Two MEI Graduate Certificates

Within the MEI curriculum, we offer two fully online graduate certificates programs: **1) Value-Driven Innovation**, and **2) Energy Economics and Global Sustainability**. Each certificate program consists of four required courses, open to individuals holding a B.S., M.S., or Ph.D. in Engineering, Science, or Mathematics, or those currently accepted into a graduate program at Missouri S&T. Certificate credits count toward the M.S. degree for students admitted to the program.

Value-Driven Innovation Certificate

This online industry-focused certificate is designed to empower technology-powered teams and equips you with the knowledge and skills to execute the innovation process from ideation to implementation. Through courses on ideation, project development and finance, market launch, and contemporary tech issues, you'll learn a systematic approach to drive purposeful innovation, create value, and succeed in leadership roles within today's technology-driven economy.

Required Courses*:

1.	ECON 5338	Innovation and Value Generation **(Fall Semester)**
2.	ECON 5543	Innovation Economics and Finance **(Fall Semester)**
3.	ECON 5648	Innovation to Market **(Spring Semester) Prerequisites: ECON 5338 & ECON 5543**
4.	ECON 6020	Contemporary Issues in Technology and Innovation **(Spring Semester)**

Notes: * These courses are co-listed with Chemical, Nuclear, and Mining Engineering programs at S&T.

Energy Economics and Global Sustainability Certificate

This online industry-focused certificate navigates global challenges at the intersection of energy technology systems, economic policies, and environmental sustainability. It equips you with the knowledge to drive innovative solutions, shape energy policies, and lead sustainability efforts to address today's pressing energy challenges through collaboration among engineers, economists, and energy industry experts.

Required Courses*:

1.	ECON 6638	Energy Policy & Economic Analysis **(Fall Semester)**
2.	ECON 5543	Innovation Economics and Finance **(Fall Semester)**
3.	ECON 5658	Building Sustainability & ESG **(Spring Semester)**
4.	ECON 6030	Contemporary Issues in Energy Economics **(Spring Semester)**

Notes: * These courses are co-listed with Chemical, Nuclear, and Mining Engineering programs at S&T.

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Course Description

ECON 5338 Innovation and Value Generation (LEC 3.0)
This course introduces a structured framework for understanding and executing the innovation process, from ideation to implementation. It emphasizes a systematic approach to identifying real-world needs, crafting solutions, and transforming them into impactful outcomes, providing strategies for identifying customer needs and determining innovative solutions.

ECON 5543 Innovation Economics and Finance (LEC 3.0)
This course teaches rapid project development and financing, from an idea to a revenue-generating asset. It covers process ideation, technology/vendor selection, financial modeling, contract structuring, non-recourse financing, and project execution, such as engineering, procurement, construction, and start-up, resulting in a cash-flowing, tradeable annuity.

ECON 5648 Innovation to Market (LEC 3.0)
This course provides the tools needed to transform innovative solutions into market-ready products and services, focusing on business model development, value generation, and product management. Students will learn to identify product-market fit, maximize value to customers and users, and launch successful innovations. **Prerequisites: ECON 5338 and ECON 5543.**

ECON 6020 Contemporary Issues in Technology and Innovation (LEC 3.0)
This course explores contemporary trends, challenges, and opportunities in technology and innovation, featuring lectures by various industrial experts. Topics include disruptive technologies, innovation strategies, regulatory and policy impacts, and emerging markets. Students will learn the forces driving change in today's global technology landscape. **Prerequisite: Graduate Standing.**

ECON 6638 Energy Policy and Economic Analysis (LEC 3.0)
This course focuses on the economic and policy aspects of energy. Topics include energy prices, electricity market mechanisms, renewables, nuclear, alternative fuels, climate change, and the environmental consequences of energy consumption and production. The efficiency of various energy options is compared and discussed for future energy policies. **Prerequisite: Graduate Standing.**

ECON 5658 Building Sustainability & Environmental, Social and Governance (ESG) (LEC 3.0)
Across the globe, businesses are increasingly recognizing the importance of sustainability and ESG principles. This course equips students with the knowledge, tool set, and skills needed to understand, implement, and integrate sustainability and ESG practices in various organizational contexts.

ECON 6030 Contemporary Issues in Energy Economics (LEC 3.0)
This course explores the key challenges, trends, and opportunities shaping the future of energy, featuring insights from industry experts. It delves into the complexities of energy transition, decarbonization, policy regulation, and technological innovations, highlighting the forces driving change in the global energy economy. **Prerequisite: Graduate Standing.**