Course ID and Title: ENGR 492 “Thought Leadership in a Technologically Changing World”
Units: 2
Term—Day—Time: Fall Semester- Fridays 10:00am-11:50am Pacific Time Zone
Location: The Course will be entirely Online

Instructors:
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University of Southern California
https://viterbi.usc.edu/directory/faculty/Raghavendra/C

Office Hours: Fridays 9am-10am

Teaching Assistant:
Office, Office Hours, and Contact Info: TBD

Catalogue Description
Development of engineering leaders by providing a solid foundation of leadership principles and their practice while studying the impact of technological achievements in leadership structures.

Course Description
Technological innovation has been the key driver of the global economy and as a result the demand for leaders—especially those with engineering backgrounds—will be rising rapidly. Given that the major challenges and opportunities for growth in corporations and other organizations are increasingly driven by technology, the future will bring increasing demand for leaders who have the ability to understand and follow technological innovation, to anticipate their impact in business, and to adapt to quickly. It is no surprise that today, according to the Harvard Business Review, 34 of the CEOs of the world’s 100 largest corporations have engineering degrees and that the best-performing CEOs around the globe are more likely to have an engineering degree than any other degree.

Engineers exhibit a number of qualities that provide excellent background experience for leadership: attention to detail while also understanding the overall strategy; strong problem solving and “fix anything” skills; taking responsibility without blaming others; analytical skills and structural methods of thinking; and a
tendency to recruit talent that has a similar way of looking at challenges. However, these characteristics are by no means sufficient to make engineers successful leaders.

This course is designed to address urgent issues that relate to the development of leaders as well as some of the larger issues on societal leadership. We will initially focus on the often-neglected timeless lessons of leadership from classical literature that provide a solid foundation of leadership principles and their practice in a modern world of globalization. We will also study the impact of technological achievements and especially disruptive technologies on leadership structures and new models of governance. By rediscovering timeless truths about the human condition and human society, we can learn a great deal about leadership from the philosophers and playwrights of antiquity. We will gain wisdom, draw parallels and metaphors, and rediscover the skills and practices of exemplary leaders of our technologically advanced times and throughout history.

The course is structured to involve a high level of classroom participation from the students, presentations of their bi-weekly essay questions, and debates of the various case studies and their outcomes. Classes will involve lectures, guest speakers especially from technology companies, discussions, debates, movies and video clips, weekly reading assignments and case studies. The classes will seek to actively engage and challenge the students, guest lecturers and professors.

**Learning Objectives**

Upon completion of this course, students will be able to on p.3

- Implement theories from the “Bible on Leadership” which is Xenophon’s *Cyropaedia* (i.e., *The Education of Cyrus*) that influenced later works such as Machiavelli’s “*The Prince*” and the myriad of leadership books and articles written in our times.
- Assess the necessary traits and stand out qualities of successful leaders throughout history and in contemporary society.
- Apply strategies to equal pay and pay transparency in any working environment or corporation.
- Draw parallels between historical and contemporary leaders.
- Apply the timeless lessons of leadership to our technology-driven working and living environments.
- Analyze the complexity, paradoxes, and often-times messy art of leadership in an increasingly technological world.
- Articulate an effective plan for personal leadership development.
- Discuss the concepts of uncertainty, instability, conflict, ethics and morality as they relate to leadership dilemmas.

**Guest Lecturers**

Throughout the semester we will host in class noteworthy individuals as guest lecturers who by their leadership roles have made important contributions in the world of technology companies. We will have the opportunity to interact with them in Q&A session and discussion.

**Required Readings and Supplementary Materials**

You need the following resources for this course.


- Cyropaedia: The Education of Cyrus by Xenophon
  [https://www.gutenberg.org/files/2085/2085-h/2085-h.htm](https://www.gutenberg.org/files/2085/2085-h/2085-h.htm)

Course Notes
All course information will be available through your Brightspace account. Brightspace is the primary channel of communication for this course so take note of announcements and other email messages you receive. Assignment and grades are posted here as well. To access Brightspace from your web browser use your USC username and password to log in.

Course Requirements and Pre-requisites
Students will receive two units of credit under the heading of this letter-graded course. Course requirements include regular participation in-class discussions, debates, and case studies; timely completion of bi-weekly reading assignments and essays; and participation in midterm and final exams. No other course pre-requisite is required.

Description of Assignments and How They Will Be Assessed
Bi-Weekly Essays: There will be a series of questions on a particular topic (see weekly schedule below) for the students not only to answer but also provide an in-depth analysis and arguments as well as a conclusion wrapping up their ideas. Typical length of the essay assignments will be four to five pages.

Case Study Group Projects: The students will be divided into groups with four members in each group. Each group will be asked to provide 3 names of technical or contemporary leaders that they would like to study. Professors Nikias, Glynn and Raghavendra will pick one of the three proposed names for each group in order to avoid duplication of effort. Each group of students will work together as a team assessing their leader of choice based on qualifications learned in this course (see below). Each group of students will present their project in class. The project will be documented with a PowerPoint presentation.

Grading breakdown: Breath and depth of presentation: 20%, Metrics of leadership traits and qualities chosen to assess a leader: 40%, Chosen leader’s accomplishments and justifications: 40%

Description of Mid-Term and Final Exams and How They Will Be Assessed
Mid-term and final exams will include a series of essay questions where the students will have the freedom to demonstrate their understanding of leadership concepts by brainstorming their ideas and organizing, integrating and presenting them in a logical way.

Participation
Participation includes class attendance every week as well as active participation in class discussions and active participation in teamwork for the group projects.

Final Grading Breakdown

<table>
<thead>
<tr>
<th>Grading Breakdown</th>
<th>% of Grade</th>
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</thead>
<tbody>
<tr>
<td>Essays</td>
<td>30</td>
</tr>
<tr>
<td>Participation</td>
<td>15*</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>15</td>
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<tr>
<td>Final Exam</td>
<td>15</td>
</tr>
<tr>
<td>Case Study Group Project</td>
<td>25</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
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</tbody>
</table>

*Participation includes class attendance every week as well as active participation in class discussions and active participation in teamwork for the group projects.
### Weekly Schedule

Weekly Class Schedule will also be available on Brightspace as a separate document with detailed description of the topics to be covered, reading assignments and class essays.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics/Daily Activities</th>
<th>Readings/Preparation</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Discovering the Foundation of Leadership</td>
<td>See below #1: book chapter, articles</td>
<td></td>
</tr>
</tbody>
</table>
| 2    | Necessary Character Traits for Leaders. Are Leaders Made or Born? | See below #2: book chapters, articles, video | Class Essay #1 Due  
**Topic:** Self-assessment on foundational character traits of leadership |
| 3    | Importance of Self-Restraint | See below #3: book chapters, articles |  |
| 4    | Stand-Out Qualities for Leaders | See below #4: book chapter, articles, podcast, videos | Class Essay #2 Due  
**Topic:** Learning from mistakes and our compass |
| 5    | Vision, Inspiration and Charisma | See below #5: book chapters, videos |  |
| 6    | Values, Culture and Social Responsibility | See below #6: book chapters, articles, videos | Class Essay #3 Due  
**Topic:** Leading to Innovation and Requirements |
| 7    | Pay Transparency and Pay Equity | See below #7: articles, videos |  |
| 8    | Midterm Examination | | Midterm Examination |
| 9    | Women in Engineering Leadership | See below #9: articles, videos | Class Essay #4 Due  
**Topic:** Stereotype obstacles that discriminate against women leaders |
| 10   | Defiance & Risk Taking | See below #10: articles, book chapters |  |
| 11   | “Social Media Leader” and Teamwork | See below #11: book chapters, articles, videos | Class Essay #5 Due  
**Topic:** Leading teams to perform |
| 12   | Leading Teams to Perform | See below #12: book chapters, articles, videos |  |
| 13   | Group Projects/Case Studies Presentations | **Footnote** | Group Projects/Case Studies In Class Presentations |
| 14   | Group Projects/Case Studies Presentations | **Footnote** | Group Projects/Case Studies In Class Presentations |
| 15   | Group Projects/Case Studies Presentations | **Footnote** | Group Projects/Case Studies In Class Presentations  
Class Essay #6 Due  
**Topic:** Reflection from Case Studies presentations |

**Footnote**

**Students are expected to take notes, pose questions, write, and submit a summary or reflection of others’ presentations, especially if they agree or disagree with others’ assessment of leaders. Their reflections will be summarized in Essay #6.**
Session 1: Discovering the Foundation of Leadership
Readings:
Chapter 1: Introduction

Session 2: Necessary Character Traits for Leaders. Are Leaders Made or Born?
Readings:
https://www.europeanceo.com/business-and-management/are-great-leaders-born-or-made/
https://www.researchgate.net/publication/270684591_Are_leaders_born_or_made
Chapter 2: Purpose of Leadership
Videos:
Steve Jobs, No.7 video: https://www.resourcefulmanager.com/leadership-videos/

Session 3: Importance of Self-Restraint
Readings:
Chapter 3: Our Compass, or “Where is True North?”

Session 4: Stand-Out Qualities for Leaders
Readings:
Chapter 12&15: Leading Experts and Decide
https://www.thecrosslandgroup.com/article/inner-leadership-seriesleading-vulnerability-vulnerable-can-serve-not-harm-leader/
Podcast:
https://hbr.org/podcast/2020/03/real-leaders-oprah-winfrey-and-the-power-of-empathy
Videos:
“Scent of a Woman”.....integrity, courage
https://www.youtube.com/watch?v=UJ4HUD-wErc&feature=youtu.be
Ted Talk (2017) Damon Davis - Courage is Contagious
Session 5: Vision, Inspiration and Charisma

Reading:
Chapter 4&5: Strategic Objectives and Creating Value-Providing Sense of Purpose
https://hbr.org/2012/06/learning-charisma-2

Videos:
Mandela in “Invictus”
https://www.youtube.com/watch?v=TQhns5AwAkA&feature=youtu.be
Gary Oldman as Churchill in the “Darkest Hour”
https://www.youtube.com/watch?v=skrryoabmgA&feature=youtu.be
JFK “We chose to go to the moon…”
https://www.youtube.com/watch?v=QAmvcdwKgtQ
No.4 Ted Talk John Wooden
https://www.inspiringleadershipnow.com/best-ted-talks-on-leadership/

Session 6: Values, Culture and Social Responsibility

Reading:
Chapters 6&7&8: Leading to Innovation and Requirements
https://hbr.org/2018/03/socially-responsible-business-can-only-succeed-if-it-becomes-a-movement

Videos:
“Fair Game” Social Responsibility Speech
https://www.youtube.com/watch?v=FKbpLDd4KUJ&feature=youtu.be
What is CSR?
https://www.youtube.com/watch?v=l9lyDvxxADU
Coke Video
https://www.youtube.com/watch?v=75SzckCQy8E
Patagonia
https://www.youtube.com/watch?v=bB8ZWOKyoqY

Session 7: Pay Transparency and Pay Equity

Reading:
https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/pay-transparency-requires-leaders-commitment.aspx
https://fortune.com/recommends/banking/the-motherhood-penalty/
Session 8: Midterm Examination

Session 9: Women in Engineering Leadership

Reading:
The Number of Women Running Fortune 500 Companies Hits New High
Michelle Obama: A Charismatic Leader? By HBR
Eliminating the Gender Pay Gap: Gap Inc. Leads the Way
"Where Are All the Women CEOs?" WSJ Article

Videos:
“Why we have too few women leaders” by Sheryl Sandberg/Ted Talk
https://www.youtube.com/watch?v=18uDutylDa4
Oprah’s Tearful Speech at Power of Women
https://www.youtube.com/watch?v=6Rfn94k717U
Women in Leadership: Lessons in Working Smarter, Not Harder; Anila Khalique
https://www.ted.com/talks/anila_khalique_women_in_leadership_lessons_in_working_smarter_not_harder_jan_2020
Emmy Watson Speech on women equality
https://youtu.be/w0CWe93dXjo

Session 10: Defiance & Risk Taking

Reading
César Chávez: https://progressive.org/magazine/extraordinary-cesar-chavez/
Mohandas Gandhi:
https://www.britannica.com/biography/Mahatma-Gandhi
Rosa Parks:
https://achievement.org/achiever/rosa-parks/
Martin Luther King:
https://www.britannica.com/biography/Martin-Luther-King-Jr
Springer, 2020 (ASIN: B085L8RN37)
Chapters 13&21: Risk Management and Power, Influence and Win-Win

Session 11: “Social Media Leader”

Reading:
“How to Become a Social CEO” by Troels Johannesen, March 2020
https://knowledge.wharton.upenn.edu/article/how-ceos-can-adopt-a-21st-century-approach-to-organizational-communication/
**Videos:**
Attention CEOs:
https://www.youtube.com/watch?v=8-91Q9AyFb0
How do you make something going viral?
https://www.forbes.com/sites/johnbbrandon/2020/03/06/this-is-hands-down-the-best-ted-talk-ever-about-social-media/?sh=7ba727361ecb
Why You Should Quit Social Media:
https://www.ted.com/talks/cal_newport_why_you_should_quit_social_media?language=en

**Session 12: Leading Teams to Perform**

**Reading:**

Chapter 10&16&19: Model Based Engineering, Mastering Complexity, and Leading Teams to Perform

Building Great Teams:
https://insight.kellogg.northwestern.edu/building-leading-great-teams-research

Making Virtual Teams Work: Ten Basic Principles, HBR:
https://hbr.org/2013/06/making-virtual-teams-work-ten

**Videos:**
Attention CEOs:
https://www.youtube.com/watch?v=8-91Q9AyFb0

https://www.youtube.com/watch?v=uAy6EawKKME

**Session 13 & 14 &15: Group Projects/Case Studies/In Class Presentations**

The students will be divided into groups with four members in each group. Each group will be asked to provide 3 names of technical or contemporary leaders that they would like to study. Professors Nikias, Glynn and Raghavendra will pick one of the three proposed names for each group in order to avoid duplication of effort. Each group of students will work together as a team assessing their leader of choice based on qualifications learned in this course: necessary character traits, self-restraint or lack thereof, standout qualities or flaws, vision and charisma, ability to lead teams to perform and create value, social responsibility, and above all whether or not they have made an impact to society either good or bad. Each group of students will present their project in class.

During the class presentations, the students are expected to take notes, pose questions, write, and submit a summary or reflection of others’ presentations, especially if they agree or disagree with others’ assessment of leaders. Their reflections will be summarized in Essay #6.

**Final Exam:** *December Date*

**Our Inclusive Learning Community**

Our USC Principles of Community state “USC is a multicultural community of people from diverse racial, ethnic, gender, and class backgrounds, national origins, faith backgrounds, political beliefs, abilities, and sexual orientations. Our activities, programs, classes, workshops, lectures, and everyday interactions are enriched by our acceptance of one another, and we strive to learn from each other in an atmosphere of positive engagement and mutual respect.”
https://diversity.usc.edu/usc-principles-of-community/

As Trojans, we understand the value of the perspectives of individuals from all backgrounds that reflect the
rich diversity of our USC community and beyond. The study of Leadership requires us to recognize how
diversity, equity and inclusion is not only the ethical approach, but also creates a competitive advantage for
organizations. Together, we will strive to make this classroom a psychologically safe and inclusive
environment for all of us to develop and practice inclusive behaviors. As such, we will:

- Respect the dignity and essential work of all individuals,
- Promote a culture of respect within the university community,
- Respect the privacy, property, and freedom of others,
- Reject bigotry, discrimination, violence or intimidation of any kind,
- Practice personal and academic integrity and expect it of others, and
- Promote the diversity of opinions, ideas and backgrounds which is the lifeblood of the
  university.

If you see ways we can improve, please let us know.

**Academic Integrity & Conduct**
The University of Southern California is foremost a learning community committed to fostering successful
scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic
misconduct is in contrast to the university’s mission to educate students through a broad array of first-rank
academic, professional, and extracurricular programs and includes any act of dishonesty in the submission
of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All
students are expected to submit assignments that are original work and prepared specifically for the
course/section in this academic term. You may not submit work written by others or “recycle” work
prepared for other courses without obtaining written permission from the instructor(s). Students suspected
of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication
(e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is
intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university
and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even
expulsion from the university.

For this class you are expected to submit essays that demonstrate your individual mastery of the course
concepts. For the group project of the course, you are expected to work as a team with other students.

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is
a serious academic offense with serious consequences. The use of unauthorized material or technology,
communication with fellow students during an examination, attempting to benefit from the work of
another student, and similar behavior that defeats the intent of an examination or other course work is
unacceptable and will be treated accordingly. Other integrity violations include handing in someone else’s
homework assignment for them when they did not attend class or claiming credit for words or thoughts
that are not your own, which includes having your name appear on a team project/paper when you did not
fully participate in completion of the project/paper. These actions will have significant impact such as failing
the course. Not only is it your responsibility to abide by these standards, it is also your responsibility to
notify the instructor if you observe any violations of academic integrity in this course.

For more information about academic integrity see [the student handbook](#) or the Office of Academic
Integrity’s website, and university policies on [Research and Scholarship Misconduct](#).
Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

**Policy for the Use of AI Generators**
In this course, we encourage you to use artificial intelligence (AI)-powered programs to help you with assignments that indicate the permitted use of AI. You should also be aware that AI text generation tools may present incorrect information, biased responses, and incomplete analyses; thus, they are not yet prepared to produce text that meets the standards of this course. To adhere to our university values, you must cite any AI-generated material (e.g., text, images, etc.) included or referenced in your work and provide the prompts used to generate the content.

**Religious/Cultural Observance**
Persons who have religious or cultural observances that coincide with class should let me know by email as soon as possible so we can make accommodations for any missed work or participation. We strongly encourage you to honor your cultural and religious holidays! However, if we do not hear from you before the holiday, We’ll assume that you plan to attend all class meetings.

**Emergency Preparedness/Course Continuity**
In case of a declared emergency (i.e. earthquake or fire), the USC Emergency Information web site (http://emergency.usc.edu/) will provide safety and other information, including electronic means by which instructors will conduct class using a combination of USC’s Blackboard learning management system (blackboard.usc.edu), teleconferencing, and other technologies.

**Students and Disability Accommodations**
USC welcomes students with disabilities into all of the University’s educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

**Student Well-being Support Systems**
- **Counseling and Mental Health** - (213) 740-9355 – 24/7 on call
  Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

  **988 Suicide and Crisis Lifeline** - 988 for both calls and text messages – 24/7 on call
  The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

  **Relationship and Sexual Violence Prevention Services (RSVP)** - (213) 740-9355(WELL) – 24/7 on call
  Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

  **Office for Equity, Equal Opportunity, and Title IX (EEO-TIX)** - (213) 740-5086
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

**Reporting Incidents of Bias or Harassment** - (213) 740-5086 or (213) 821-8298
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

**The Office of Student Accessibility Services (OSAS)** - (213) 740-0776
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

**USC Campus Support and Intervention** - (213) 740-0411
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

**Diversity, Equity and Inclusion** - (213) 740-2101
Information on events, programs and training, the Provost’s Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

**USC Emergency** - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

**USC Department of Public Safety** - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call
Non-emergency assistance or information.

**Office of the Ombuds** - (213) 821-9556 (UPC) / (323-442-0382 (HSC)
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

**Occupational Therapy Faculty Practice** - (323) 442-2850 or otp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.