Numerous technologies are threatening disruption today: blockchain, computer. These should be a horrible warning to all business leaders. The first iPhone, and laughed off Google. IBM laughed off the first personal computer. Blockbuster is not alone in their blindness. Microsoft laughed off the Internet of Things (IoT), artificial intelligence, autonomous vehicles, unmanned aerial vehicles (UAVs), 3D printing, 5G wireless networks, gene editing. Understanding what they are and how they might disrupt will make or break countless companies in the coming years.

Credit 3 units.

**T55 ETEM 520 Intro to Innovation & Entrepreneurship**

What exactly is innovation, and what is entrepreneurship? How do they drive business and society? Where do good ideas come from? Can anyone learn to be innovative or be an entrepreneur, and does “thinking like an engineer” help or hinder this process? What does an innovative organization look and act like? What barriers exist to innovation/entrepreneurship, and can they be overcome? This course introduces important frameworks and concepts, offers the student hands-on individual and team learning, includes numerous guest lecturers, and cultivates essential communication skills, all with the goal of fostering an understanding of, and confidence in, innovation and entrepreneurship - both for the individual as well as for the organization.

Credit 3 units.

**T55 ETEM 525 Innovating For Defense**

This interdisciplinary entrepreneurial course gives students the unique opportunity to solve real problems facing the U.S. Department of Defense (DoD) and the U.S. Intelligence Community (IC). This course is open to all students who want to solve real problems for real customers in real time. Teams will form their own interdisciplinary teams. Each team chooses their own DoD problems from those available to the class. Each problem has a dedicated DoD problem sponsor who will be regularly engaged with the team. Student teams learn and use the Lean Startup methodology and the Mission Model Canvas made famous by Stanford University to iteratively cut through the complexity of the problem. Teams develop a keen understanding of the problem, craft a business model and solution, and develop a prototype. Note: This course is sponsored by the U.S. DoD. It was originally developed at Stanford University and is now taught at 30+ U.S. universities. A student does NOT have to be a citizen of the United States to take this course; none of the DoD problems are classified. Recommended completion of T55 ETEM 520.

Credit 3 units.

**T55 ETEM 582 Human Performance in the Organization**

Have you ever wondered why some careers soar and others stall? Why you find it easy to build relationships with some people - but not others? Why some teams function well and consistently outperform others? Are you curious about what kind of manager you are, or will others? Do you want to know more about how organizations decide who to hire and who to promote? Human Performance in the Organization is designed to help you answer these questions. The content is a mix of relevant theory, personal reflection, and practical application. Our goal is to understand human performance at all levels of the organization. Can anyone learn to be innovative or be an entrepreneur, and does “thinking like an engineer” help or hinder this process? What does an innovative organization look and act like? What barriers exist to innovation/entrepreneurship, and can they be overcome? This course introduces important frameworks and concepts, offers the student hands-on individual and team learning, includes numerous guest lecturers, and cultivates essential communication skills, all with the goal of fostering an understanding of, and confidence in, innovation and entrepreneurship - both for the individual as well as for the organization.

Credit 3 units.

**T55 ETEM 581 Leading in a Technology-Rich World**

Leadership has fundamentally changed from top-down, autocratic and task-focused to collaborative and people-focused in just a few generations. Great senior leaders now get their people to do the greatest things. They must constantly learn, think innovatively, move and adapt very quickly, and collaborate over short and long distances. Students will learn new leadership skills, explore their individual leadership styles, and discuss the senior leadership challenges in an evolving tech-rich world.

Credit 3 units.

**T55 ETEM 520 Intro to Innovation & Entrepreneurship**

What exactly is innovation, and what is entrepreneurship? How do they drive business and society? Where do good ideas come from? Can anyone learn to be innovative or be an entrepreneur, and does “thinking like an engineer” help or hinder this process? What does an innovative organization look and act like? What barriers exist to innovation/entrepreneurship, and can they be overcome? This course introduces important frameworks and concepts, offers the student hands-on individual and team learning, includes numerous guest lecturers, and cultivates essential communication skills, all with the goal of fostering an understanding of, and confidence in, innovation and entrepreneurship - both for the individual as well as for the organization.

Credit 3 units.

**T55 ETEM 525 Innovating For Defense**

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**T55 ETEM 582 Human Performance in the Organization**

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Credit 3 units.

**T55 ETEM 581 Leading in a Technology-Rich World**

Leadership has fundamentally changed from top-down, autocratic and task-focused to collaborative and people-focused in just a few generations. Great senior leaders now get their people to do the greatest things. They must constantly learn, think innovatively, move and adapt very quickly, and collaborate over short and long distances. Students will learn new leadership skills, explore their individual leadership styles, and discuss the senior leadership challenges in an evolving tech-rich world.

Credit 3 units.
Credit 3 units.

T55 ETEM 585 MEM Capstone
The MEM capstone course is the culmination of the Master of Engineering Management degree program. Taken at the end of the program, the capstone course gives each student (as part of a team) an opportunity to apply a cross-section of knowledge and skills gained toward a current challenge/project from industry, government or nonprofit organization. Student teams are encouraged to interface with the sponsoring organization throughout the semester. Prerequisite: Completion or co-enrollment in all Required MEM courses. Credit 3 units.

T55 ETEM 586 Cross-Cultural Negotiation
This course introduces students to and gives them practice with principle-based tools and techniques to reach agreements across varied cultures. Best practices from the most famous negotiators of ancient history (i.e., the Phoenicians) are studied and used as a methodology that includes the role of a third party in resolving conflict. The cross-cultural elements are based on multicultural experiences, research studies and the real-life experiences of the instructor. The course is highly interactive (about 70% of the course work). Participants learn through role plays and simulation as well as through readings and case-study analysis. Credit 3 units.

T55 ETEM 587 Communication Excellence for Influential Leadership
Exceptional communicators become extraordinary leaders. This course will guide students to learn to exceptionally communicate their message by applying refined nuances that inspire and transform those with whom they converse. Through a proven communicative process, students will acquire skills necessary to differentiate them as leaders. Students will learn how to communicate across a variety of settings using strategies that result in clear, vivid, and engaging exchanges. Students will practice: storytelling; creating and using clear visuals; engaging listeners; demonstrating passion when speaking; responding to questions with clarity and brevity, and, using their distinctive voice as a leadership asset. Each student will learn how to assess his or her own communication capabilities, adjust to different listeners, and how to evaluate speaker effectiveness and provide valuable feedback to others. Video recordings will be used to demonstrate incremental communicative changes throughout the course, and to show how these strategies bring about outstanding leadership. Credit 3 units.