Leadership in Engineering

Instructor: Tom Krisa

Days, Time & Location:
Section 801 MW 8:40am – 10:40am, room ENB 109
Section 802 MW 11:30am – 1:30pm, room ENB 109

Office Hours: Times can be arranged by appointment

Enrolment Criteria: Enrolment will be restricted within the following boundaries:

• Have a declared major and be enrolled in an engineering discipline department in the College of Engineering
• Have a 2.8 GPA or higher

If classes are over-subscribed, student selection will consider distribution of disciplines within the class and recommendations from the departments.

Texts: There will be assigned readings from handout materials and from the following books:

• Patton on Leadership by Alan Axlerod, ISBN: 9780735202979
• The Contrarian’s Guide to Leadership by Steven B. Sample, ISBN: 9780787967079

Texts are used on first class day and can be obtained from the USF Bookstore at a relatively inexpensive price.

Attendance: Attendance at all sessions is required. Absences will have a detrimental impact on other students. Acceptable reasons for absence are ill health, contagious sickness, or family emergency, or legal requirements.

Class Method: In general, classes will consist of small group exercises for exploring and practicing leadership and teamwork concepts and competencies. The exercises will require the student to complete a modest amount of reading between classes and prepare for the exercise activity. The reading and exercise preparation will be issued at the end of each class period for the following class meeting. Periodically, external professionals will join the class to provide exposure to additional perspectives.
Course Objectives: Increase awareness of leadership and teamwork competencies and strengthen ability to apply that knowledge. The focus will be awareness and application of these competencies and concepts in a business environment. Competencies that will be practiced directly include:

- Presentations and communications (to team, peers, management, etc.)
  - Visioning
  - Motivating
  - Convincing/Influencing
  - Communicating information
  - Challenging
- Facilitation of meetings/group discussions
- Challenging & debating
- Reading critically (and openly)
- Listening critically (and openly)
- Providing feedback constructively
- Coaching

Through the exercises, the class will explore many of the following topics:

- Understanding self and others
- Personal values
- Organization culture and values
- Decision-making
- Handling conflict
- Innovating
- Applying values
- Analyzing organizational dynamics
- Rewarding & celebrating
- Delivering Praise
- Setting team direction
- Using metrics
- Leading change
- Personal growth & continual development
- Facing difficult questions
- Improving business processes
Course Content:

Weeks 1 – 5:

- **Before each class:**
  - Read Patton on Leadership
  - Prepare a presentation for a small group each class related to the reading or prepare to coach another student
  - Prepare to facilitate a small group meeting

- **During each class:**
  - Each student makes a presentation to a small group
  - After the presentation, the small group, facilitated by another group member, analyzes, reacts, or works with the subject of the presentation
  - Feedback is provided on the presentation and facilitation

- **Focus of practical improvement will be on style of presentation, speaking clarity, clarity of message, connection with audience, ability to influence, getting full participation in a discussion, leading a discussion to achieve an outcome, maintaining a discussion on subject, helping others explore for personal improvement, accepting help for personal improvement, criticizing constructively, reading critically**

- **Awareness will be heightened for leadership attributes, assessing leadership situations, understanding personality types, understanding organization culture, planning, visibility of leadership, leading change, focus on people, delegation, inspiring others, efficiency and bureaucracy, communicating, boldness, goals and expectations.**

Weeks 6 -11

- **Before each class:**
  - Read The Leadership Challenge
  - Analyze a relevant situation related to the reading and prepare a presentation or for an exercise

- **During each class:**
  - The exercise is conducted. Generally this comprises a presentation by each student to their small group and a facilitated meeting to respond to the scenario in the exercise. In some cases it is a one-on-one presentation observed by a third student.

- **Focus of practical improvement will be on effectiveness of presentation, inspiring others, influencing others, communicating clearly, developing vision, understanding others, and thinking systemically,**

- **Specific topics addressed will include values, setting direction, leading creativity, leading change, business processes, managing relationships, delegating, developing others, recognizing others, and team culture**
Weeks 12 -16

- Before each class:
  - Read The Contrarian’s Guide to Leadership
  - Work with a relevant current or anticipated business situation to develop an analysis or proposal related to the message of the reading. Develop a presentation of the work.

- During each class:
  - Each student presents their work to the small group.
  - The group discusses, analyzes, and provides feedback on the presented material.

- Focus of practical improvement will be on presentations, influencing, listening, providing constructive feedback, self-analysis, analysis of others and teams, personal vulnerability, and decision-making.

- Specific topics addressed will include visioning, team culture, planning, applying values, difficult decisions, idealism versus reality, developing others, and differences between management and leadership.

Special Topics:

- Personality types: Students will explore different personality types through class lecture and exercise.
- Culture models: Students will be introduced to how to model a team culture via class lecture and an in-class practical exercise.
- Causal loop analysis: Students will be introduced to causal loop analysis for assessing organization systems through lecture and multiple in-class exercises.
- Coaching: Students will be exposed to a model for coaching others through a lecture and multiple in-class exercises.
- Competency interviewing: Students will learn the basics of behavioral competency interviewing through class lecture and an in-class exercise.
- Business process improvement: Students will practice improving business processes by working with a process model.
- Decision-making: Students will be introduced to a variety of decision-making techniques and practice them within in-class exercises. (When graduate students are in the class, this includes an introduction to project analysis and decision-making concerning approval of projects.)

- Dealing with career realities: Students will participate in a series of café discussion sessions with industry representatives attending for a class period.

**Graduate Students:** Graduate students will be assigned a special project after discussion with the instructor. The project will generally be agreed approximately one month into the semester.