Graduate Certificate in Engineering Management

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Courses
Visit online course listings to view semester offerings for T55 ETEM (https://courses.wustl.edu/CourseInfo.aspx?sch=T&dept=T55&crslvl=5:8).

T55 ETEM 504 Engineering Management & Financial Intelligence
Discover the full picture of how business works within the organization. This course walks the student through the complete business cycle -- the roles the various functions play in a business operation as well as how information is used to make business decisions (e.g. financial data, marketing data, production data, economic data). To bring these learnings to life, this course also uses management simulation games and classroom competitions. Includes strategy, product planning and management, sales and support, research and development, manufacturing and supply chain, with particular emphasis on accounting, finance and the use of financial statements. Credit 3 units.

T55 ETEM 506 Technology Strategy & Marketing
Learn the art and science of technology-rich strategy and marketing. Every business rises and falls on the value it brings to the customer and the value it simultaneously brings to the business itself. The engineer that understands and can communicate strategy and marketing is powerful! Business, technology and research budgets are allocated based on this value proposition, whether the commercialization or operationalization of the technology is 1 year out or 10 years out. Prerequisite: T55 504. Credit 3 units.

T55 ETEM 510 Understanding Emerging & Disruptive Technologies
We live in an era of rapid technology innovation and disruption. Blockbuster was the darling of Wall Street in 2004 and filed for bankruptcy in 2010. Blockbuster CEO in 2008: “Neither Redbox nor Netflix are even on the radar screen in terms of competition.” Blockbuster is not alone in their blindness. Microsoft laughed off the first i-phone, and laughed off Google. IBM laughed off the first personal computer. These should be a horrible warning to all business leaders. Numerous technologies are threatening disruption today: block chain, 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 530 Project Planning Methodologies
Build your expertise with today’s critical project management methodologies in our fast-paced world. Variations of waterfall are widely used in industry, but new uses of agile are being discovered every day, both inside and outside of software-based organizations.