BECOME AN INNOVATIVE LEADER OF CHANGE

Master of Engineering in Engineering, Law, and Policy

The master of engineering in engineering, law, and policy (MELP), housed in the School of Engineering Design, Technology, and Professional Programs, is an interdisciplinary professionally focused graduate program that provides students from diverse engineering and technical backgrounds with the necessary knowledge to understand the convergence between engineering, law, and policy and successfully develop and implement technology-based strategies and solutions.

MELP graduates will acquire the skills to communicate science, technology, engineering, and math (STEM) to policymakers, regulators, and decision-makers to inform public policy; and inform research development and innovation based on the analysis of existing ethical, policy, and regulatory frameworks. This innovative graduate program is the first curricular offering of the Law, Policy, and Engineering (LPE) initiative at Penn State.

Graduate Offerings

The MELP graduate program includes:

- A non-thesis, master's degree that provides advanced professional practice training for those in STEM and public policy fields
- Flexibility and customization to meet each student's interests, needs, and science and technical background
- Exposure to professional networking opportunities and workshops for skill development, while engaging renown faculty in a diverse, interdisciplinary, and supportive learning environment for professional growth

Technical Elective Focus Areas

- Energy
- Environmental
- Nuclear energy policy and nuclear security
- Computer and network security
- Autonomous vehicles
- Telecommunications
- Biology and agriculture
- Nanotechnology and advanced manufacturing
- Biomedicine and health care technology

Students may also take general electives to expand their knowledge across law, policy, and technology to tackle the complexities of climate change, emerging technologies, environmental justice, and other societal issues. This includes core courses from the graduate certificates in international affairs, international security studies, international public policy, international development policy, or engineering leadership and innovation management.

Master of Engineering in Engineering, Law, and Policy

- Flexible, residential one-year full-time or two-year part-time program
- 30 credits (21 credits of core courses and 9 credits of electives)

PennState
College of Engineering

ENGINEERING DESIGN, TECHNOLOGY, AND PROFESSIONAL PROGRAMS

Program Curriculum

The MELP program requires the completion of 30 credits—21 credits of required courses and 9 credits of electives.

Systems Design and Systems Thinking | 6 credits

- EDSGN 558: Systems Design
- EDSGN 549: Design Decision Making

Law | 6 credits

- LPE 851: Foundations in Public Law
- LPE 852: Foundations in Private Law

Global Policy | 3 credits

- INTAF 502: Science, Technology, and International Policy

Interdisciplinary Core | 6 credits

- LPE 853: Engineering, Law, and Policy Systems
- LPE 854: Engineering, Law, and Technology Policy Practicum

Electives | 9 credits

- Technical depth to be chosen in consultation with adviser
- Choice of internship or research paper

Learning Outcomes

Graduates from the MELP program are a new cadre of engineers and scientists with the capacity to innovate, lead, create, change, and help engage the existing STEM workforce in technical and regulatory policy by:

- Developing solutions to complex societal problems through systems thinking and integrating principles of law, policy, ethics, and engineering
- Analyzing and explain the fundamental principles of advanced topics in technology, technology policy, and law
- Connecting local, national, and global problems, resources, and solutions
- Analyzing and model engineering systems, legal systems, and policymaking systems
- Performing productively on an interdisciplinary team
- Communicating effectively across disciplines with a range of audiences and stakeholders

"Graduates from the MELP program will be equipped to impact public policy, lead change, and differentiate themselves among the STEM workforce by navigating the convergence of law, policy, and engineering for business growth, public interest, and social impact."

Sandra Allain
LPE Director and Professor of Practice

Career Opportunities

The advanced, professionally focused MELP degree will provide graduates with a competitive advantage in different types of professional practice, including:

- Industry and corporate sector
- State and federal agencies
- International organizations
- Non-governmental organizations
- Consultancy firms
- Think tanks
- Academia
- Start-ups
- National laboratories
- Non-profits

Scan this QR code to learn more about MELP and its admission requirements.

bit.ly/Penn-State-MELP

LPE
LAW, POLICY, AND ENGINEERING