

Catalog Description: (1 unit) This course is intended to prepare students to develop leadership competencies throughout their engineering careers by providing students with a basic understanding of concepts relevant to leadership in engineering. Additionally, students will analyze their own leadership competencies and prepare a personal leadership development plan. Engineers from industry will regularly visit class to share their experiences and knowledge about leadership in engineering. Significant interaction between students and industry guests is expected.

Prerequisite(s): Advanced Standing.

Course Objectives:

Students should be able to:

1. Describe core leadership competencies and how they apply to engineering work environments.
2. Identify their own leadership strengths and weaknesses.
3. Develop and explain a plan to develop leadership competencies.

Leadership ABET outcomes:

- B. Ability to function on multidisciplinary teams
- E. Understanding of professional and ethical responsibility
- H. The broad education necessary to understand the impact of engineering solutions in a global context
- I. Recognition of the need for and an ability to engage in life-long learning

Instructors: Dean Papajohn and Mike Nelson
Class time & place: F 1:00-1:50 @ Engineering Building, Room 214
Office Hours: M,W 10:00-11:00 and by appointment
Office: CE 214B
E-mail: dpapajohn@email.arizona.edu

Textbook:

Learning to Lead: A workbook on becoming a leader by W. Bennis and J. Goldsmith, 4th edition, 2010

Other suggested readings:

Wooden on leadership, John Wooden and Steve Jamison, McGraw-Hill, 2005
Seven habits of highly effective people, Stephen Covey, FranklinCovey, 1989

Other materials will be supplied through the course D2L website.

Evaluation

Class attendance and participation	30%
Presentation feedback	20%
Analysis of leadership competencies	20%
Leadership development plan	20%
1 on 1 conferences (three)	10%

Homework assignments must be submitted **at the start of class** on the assigned due date. No late assignments will be accepted, including assignments turned in during or at the end of the class, unless special arrangements have been made.

Semester grades are determined as follows:

90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; 0-59% = F.

Reflection on presentations

You will be asked to complete a survey on D2L to capture your reflections after each presentation.

Leadership competencies assessment

During the semester you will be asked to complete the Student Leadership Competencies Indicator <http://studentleadershipcompetencies.com/tools/inventory/>

Leadership development plan

During the semester you will create a personalized leadership development plan.

Attendance

Students are expected to attend all class meetings. If a late arrival or an early departure is anticipated, check with the instructor to be sure that it is done without disturbing the class. The instructor, at his discretion, may decide to consider late arrivals or early departures as full absences. A two week absence may result in administrative withdrawal. If a student misses a class, he/she is responsible for all announcements and subjects covered in that class. If in doubt, contact the instructor.

Accessibility and Accommodations:

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let the instructor know immediately so that options can be discussed. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Academic Integrity

Principle Integrity and ethical behavior are expected of every student in all academic work. This Academic Integrity principle stands for honesty in all class work, and ethical conduct in all labs and clinical assignments. This principle is furthered by the student Code of Conduct and disciplinary procedures established by ABOR Policies 5-308 through 5-404, all provisions of which apply to all University of Arizona students.

This Code of Academic Integrity (hereinafter "this Code") is intended to fulfill the requirement imposed by ABOR Policy 5-403.A.4 and otherwise to supplement the Student Code of Conduct as permitted by ABOR Policy 5-308.C.1.

Failure to follow this code of academic integrity will result in failing the course and be reported to the Dean of Students' office.

Prohibited Conduct

Conduct prohibited by this Code consists of all forms of academic dishonesty, including, but not limited to:

1. Cheating, fabrication, facilitating academic dishonesty, and plagiarism as set out and defined in the Student Code of Conduct, ABOR Policy 5-308-E.6, E.10, and F.1
2. Submitting an item of academic work that has previously been submitted without fair citation of the original work or authorization by the faculty member supervising the work.
3. Violating required professional ethics rules contained or referenced in the student handbooks (hardcopy or online) of undergraduate or graduate programs, or professional colleges.
4. Violating health, safety or ethical requirements to gain any unfair advantage in lab(s) or clinical assignments.
5. Failing to observe rules of academic integrity established by a faculty member for a particular course.
6. Attempting to commit an act prohibited by this Code. Any attempt to commit an act prohibited by these rules shall be subject to sanctions to the same extent as completed acts.

Student Responsibility

Students engaging in academic dishonesty diminish their education and bring discredit to the academic community. Students shall not violate the Code of Academic Integrity and shall avoid situations likely to compromise academic integrity. Students shall observe the generally applicable provisions of this Code whether or not faculty members establish special rules of academic integrity for particular classes. Students are not excused from complying with this Code because of faculty members' failure to prevent cheating.

Leadership Core Competencies

<p>1. Learning and research</p> <ol style="list-style-type: none"> 1. Research 2. Other perspectives 3. Reflection and application 4. Systems thinking 5. Analysis 6. Synthesis 7. Evaluation 8. Idea generation 9. Problem solving 10. Decision making 	<p>2. Self-awareness and development</p> <ol style="list-style-type: none"> 1. Self-understanding 2. Personal values 3. Personal contributions 4. Scope of competence 5. Receiving feedback 6. Self-development
<p>3. Interpersonal interaction</p> <ol style="list-style-type: none"> 1. Productive relationships 2. Appropriate interactions 3. Helping others 4. Empathy 5. Mentoring 6. Motivation 7. Others' contributions 8. Empowerment 9. Providing feedback 10. Supervision 11. Collaboration 	<p>4. Group dynamics</p> <ol style="list-style-type: none"> 1. Organizational behavior 2. Power dynamics 3. Group development 4. Creating change
<p>5. Civic responsibility</p> <ol style="list-style-type: none"> 1. Diversity 2. Other's circumstances 3. Inclusion 4. Social justice 5. Social responsibility 6. Service 	<p>6. Communication</p> <ol style="list-style-type: none"> 1. Verbal communication 2. Nonverbal communication 3. Listening 4. Writing 5. Facilitation 6. Conflict negotiation 7. Advocating for a point of view
<p>7. Strategic planning</p> <ol style="list-style-type: none"> 1. Mission 2. Vision 3. Goals 4. Plan 5. Organization 	<p>8. Personal behavior</p> <ol style="list-style-type: none"> 1. Initiative 2. Functioning independently 3. Follow-through 4. Responsibility for personal behavior 5. Ethics 6. Responding to ambiguity 7. Responding to change 8. Resiliency 9. Positive attitude 10. Confidence 11. Excellence

From: Seemiller, Corey (2013). The student leadership competencies guidebook, Jossey-Bass.

TENTATIVE SCHEDULE

(The instructor may change this schedule to accommodate class needs.)

Date	Topics	Readings due (from LtoL unless otherwise noted)	Homework due
1/16/16	A Life Time of Learning to Lead Facilitator: Dean Papajohn-UA and Mike Nelson-Exxon (1.3 Reflection and application; 2.1 Self-understanding; 2.6 Self-development; 8.1 Initiative)		Obtain textbook
1/22/16	Facilitator: Mike Nelson-Exxon	Ch. 1 A lifetime of learning to lead	
1/29/16	Leadership Lessons - Technical Role to Leadership Role Facilitator: Bob Lepore-RMS/UA (2.1 Self-understanding; 2.5 Receiving feedback; 2.6 Self-development; 3.3 Helping others; 3.5 Mentoring; 3.6 Motivation; 6.3 Listening; 8.1 Initiative; 8.3 Follow-through; 8.4 Responsibility for personal behavior)	Ch. 2 Audacious leadership	First 1on1
2/5/16	Leadership within your personality Facilitator: Jerry Proctor-President, JVP Strategic Consulting, LLC (1.9 Problem solving; 1.10 Decision making; 2.2 Personal values; 3.4 Empathy; 3.5 Mentoring; 3.10 Supervision; 6.1 Verbal communication; 6.2 Nonverbal communication; 8.5 Ethics; 8.6 Positive attitude)	Ch. 4 Know yourself	
2/12/16	Facilitator: Kathy King (6.1 -6.7 Communication)	Ch. 6 Communicating with meaning	

2/19/16	Competencies workshop Facilitator: Mike Nelson/Phil Hall/Barry Abbott/Dean Papajohn (2.1-2.6 Self-awareness and development)		Student Leadership Competencies Indicator http://studentleadershipcompetencies.com/tools/inventor/
2/26/16	Facilitator: Gary Barras-SRP The Baton Pass (3. Interpersonal interaction; 4 Group dynamics; 6.1 Verbal; 6.3 Listening; 6.5 Facilitation; 8. Personal behavior)	Ch. 3 Mastering the context	
3/4/16	Individual Leadership Development Plan Workshop Facilitator: Dean Papajohn		
3/11/16	Facilitator: Mike Arnold Engineers can thrive in Chaos (1.9 Problem solving, 2.5 Receiving feedback, 3.5 Mentoring, 4.4 Creating change, 7.2 Vision, 8.6 Responding to ambiguity)	Engineer to Entrepreneur, by Mike Arnold Ch. 5 Creating a powerful vision	
3/18/16	Spring Break-no class		
3/25/16	Facilitator: Susan Gray –TEP (1.2 Other perspectives; 2.5 Receiving feedback; 3.7 Other’s contributions; 3.9 Providing feedback; 3.11 Collaboration; 6. Communication; 8.4 Responsibility for personal behavior; 8.5 Ethics; 8.9 Positive attitude)	Ch. 7 Maintaining trust	
4/1/16	No class.		Second 1 on1
4/8/16	Leading from within Facilitator: Mike Nelson-Exxon	Ch. 8 Realizing Intention through action	
4/15/16	Leadership experiences Facilitator: Phil Hall-ACOE, MWH (3. Interpersonal interaction; 4. Group dynamics; 7. Strategic planning; 8. Personal behavior)		

4/22/16	Facilitator: Laura McGill, Raytheon		
4/29/16	Leadership Panel: Chuck Huckelberry (Pima County Administrator), Kathy King (ExxonMobil & communications consultant) Brandon Phillips (ExxonMobil) Austin Allen (Henderson Engineering, Inc.)		

LtoL = Learning to Lead