The MITS program sits at the critical intersection of emerging technologies and social science, providing students with the skills necessary to understand many of today’s most pressing challenges related to the formulation of policy and strategy in this area.

Colin Clarke
MITS Assistant Teaching Professor, Institute for Politics and Strategy, Carnegie Mellon University
Master of Information Technology Strategy
Program Characteristics

Unique Program Features

Seminar: The Seminar provides students with an opportunity to broaden their understanding of cyber security and information dominance. As a global leader in technology and strategy, Carnegie Mellon hosts military and civilian leaders for campus-wide talks and in-depth seminars in the MITS program.

Project: The Project promotes team-based engagement on a real-world problem related to cyber security and information dominance. Information on past projects can be found at the MITS website (www.cmu.edu/mits).

Concentration Areas: MITS focuses on four thematic areas collectively spanning disciplines that are essential in developing astute, knowledgeable, and practiced leaders in cyber security and information dominance.

Concentration Areas

Information Security
An understanding of cyber threats and the mitigation of their impact ensures that program graduates are equipped to address the dangers of cyber attacks.

Courses include:
- Information Security, Privacy, and Policy
- Introduction to Computer Security
- Secure Software Systems
- Applied Cryptography
- Foundation of Privacy

Data Analytics
To be successful, tomorrow's leaders in Information Dominance must be proficient in extracting knowledge from large data systems. Such extraction requires mastery in techniques such as machine learning, social network analysis, and large-scale data reduction and filtering.

Courses include:
- Dynamic Network Analysis
- Machine Learning Large Data Sets
- Topics in Deep Learning
- Probabilistic Graphic Models
- Search Engines
- Graduate Artificial Intelligence

Politics and Strategy
The ability to demonstrate sound reasoning about policy and strategy is an invaluable skill for individuals who will shape the future of IT strategy.

Courses include:
- The Future of Warfare
- Technology and Policy of Cyber War
- Social Media, Technology, and Conflict
- Emerging Technologies and the Law
- Grand Strategy in the United States
- Space and National Security

Software and Networked Systems
An understanding of system and software architecture is essential for the management of safe, secure, and reliable information infrastructures.

Courses include:
- Distributed Systems
- Architectures for Software Systems
- Cloud Computing
- Computer Vision
- DevOps: Engineering for Deployment and Operations
- Engineering Data Intensive Scalable Systems

Elective Courses

Elective courses allow students to explore a concentration area in greater depth or to pursue topics outside of their concentration. With more than 45 elective courses spanning the concentration areas, students can strategically tailor the program to align with their personal and professional goals.

To learn more, visit us at www.cmu.edu/mits or e-mail Kelly Wadsworth (ips-admissions@cmu.edu)

The Masters of Software Engineering Professional Programs are a proud part of:

Carnegie Mellon University
School of Computer Science

Institute for Software Research