues)

Fucaloro, A. selected writings and cases.

6 Feb. 27: Ethical Issues in Science: Embryo Destruction (Rajczi)

(The skills of good ethical reasoning are applied to a particular issue: embryo destruction.)

Don Marquis, "Why Abortion is Immoral".

7 Mar. 6: Foundations of Leadership: Models of Effective Leadership (Riggio)

(Presentation of how leadership scholars have conceptualized effective leaders and discussion of how these various theories of leadership might apply to leadership in the sciences.)

Chemers, M. (1997) *An integrative theory of leadership*. Erlbaum (Chs. 1-7)

Riggio, R.E. (2003). Leadership. In *Introduction to Industrial/Organizational Psychology* Prentice-Hall.

Spring Break (March 10-19)

- 8** **Mar. 20 Corporate Governance and Leadership Ethics – To Whom Are Leaders Accountable? (Finegold)**
- Guest Lecturer: Larry Stambaugh, CEO Maxim Pharmaceuticals**
- Case: Circon A (9-801-403)**
- Conger, J. Lawler, E and Finegold, D. (2000), *Corporate Boards*, S.F: Jossey Bass, Chap 1, 2, pp. 164-66.
- Finegold, D. (2005), Maxim Pharmaceuticals, in *BioIndustry Ethics* (read to first decision point).
- 9** **Mar. 27 Leading a Science-Driven Organization**
- Case: Proteome Systems Limited: The First Five Years (9-604-049)**
- Sapienza, A. (1995), “Communicating Effectively and Dealing with Conflict,” *Managing Scientists*, NY: Wiley-Liss, pp. 97-141, Ch. 6-7.
- Farris, G. and Cordero (2002), “Leading Your Scientists and Engineers 2002” *Research in Technology and Engineering Management*, Nov.-Dec.
- 10** **Apr. 3 - Locals and Cosmopolitans: Engineers, Scientists and the Challenges of Leading Professionals**
- Guest Lecturer: Paul Glen, C2 Consulting**
- Case: Vertex (supplied by instructor)**
- Glen, P. *Leading Geeks*, S.F: Jossey Bass, 2002, Chaps. 12, Appendix
- Finegold, D. and Matousek, R. (2006), “US Efforts to Create a New Professional Identity in the Biosciences,” (ed.) Brown, A. and Kirpal, S. *Professional Identities at Work*, Springer.
- 11** **Apr.10 Managing Organizational Change**
- Case: GE's Two-Decade Transformation: Jack Welch's Leadership (9-399-150) -- John Harvey Jones Video**
- Flynn, G. (1997) “A Flight Plan for Success,” *Workforce*, July, 72-8.
- Jones, J. et al. (2003), “Four Antidotes to Change Resistance,” *Strategy and Business*, Resilience Report, 1-2.
- Abrahamson, E. (2000), “Change Without Pain,” *HBR*, July-Aug., 75-9.

Nadler, D. and Tushman, M. (1998), “Types of Organizational Change” 15-44.

Supplemental: Tenkasi, R. et al. (1998), “Accelerating Organizational Learning During Transition,” in Mohrman, S.A. et al, *Tomorrow’s Organization*, 330-61.

12 Apr. 17 Negotiation and Persuasion

Cases: Williams Medical Center (Distributed by Instructor)

The Power to Persuade (9-800-323)

Negotiation Analysis: An Introduction, HBS 9-801-156.

Bohm, D. et al. *Dialogue – A Proposal*,
www.muc.de/~heuvel/dialogue/dialogue_proposal.html.

13 Apr. 24 Managing Performance in High-Uncertainty Environments

Cases: NanoGene Technologies, Inc. (5-803-117) and Merck & Co. (A) (9-491—005)

Guest Lecturer: Sherry Benjamin, HR Consultant and Recruiter

Lawler, E. (2000), *Rewarding Excellence*, SF: Jossey Bass, Chap. 3, “Attracting and Selecting Excellent Employees”, pp. 65-86, “Appraising Performance,” pp. 166-92.

Finegold, D. and Frenkel, S. (2003), “Managing People Where People Really Matter”, forthcoming, *International Journal of Human Relations*.

Scherreik, S. (2001), “Your Performance Review: Make it Perform,” *BusinessWeek*, pp. 139-40.

14 May 1 Student case teaching

15 May 8 Student case teaching

Course Requirements and Grading

Midterm Exam	=	20%
Final Exam	=	20%
Term Papers	=	35%
Presentation	=	10%
Class Participation	=	15%