Make the Choice to be An Engineering Leader (Spring 2018)

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Essence of the Message

(1) Engineering and computer science are noble professions **(2)** We need engineering leaders who have the burning desire and confidence to deliver world changing solutions **(3)** Begin with the end in mind—go for the "golden ring" **(4)** You need to make the most of your academic career—proactively take steps each year **(5)** You need to practice like you need to play on a daily basis **(6)** You make the choice to be more than "good enough"

Why

Desired Skills

Technically Sound → Design Usable Systems
- Appreciates and Values Being an Engineer
- Critical & Systems Thinker

Creative→ Generate New Ideas
- Builder
- Creator

Innovative → Convert Ideas to Social & Business Value
- Entrepreneurial
- Business & Financially Savvy
- Learner—Reflective Practitioner

Collaborative → Work in a Team as a Professional
- Team Player
- Ethical & Trustworthy
- Good Communicator
- Professional
- Socially Responsible

Accountable → Meet Commitments
- Disciplined
- Personally Responsible
- Meets Commitments
- Brings a Strong Work Ethic
- Connected to and "In Sync" with the Project

What Need to Accomplish—What Good Looks Like

Responsibility	Desired Outcome	Bronze	Silver	Gold
1) Learn the Most from Your Engineering Courses	• Identify, formulate, and solve engineering problems	• 3.0 GPA	• 3.2 GPA • Have regular meetings with professors	• 3.5 or better GPA (Dean's List) • Conduct research w/ a professor • Become a TA
2) Expand Your Network and Resources (Gather With Other Engineers & Disciplines)	• Increase diversity of thoughts • Enhance the breadth of knowledge • Increase ability to be a resource for others • Recognize the need for multi-disciplinary teams • Function as part of a multi-disciplinary team	• Become a member in a non-engineering organization • Subscribe to non-engineering magazines (e.g., Popular Mechanics, Popular Science) • Take electives in another engineering discipline • Form study groups within major	• Be a committee member in a non-engineering organization • Take electives in a different engineering discipline • Form study groups across CECS disciplines	• Hold a leadership position in a non-engineering organization • Demonstrate contribution to a non-engineering field • Take electives in non-engineering disciplines • Form study groups outside of CECS • Work on joint projects and competitions across campus • Attend conferences
3) Learn from Life Experiences	• Enhance leadership and professional skills	• Join professional or volunteer groups	• Be active in professional or volunteer groups	• Provide leadership in professional or volunteer groups
4) Experiment with Creating and Innovating	• Produce creative and plausible solutions to solve real-world problems	• Gain exposure to projects from student organizations, conferences, outside projects or lab workshops	• Join a design competition team • Complete class projects in the Maker Spaces	• Utilize the Maker Spaces • Be a team leader in a design competition • Attend workshops in labs that lead to a working product
5) Gain Relevant Work Experiences	• Solve real-world challenges • Apply classroom knowledge to life	• Gain work experiences that demonstrates responsibility	• Gain 1 Internship within the field	• Hold multiple internships or co-op positions within the field
6) Learn from Leadership Courses	• Lead teams with integrity and personal values	• Attend 2 seminar series	• Complete the Engineering Leadership Certificate	• Complete the Engineering Leadership Minor
7) Learn from Leaders—Pathway & Peer Mentors	• Gain exposure to career options, advice and job search tips • Build professional network	• Have a peer or pathway mentor	• Have a peer & pathway mentor • Join the eli² Development Circles	• Have a peer & pathway mentor • Mentor other students
8) Reflect on Yourself and Your Experiences	• Recognize the need for and engage in lifelong learning	• Have a resume & cover letter • Have a LinkedIn profile	• Have a resume, bio, ePortfolio LinkedIn • Participate in 3 annual planning & reflection sessions each year	• Have a ePortfolio, LinkedIn profile, resume, cover letter, bio • Submit scorecard annually
9) Ensure You Are Mentally, Physically, Emotionally Well	• Recognize the need to "be well to do well"			
10) Join the Leadership Journey	• Recognize that leadership is a lifelong learning process	• Attend the leadership seminars (EGS 3030/3031) • Pursue the minor/certificate	• Hold a leadership position in a student org or project • Be an eli² committee member	• Complete the Engineering Leadership program (minor certificate) • Be an eli² intern

Steps to Take Each Year

Freshman	Sophomore	Junior	Senior
• Go to class & actively participate in projects • Reflect on how being creative, innovative, collaborative, and accountable are important • Reflect on how the course knowledge can be used to deliver world-changing solutions			
• Explore eli² Resources (see eli2.cecs.ucf.edu) • Work in the Harris Gathering Lab with other students • Participate in student group activities • Participate in the eli² Facebook Group			
• Join a student group	• Become active in a student group	• Lead in student group	• Mentor a student group
• Use Maker Spaces for course projects including "Intro to Engineering" projects and senior design			
• Explore internship and coop requirements	• Pursue an intern or coop	• Participate in intern/coop opportunities	• Prepare for your career transition
• Align general education courses to the certificate requirements	• Apply to be part of the of certificate/minor • Participate in certificate/minor courses	• Participate in certificate/minor courses	• Participate in certificate/minor courses • Complete the leadership capstone
• Talk with a Peer Mentor	• Talk with a Peer Mentor • Seek out Pathway Mentor	• Talk with a Peer Mentor • Seek out Pathway Mentor • Become a Peer Mentor	
• Start using a notebook to reflect on your story	• Establish an e-journal or portfolio	• Update your e-journal or portfolio	• Prepare your portfolio to share with potential employers
• Reflect on your current wellness • Take proactive steps to enhance your wellness where it is needed			
• Make the choice			

Steps to Take Each Day

Technically Sound → Design Usable Systems
- ❑ Do your work
- ❑ Talk with your professors
- ❑ Learn about the "giants" in your field
- ❑ Work for a 3.0 or better GPA
- ❑ Take a design course

Creative→ Generate New Ideas
- ❑ Carry a sketchbook with you
- ❑ Think visually
- ❑ Tinker
- ❑ Join an engineering club
- ❑ Join a design competition

Innovative → Convert Ideas to Social & Business Value
- ❑ Sketch product improvements
- ❑ Study new companies
- ❑ Start a business
- ❑ Balance your check book
- ❑ Make an outcome oriented budget
- ❑ Take a cost or economics class

Collaborative → Work in a Team as a Professional
- ❑ Do the right things
- ❑ Live by the "UCF Golden Rules"
- ❑ Do your project work
- ❑ Give the project presentations
- ❑ Address professor by preferred name and title—start with Dr.
- ❑ Dress for success
- ❑ Follow a social media site related to sustainability
- ❑ Volunteer
- ❑ Join Toastmasters

Accountable → Meet Commitments
- ❑ Read newspapers
- ❑ Show up to every class on time
- ❑ Turn your phone off during class
- ❑ Bring a notebook and pen to meetings with professors—Use them
- ❑ See the syllabus as your project plan
- ❑ Develop daily/weekly planners & reviews
- ❑ Build lessons learned from each class or project
- ❑ Complete a professional portfolio