

Syllabus
Engineering Leadership
EGS 6039 (EDGE Program Graduate Students)

Section (Class No.): 1FE2 (11625) – Florida Residents
Section (Class No.): 2FED (11626) – non-Florida Residents
Section (Class No.): OVER (28123) – Approved Grad Students

Academic Term: Spring 2026

1. Instructor:

Bill McElroy, P.E., Associate Director and Gene Fraser Teaching Professor, Engineering Leadership Institute, University of Florida (UF) Herbert Wertheim College of Engineering (HWCOE)

- a. E-mail address: mcelrowj@eng.ufl.edu
- b. Office telephone: 352-294-7383
- c. Office location: Room 385 Wertheim Laboratory for Engineering Excellence
- d. Office hours: Office or Zoom personal meeting room
<https://ufl.zoom.us/j/6112768635>; 9:00 to 10:00 a.m. Tuesdays and Thursdays.
Other one-on-one meetings or Zoom/phone conversations are available by appointment (use email to set up).
- e. Web site: [e-Learning @ UF](#)
- f. No teaching assistant
- g. Course communications: The preferred first step is to email the instructor, using the Canvas course management email tool, for general questions about aspects of the course.

2. Course Description: *Engineering Leadership* introduces engineering students to the concepts, theory and practice of engineering leadership; effective written and oral communications and presentations; engineering leadership characteristics, individual differences and self-awareness; developing and building teams; managing change, conflicts, and crises; and understanding real-world ethics and core values. 3 credit hours.

3. Credit Hours: 3

4. Course Pre-Requisites/Co-Requisites: none

5. Course Objectives: This course is 100% online and primarily for graduate students with some work experience who are: 1) completing their advanced degree through the HWCOE Electronic Delivery of Gator Engineering (EDGE) program or; 2) registered through the UF graduate school as a certificate-seeking or non-degree seeking student.

Course lecture videos are abbreviated and content is supported by several types of student learning activities, within a user-friendly format that integrates the Canvas course management system. The course is divided into 3 units and each unit contains a series of modules. Each module includes one or more lecture videos, one or more activities designed to support student learning of the content, and a brief weekly reading insight assignment on leadership-related content. Some modules include main

assignments, quizzes, presentations and/or other requirements. All quizzes are administered electronically through the Canvas system (no proctors are required). Students will also plan and implement a leadership-related experience and submit an Individual Leadership Development Plan (ILDP) as a major course deliverable. An ILDP Framework document is available on the Canvas course website and students should read this document at the outset of the course.

The main goals for the course are summarized below. Students completing the course will be able to:

- enter or advance in *engineer-leader* roles in their professional careers, whether in the private, academic, public, or non-profit sectors
- identify, interpret and apply the foundations of leadership to their individual leadership framework, with linkages to vision, high ethical standards and professionalism
- develop their persuasive communications skills
- apply concepts to better manage collaborative team dynamics, drive change, and manage conflicts

Course completion is one of the prerequisites to obtain the Engineering Leadership Certificate offered by the HWCoe and issued by the UF graduate school.

<https://www.eng.ufl.edu/leadership/curriculum/certificates/>

6. **Material and Supply Fees:** none
7. **Professional Component (ABET):** Not applicable as course is not specific to a major under ABET purview.
8. **Relation to Program Outcomes (ABET):** Not applicable as course is not specific to a major under ABET purview.
9. **Required Textbooks and Software:** The required course text for all students is:
 - a. Title: Everyone a Leader: A Guide to Leading High-Performance Organizations for Engineers and Scientists (all Sections)
 - b. Author: Colcleugh, David
 - c. Publication date and edition: 2016
 - d. ISBN number: 978-1-4875-2183-7

Students may also be required to purchase a case study online simulation package titled *Change Management Simulation: Power and Influence V2*, by Judge and Hill (7/25/18). The costs will be on the order of \$16.25 per student. The simulation will be available through Harvard Business School Publishing and the instructor will provide more information about, and a link for, obtaining the package later in the semester.

The individual modules outline additional assigned readings and information. These materials are either articles (such as from Harvard Business Review journal) that are electronically available to UF students for free through the University e-library system, or postings on the Canvas course website.

10. Recommended Materials: Additional supplemental recommended resources related to the course content are outlined by module. These will also either be free articles available electronically through the University e-library system, or postings on the Canvas course website. These materials are not assigned but are recommended to provide students with additional value from the course.

11. Course Schedule: The online course is designed to comprise a weekly 3 credit-hour session of content, similar to the conventional on-campus version of the course. By UF definition, the course equates to 2.5 hours of equivalent weekly “contact periods” (50 minutes per period). The UF definition assumes that students may spend a **minimum** of 6 additional hours (2 hours per credit hour) outside of the weekly equivalent contact time in completing the course requirements.

The outline of main topics to be covered in each module, student learning objectives for each module, and key submittals and activities corresponding to each module are summarized below. Students may complete all assigned text readings however they choose in order to be prepared for quizzes that cover the content. The actual availability and due dates for assignments, activities, and quizzes are set in the Canvas course management system (see Syllabus page), and are summarized in a 1-page course schedule provided by the instructor. The module instructions in the Canvas course website track the summary table and provide additional details:

Units	Weeks ¹ (Mon.-Sun.) [Module]	Expected Coverage and Discussion Topics	Student Learning Objectives for Unit	Text Readings ²	Key Submittals and Activities ³
1 Foundations of Leadership (Modules 1-4)	1 [1] Jan. 12th is official semester start	course overview and initial leadership concepts	<ul style="list-style-type: none"> Identify and describe the course content and objectives Describe and appraise the components of engineering leadership Interpret and compare key common elements of effective leadership 	Chapters 1-2 (Quiz 1 Modules 1-3)	Submittals: - Activity: 1.1 - syllabus quiz Other: - acquire text - review ILDP framework - initiate prep of initial ILDP submittal
	2 [2]	trust; followership; leadership fundamentals and frameworks; leadership competencies; curiosity and leadership	<ul style="list-style-type: none"> Describe and appraise the components of building trust and followership Appraise and critique common leadership fundamentals and frameworks Describe and appraise the significance of curiosity in leadership development and what builds curiosity 		Submittals (Sunday pm): - weekly reading insights (ongoing Assignment 1) - Activities: 2.1, 2.2, 2.3 Other: - complete assigned materials (see Canvas module) - initiate Assignment 2 (individual) - continue work on initial ILDP submittal
	3 [3]	leadership theories	<ul style="list-style-type: none"> Identify and compare common leadership theories that have evolved over time Compare and assess common leadership theory applications 		Submittals (Sunday pm): - weekly reading insights - Assignment 2 - Activities: 3.1, 3.2 Prepare for and complete Quiz 1 – available upcoming Sunday and Monday Other: - complete assigned materials (see Canvas module) - continue work on initial ILDP submittal
	4 [4]	more leadership concepts (management vs. leadership; power and influence; ethical leadership; purposeful leadership)	<ul style="list-style-type: none"> Compare and assess key differences between management and leadership in organizations Identify and compare key components of leadership and power Define and evaluate common aspects of 		Complete Quiz 1 (closes Monday pm) Submittals (Sunday pm): - weekly reading insights - initial ILDP - Activities: 4.1, 4.2, 4.3

			ethical leadership and ethical organizational cultures <ul style="list-style-type: none"> Define and assess the role of purpose in individual, team and organizational success 	Chapters 3-4	Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) initiate Assignment 3 (team)
2 Individual Leadership Development (Modules 5-8)	5 [5]	persuasion and influence	<ul style="list-style-type: none"> Compare and assess the roles of and key differences between persuasion and influence in leadership Evaluate and compare the key principles of persuasion 	(Quiz 2 – Modules 4-6)	Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Activities: 5.1 Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) continue work on team Assignment 3 continue work on ILDP experience
	6 [6]	persuasive communications	<ul style="list-style-type: none"> Understand and analyze concepts and principles used to develop persuasive written documents and presentations Apply and create persuasive written documents and presentations 		Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Assignment 3 (team) Activities: 6.1, 6.2 Prepare for and complete Quiz 2 – available upcoming Sunday and Monday Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) initiate Assignment 4 (team) continue work on ILDP experience
	7 [7]	emotional intelligence; personality, communications ; conflict resolution; having difficult conversations	<ul style="list-style-type: none"> Understand and assess the concept and role of emotional intelligence (EQ) in modern-day leadership Identify and evaluate key attributes of EQ for individual growth and development Understand and interpret individual preferences through evaluation of personality traits Compare and apply key principles about personality traits for more effective communications 	Chapters 5-7 (Quiz 3 – Modules 7-9)	Complete Quiz 2 (closes Monday pm) Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Activities: 7.1, 7.2, 7.3 Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) continue work on Assignment 4 (team) continue work on ILDP experience

2 Individual Leadership Development (Modules 5-8)			<ul style="list-style-type: none">• Understand and interpret individual tendencies in conflict situations• Compare and apply key concepts about conflict management approaches to improve individual and team communications and interactions• Evaluate and apply best practices to hold difficult conversations with individuals	Chapters 5-7 (Quiz 3 – Modules 7-9)	
	8 [8]	professional credibility	<ul style="list-style-type: none">• Summarize the concept of credibility and identify its foundations• Summarize and apply the concept of the standard of care in engineering		Submittals (Sunday pm): - weekly reading insights - Assignment 4 - Activities: 8.1, 8.2 Other: - complete assigned materials (see Canvas module) - continue work on ILDP experience
3 Leadership and 21st Century Organizations (Modules 9-15)	9 [9]	motivational theories and applications	<ul style="list-style-type: none">• Compare and assess the fundamental aspects of key motivational concepts and theories		Submittals (Sunday pm): - weekly reading insights - Activities: 9.1, 9.2 Prepare for and complete Quiz 3 – available Monday-Tuesday after Spring Break Other: - complete assigned materials (see Canvas module) - continue work on ILDP experience
	Spring Break March 13 – March 22				
	11 [10]	teams, team dynamics and team development	<ul style="list-style-type: none">• Compare and describe the terms commitment and engagement, and assess factors that impact them in teams and organizations• Identify key overarching factors impacting team development and effectiveness	Chapters 8-10 (Quiz 4 – Modules 10-11)	Complete Quiz 3 (closes Tuesday p.m.) Submittals (Sunday pm): - weekly reading insights - Activities: 10.1, 10.2 Other: - complete assigned materials (see Canvas module)

3 Leadership and 21st Century Organizations (Modules 9-15)			<ul style="list-style-type: none"> Describe and interpret the common dynamics in teams and assess key factors in development of high-performance teams Compare and describe key generational differences that can impact team dynamics, and practices to manage and lead different generations in the work force 	Chapters 8-10 (Quiz 4 – Modules 10-11)	<ul style="list-style-type: none"> continue work on ILDP experience initiate Assignment 5 (team)
	12 [11]	corporate culture; some leadership realities in modern day organizations	<ul style="list-style-type: none"> Identify and assess key elements and factors that form strong cultures in modern-day organizations Evaluate and apply best practices when leading without authority and/or leading virtual teams 		Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Assignment 5 (team) Activities: 11.1, 11.2 Prepare for and complete Quiz 4 – available upcoming Sunday and Monday Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) continue work on ILDP experience
	13 [12]	leading and managing change; questioning	<ul style="list-style-type: none"> Evaluate and apply best practices with respect to leading and managing change in projects and organizations Compare and apply best practices in learning to ask good questions 	Chapters 11-13 (Quiz 5 – Modules 12-15)	Complete Quiz 4 – closes Monday pm Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Activities: 12.1, 12.2 Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module) initiate Assignment 6 (team) Initiate Preparation of Final ILDP
	14 [13]	leadership and creativity	<ul style="list-style-type: none"> Identify and assess key elements and factors that improve creative leadership, creative work environments, and ethical innovations 		Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Final ILDP Assignment 6 (team) Activities: 13.1 Other: <ul style="list-style-type: none"> complete assigned materials (see Canvas module)
	15 [14]	safety, sustainability and engineering leadership;	<ul style="list-style-type: none"> Examine the leadership mindset involved with integrating safety and 	Chapters 11-13	Submittals (Sunday pm): <ul style="list-style-type: none"> weekly reading insights Activities: 14.1 or 14.2 Other:

Leadership and 21st Century Organizations (Modules 9-15)			sustainability into organizational cultures	(Quiz 5 – Modules 12-15)	<ul style="list-style-type: none"> - complete assigned materials (see Canvas module) - complete course evaluations <p>Prepare for and complete Quiz 5 – see announcements for availability</p>
	15 [15] Apr 22nd is last official day of classes	global leadership; professionalism	<ul style="list-style-type: none"> • Assess leadership differences and considerations in different cultures • Examine the concept of professionalism and what comprises it 		<p>Submittals (Sunday pm):</p> <ul style="list-style-type: none"> - none <p>Other:</p> <ul style="list-style-type: none"> - complete course evaluations <p>Prepare for and complete Quiz 5 – see announcements for availability</p>

NOTES:

¹ See course schedule provided.

² “Everyone a Leader” text (see Syllabus for more details). Individual modules identify additional assigned and recommended readings and information.

³ See course schedule. Assignments and activities open on the Mondays of the week indicated; submittals are due on the Sundays of the weeks indicated. Specific Canvas assignments provide details and will govern the actual dates of availability and submittals in the event of unintended conflicts. Modules in Canvas course site provide instructions and more details.

12. Policies and Class Expectations:

General

The learning environment for *Engineering Leadership* is intended to be professional, courteous and respectful. The course is designed around what are believed to be current and relevant topics and best practices to help create and/or develop Gator Engineers who are prepared to accept roles, and/or advance, as an engineer-leader in their career.

The instructor is fully invested in this course instructional effort. The instructor is more than willing to provide students with the corresponding subject matter expertise, professional experience, and judgment to accomplish course objectives and maximize student learning outcomes. The instructor is also open to suggestions and constructive criticisms to continually improve the online course. Students are expected to fully engage in completion of the course materials in a sequential and timely manner, in accordance with the schedule for the class.

To promote a more complete understanding and application of this course content, students will be required to complete an Individual Leadership Development Plan (ILDP). The ILDP is intended to assist students in understanding and applying key competencies that are related to the course content and based on their individual strengths and needed for effectiveness in their careers as engineering leaders. The ILDP is a requirement and a key deliverable for completion of the course. More about the ILDP can be found in the ILDP Framework document available on the Canvas course website.

The course instructor has no ability to address or resolve technology issues related to the Canvas course management system. If a student believes that an issue of this nature was responsible for an event, such as a late individual or team submittal or some malfunction during a quiz, then it is that student's responsibility to discuss the issue with the UF HELP Desk (352-392-4357), obtain documentation from them about the issue, and follow-up with the instructor upon the supported conclusion that a Canvas issue was in fact involved with the event. The instructor will make time extensions for students having these or other legitimate reasons (for example, a documented health issue) for a late submittal, quiz accessibility issues, etc.

Other Specific Policies and Expectations:

Use of AI:

You are a student at this institution because you live in a free society that values intellectual freedom and the open exchange of ideas. You are here to learn, grow, and develop **your own critical voice** —not to copy or substitute others' work for your own understanding.

Students may use generative AI tools (such as ChatGPT, Claude, etc.) to enhance their learning and writing process, but must do so **transparently, ethically, and responsibly**. AI should serve as a collaborative tool to support brainstorming, idea generation, research assistance, grammar checking, and feedback on drafts, rather than as a replacement for critical thinking, original analysis, or authentic voice.

All AI use must be properly disclosed and cited, with students providing clear documentation of which tools were used, how they were employed, and what prompts generated the assistance. Students **remain fully responsible** for the accuracy, quality, and integrity of their submitted work, including any AI-generated content, and must be prepared to verify information, correct inaccuracies, and defend their own ideas.

Be aware of AI's significant limitations - AI frequently generates incorrect facts, numbers, and even fabricated citations that must be independently verified, while also potentially producing biased or incomplete information. **Should the UF Student Conduct process find a student guilty of** using AI to generate substantial portions of assignments, complete entire projects, or bypass the core learning objectives, **this will constitute academic misconduct** and will result in penalties ranging from assignment failure to course failure, depending on the severity of the violation.

Teams:

Depending on enrollments, many of the assignments (including presentations that may be required) will be team-based. Students may opt to self-assign to a team formed in Canvas by the instructor (normally consisting of 2 - 3 students per team depending on class enrollment), within the prescribed period (to be announced). At that time, the instructor will randomly assign the other students (who did not self-assign) into teams.

Note that Canvas recognizes only the teams created by the instructor for team-based assignment grading purposes, so students must be assigned to one of the designated teams. Students may also form a student or project group in Canvas if they choose; however, this is incidental to and not a substitute for being assigned to one of the designated teams.

Team members are expected to actively and fully participate in the development of each assignment. There is 1 submittal per team, which is graded, and the grade applies to all team members. Teams are expected to be self-regulating with respect to managing team member contributions and participation issues.

Quizzes:

Quizzes will be an open-book, open-note format. UF Honor Code provisions apply. Quizzes will be completed electronically through the Canvas website for the course. (No proctors are required.) The quizzes will be available for prescribed periods of time (normally a couple of days), with dates and times of availability based on the course schedule and updates through announcements and emails (using the Canvas course website). No make-up quizzes will be available, subject to [UF Attendance Policies](#).

Assignments:

There will be up to seven larger assignments throughout the semester, of which one is the Weekly Reading Insights (more information below). Each Canvas assignment will include instructions for preparation, including the release and due dates:

- Microsoft Word templates are provided on the assignment pages for student reuse in preparing these submittals (except for the weekly reading insights submittals where text-box entry format is acceptable).
- Students should expect a minimum 10% grade penalty for failure to follow all instructions indicated on the templates and the specific assignments (as applicable).
- Assignments will be evaluated against rubrics that will be available and each assignment page in Canvas.
- Students listed as participating members on the team assignments will receive the same assignment grade. The instructor will assume that unlisted students were not a participating team member and they will receive a grade of 0 for that assignment.
- Weekly Reading Insights: Each week, all students are required to submit their Weekly Reading Insights, with reflections on a leadership-related article posted by the instructor. These weekly assignments will cumulatively count as one main assignment grade, with the assignment score corresponding to the ratio of the number of assignments actually submitted to the number of weekly assignments required.

- No late Assignments will be accepted, subject to [UF attendance policies](#).
- **Expectations for Quality of Work:** Effective written communications are an important part of being an engineer, engineering leader and professional. While students are not expected to be able to write like English majors or accomplished authors, all students are expected to take sufficient care to produce assignment submittals that reflect a collegiate or working professional level of effort in terms of compositional structure and correct grammar usage. To this end, the instructor's expectations for all assignment submittals are outlined below:
 - ✓ All assignments will be completed using the appropriate Microsoft (MS) Word template. All final submittals will be in pdf format unless specifically stated otherwise in the associated assignments.
 - ✓ Students will take ownership of producing high-quality assignment "deliverables" that they would submit to their employer.
 - ✓ Submittals will reflect good, common practice in developing paragraphs and sentences (such as one topic per paragraph, use of complete sentences and not fragments, one thought per sentence that supports the paragraph topic, consistent fonts and structure, etc.). Good, common practice for this course does **not** include responses that involve long blocks of text containing multiple topics.
 - ✓ Students will use standard resources available through MS Word (or other acceptable sources) to search for and correct grammatical issues prior to assignment submittal. Submittals that contain noticeable misspelled words, incomplete sentences and similar careless issues will be considered a non-professional submittal and subject to a minimum 10% grade penalty. (This may be in addition to the grade penalty assigned for not following assignment instructions.) The quality of team-based submittals is a shared responsibility among the team members.
 - ✓ Team-based submittals mean that the document reflects a team compilation of contributions, endorsed by all participating team members. In finalizing the submittal, remember that there is no "I in team" and submittals should reflect this concept by removing words (such as "I" or "me") that reflect only individual perspectives, unless they question asks for individual team member responses.
 - ✓ Source and reference listings may be required for some assignment submittals. Assignments that fail to include references, as may be requested, will be considered incomplete and subject to a minimum 10% grade penalty. (This may be in addition to grade penalties assigned instructional or quality-based reasons.)

Activity Reports:

Students will be asked to complete one or more Activity Reports per module. Each activity report will provide instructions for preparation, including the release and due dates. Students should expect a minimum 10% grade penalty for failure to follow all instructions (as applicable). Expectations for written documents (previously outlined) also apply to activity reports.

- No late Activity Reports will be accepted, subject to [UF attendance policies](#).
- The instructor will evaluate a number of Activity Reports against the associated rubric throughout the semester, at their discretion. On weeks when the activity report is not graded against the rubric, students will receive completion credit if they have completed the activity report by the due date. The instructor will not announce ahead of time which activity reports will be evaluated against the rubric.

Discussion Boards:

Online discussion boards will be part of completing some module activities, as identified in the applicable module outlines. The discussion boards will further exploration of topics covered in the units. Optimally, participation will involve posting an original response to the discussion board questions by the Friday evening of the week, followed by posting at least 1 reply to another student posting by the Sunday evening closure date indicated. Discussion board postings will be evaluated against rubrics that will be available and will consider both the content of the postings as well as how well ideas were communicated. Expectations for written documents (previously outlined) also apply to discussion board postings. Remember to exercise courtesy and proper etiquette when making posts and responding to others' posts.

- No late Discussion Board postings will be accepted, subject to [UF attendance policies](#). Reply components are required to obtain full points.
- The instructor will evaluate a number of discussion boards against the associated rubric throughout the semester, at their discretion. On weeks when the discussion is not graded against the rubric, students will receive completion credit if they have participated in the discussion by the due date. The instructor will not announce ahead of time which discussions will be evaluated against the rubric.

13. Evaluation of Grades:

Weightings of each course component for determination of final course grades are indicated below:

Components	Points	Weighting Percentage of Final Grade
Individual Leadership Development Plan	<ul style="list-style-type: none"> • 20 points (maximum) for initial submittal • 80 points (maximum) for final submittal 	20%
quizzes (up to 6)	<ul style="list-style-type: none"> • maximum points will vary by quiz 	25%
assignments (up to 7) (may include presentations)	<ul style="list-style-type: none"> • 100 points (maximum) each <p>Combined Weekly Reading Insights score will count as 1 assignment (5%)</p>	25%

activity reports and discussions (2-3 per module)	<ul style="list-style-type: none"> 20 points (maximum) for each submittal 	30% (divided evenly between each type)
Total:		100%

14. Grading Policy:

The final course grade (as a total percentage rounded to the nearest tenths of a digit) will be compared against the following grade scale:

A = 93 or above	C = 73.0 – 76.9
A- = 90.0 – 92.9	C- = 70.0 – 72.9
B+ = 87.0 – 89.9	D+ = 67.0 – 69.9
B = 83.0 – 86.9	D = 63.0 – 66.9
B- = 80.0 – 82.9	D- = 60.0 – 62.9
C+ = 77.0 – 79.9	E = 59.9 or below

More information on UF grading policy may be found at:

[UF Graduate Catalog](#)
[Grades and Grading Policies](#)

- 15.** We abide by all standard UF policies which can be found at the following website along with a list of resources: <https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>