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:	Tu,Th 11:00-12:00 and by appointment
Office:	CE 214B
E-mail:	dpapajohn@email.arizona.edu
Web page:	http://civil.arizona.edu/cem

Textbook:
Developing the Leader within You by John C. Maxwell, 1993

Other suggested readings:
Learning to Lead: A workbook on becoming a leader by W. Bennis and J. Goldsmith, 4th edition, 2010
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	20%
Point papers	10%
Presentation feedback	20%
Leadership competencies Indicator	15%
Personality profile	5%
Leadership development plan	20%
1 on 1 conferences	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.

Point Papers on Chapter Readings
A brief point paper should be submitted on D2L for each chapter reading

Point papers are short, bulleted summaries of ideas that resonated with you or caused you to think. As a leader you need to develop the habit of thinking systematically, and writing is an excellent tool to develop this skill. Your point papers should consist of a:
1. Chapter title.
2. Wisdoms. Wisdoms may be intuitive or counter-intuitive.
3. Vocabulary.

Leadership competencies assessment
During the semester you will be asked to complete the Student Leadership Competencies Indicator http://studentleadershipcompetencies.com/tools/inventory/
There are eight sections to complete. Save your results and print a copy to bring to class.

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

Attendance
The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop 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.

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

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 me know immediately so that we can discuss options. 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. http://drc.arizona.edu/instructors/syllabus-statement

Academic Integrity
Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

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.

Prohibited Behavior

A. Nondiscrimination and Anti-harassment policy
The University of Arizona is committed to creating and maintaining an environment free of discrimination. In support of this commitment, the University prohibits discrimination, including harassment and retaliation, based on a protected classification, including race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. The University encourages anyone who believes he or she has been the subject of discrimination to report the matter immediately as described in the section below, "Reporting Discrimination, Harassment, or Retaliation." All members of the University community are responsible for participating in creating a campus environment free from all forms of prohibited discrimination and for cooperating with University officials who investigate allegations of policy violations. http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

B. Threatening Behavior is Prohibited
"Threatening behavior" means any statement communication, conduct or gesture, including those in written form, directed toward any member of the University community that causes a reasonable apprehension of physical harm to a person or property. A student can be guilty of threatening behavior even if the person who is the object of the threat does not observe or receive it, so long as a reasonable person would interpret the maker's statement, communication, conduct or gesture as a serious expression of intent to physically harm.

C. Procedures for Mandatory Reporting of Threatening Behavior
If threatened by any student's conduct to the point of reasonable fear of immediate physical harm to self, others or property:
1. Leave the area immediately.
2. Call the Police by dialing 9-1-1 to request that an officer come to the location. Inform the Police if it is a repeat occurrence.
3. Anyone who observes what appears to be threatening behavior must report it to The Dean of Students Office and in the appropriate case file a Student Code of Conduct Complaint (see ABOR 5-403).

Student Responsibility
Students are expected to promote a positive learning environments for themselves and their peers, this includes responsible use of computers, cell phones and mobile devices.

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

1. Learning and research
   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
	2. Self-awareness and development
	   1. Self-understanding
	   2. Personal values
	   3. Personal contributions
	   4. Scope of competence
	   5. Receiving feedback
	   6. Self-development

3. Interpersonal interaction
   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
	4. Group dynamics
	   1. Organizational behavior
	   2. Power dynamics
	   3. Group development
	   4. Creating change

5. Civic responsibility
   1. Diversity
   2. Other's circumstances
   3. Inclusion
   4. Social justice
   5. Social responsibility
   6. Service
	6. Communication
	   1. Verbal communication
	   2. Nonverbal communication
	   3. Listening
	   4. Writing
	   5. Facilitation
	   6. Conflict negotiation
	   7. Advocating for a point of view

7. Strategic planning
   1. Mission
   2. Vision
   3. Goals
   4. Plan
   5. Organization
	8. Personal behavior
	   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	Homework due
1/12/18	A Life Time of Learning to Lead Facilitator: Dean Papajohn-UA and Mike Nelson-ExxonMobil	Obtain textbook Read Introduction
1/19/18	Facilitator: Mike Nelson-ExxonMobil	Ch. 1 Influence PP #1 Personality profile: http://www.humanmetrics.com/cgi-win/jtypes2.asp
1/26/18	Competencies workshop Facilitator: Dean Papajohn/Mike Nelson/Phil Hall/Barry Abbott/Tom McGovern/Priscilla Cornelio	Student Leadership Competencies Indicator: http://studentleadershipcompetencies.com/tools/inventory/
2/2/18	Leadership experiences Facilitator: Phil Hall-ACOE, MWH	Ch. 2 Priorities PP #2 **1 on1 conference**
2/9/18	Facilitator: Kathy King	Reading-see D2L
2/16/18	Facilitator: Laura McGill, Raytheon	Ch. 3 Integrity PP #3
2/23/18		Ch. 4 Creating Positive Change PP #4
3/2/18	Individual Leadership Development Plan Workshop Facilitator: Dean Papajohn/Mike Nelson/Phil Hall/Barry Abbott/Tom McGovern/Priscilla Cornelio	Ch. 5 Problem-Solving PP #5
3/9/18	Spring Break-no class	
3/16/18	Facilitator: Alan Boekmann Ethics	Ch. 6 Attitude PP #6
3/23/18	Facilitator: Gary Barras-SRP The Baton Pass	Ch. 7 People PP #7 **1 on1 conference**
3/30/18	Leading from within Facilitator: Mike Nelson-ExxonMobil	Ch. 8 Vision PP #8

4/6/18	Facilitator: Mike Hoover - Sundt	Ch. 9 Self-Discipline PP #9
4/13/18	No class.	**1 on1 conference**
4/20/18	Facilitator: Simone Vitale, Sr. Manager-NACF Automation Engineering, Amazon	Ch. 10 Staff Development PP #10
4/27/18	Leadership Panel: Chuck Huckelberry (Pima County Administrator), Kathy King (ExxonMobil & communications consultant) Brandon Phillips (ExxonMobil) Austin Allen (Henderson Engineering, Inc.)	

PP: Point Paper

Other opportunities to hear from engineering leaders:
http://engineering.arizona.edu/speakers

Kurt DelBene, Microsoft
January 29, Monday, 5:30 PM, UA Memorial Student Union Kiva Room

Dave Crawford, Sundt Construction
February 26, Monday, 5:30 PM, UA Memorial Student Union Kiva Room

Laura McGill, Vice President of Engineering, Raytheon
March 28, Wednesday, 5:30 PM, UA Memorial Student Union Kiva Room