



PennState
College of Information
Sciences and Technology

MASTER OF PROFESSIONAL STUDIES

Homeland Security

Information Security and Forensics Option

Protecting the nation's information systems and cyberspace presents one of the greatest challenges of homeland security professionals. Cyber threats and cyber security are increasingly critical areas of focus for the U.S. government, with the Department of Homeland Security serving as the coordinating agency.

If you are a computer and information systems specialist looking to advance your career, or to move into the government or private sector supporting government initiatives, the online Information Security and Forensics option in the **Master of Professional Studies in Homeland Security (MPS-HLS/ISF)** provides a flexible program combined with a highly relevant course curriculum to help you achieve your goals.

This option includes core courses that build an understanding of the theories, skills, and technologies associated with network security, cyber threat defense and forensics, intelligence analysis, risk assessment, security policy development, and privacy protection and assurance.

The National Security Agency and Department of Homeland Security have designated Penn State as a "National Center of Academic Excellence in Information Assurance Education." Students attending Penn State may be eligible to apply for scholarships and grants through the Federal and Department of Defense Information Assurance Scholarship Programs.

#1

2016 Best Online Programs from *U.S. News & World Report*

Best online masters in computer information technology programs, based on factors such as admissions selectivity, faculty credentials and academic and career support services offered to students.

Curriculum: MPS in Information Security and Forensics Option (MPS-HLS/ISF)

The core curriculum for the information security and forensics option (ISF) includes the three required courses that unify the goals for all options in the MPS-HLS program (**HLS 801: Policies and Programs**; **HLS 803: Social and Ethical Issues**; **HLS 805: Violence, Threats, Terror, and Insurgency**). In addition to a capstone project, IST 594, and nine credits of electives, four prescribed courses for the ISF option are required:

- **IST 454: Computer and Cyber Forensics** – Fundamental issues and concepts of computer and cyber-crime
- **IST 815: Foundations of Information Security and Assurance** – Emphasis on information systems security and assurance, identity theft, and distributed-systems security
- **IST 554: Network Management and Security** – Networks and Internet technologies to facilitate, manage, and secure data communications and applications
- **IST 456: Information Security Management** – Latest techniques and practices in computer security as applied to the Internet

Learning Outcomes of the Program

- **Understand theories and technologies associated with:** cyber and network security; cyber threat defense and forensics; risk assessment, security policy development and intelligence analysis.
- **Build your skills in:** information security and assurance; security audit and compliance; emergency and security management across multiple venues.

Postbaccalaureate Certificate in Information Cybersecurity

Earn a postbaccalaureate certificate in information systems cybersecurity by taking core courses IST 554 and 815 and three electives from the following: IST 451, IST 454, IST 456, IST 564 and IN SC 561.

First Year Courses*		
Semester	Course Name	Credits
Fall	Foundations of Information Security and Assurance (IST 815)	3
Fall	Homeland Security (HLS 801, 803 or 805)	3
Spring	Network Management and Security (IST 554)	3
Spring	Information Security Management (IST 456)	3
Summer	Homeland Security (HLS 801, 803 or 805)	6

Second Year Courses*		
Semester	Course Name	Credits
Fall	Computer and Cyber Forensics (IST 454)	3
Fall	Network Security (IST 451)	3
Spring	Research Paper or Project (IST 594)	2
Spring	Crisis, Disaster and Risk Management (IST 564)	3
Summer	Research Paper or Project (IST 594)	1
Summer	Elective Course	3

*Sample curriculum plan with fall semester start and an aggressive 2-year completion goal. Course availability subject to change.

For more information about IST Online Programs:

Sherry Hartman
Program Manager
101P Information Sciences and Technology Building
University Park, PA 16802
mps@ist.psu.edu | (814) 863-9461



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