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# Institutionalizing Homeland Security Education: The Penn State Experience

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Monterey, California: Naval Postgraduate School

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Penn State Harrisburg

# Homeland Security and Defense



## Institutionalizing Homeland Security Education: The Penn State Experience

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Penn State Harrisburg

HSDECA

Georgetown University

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# Homeland Security and Defense



## Topics

- Academia in Homeland Security Education
- Current Success
  - Master of Homeland Security in Public Health Preparedness
- Expanding Options
  - Inter-college Master of Professional Studies in Homeland Security
- Lessons Learned
- Next Steps
- Q&A

# Homeland Security and Defense



## Integration: Role of Academia

- Address causes & effects of a world facing multiple threats
- Contribute to developing the homeland security discipline
- Capacity to integrate multiple disciplines to:
  - Prevent
  - Prepare
  - Respond
  - Mitigate





## Public Health Preparedness Success

- Master of Homeland Security in Public Health Preparedness launched January 2005
- Office of Public Health Preparedness Support
- Statistics
  - 843 enrollments (ave. 210/year)
  - 119 active students
  - 16 MPS awarded



# Homeland Security and Defense



## Why an integrated degree?

- DHS linked research & education
- Homeland Security encompasses multiple disciplines
- Capacity to instruct & research
- Track record of success



# Homeland Security and Defense



## iMPS in HLS

- 33 credit program
- Six Penn State Colleges contribute:
  - Agriculture Sciences – Ag Biosecurity
  - Capital College (Penn State Harrisburg) - Policy
  - Earth & Mineral Sciences – Geospatial Intelligence
  - Information Science and Technology - Information Security & Forensics
  - Liberal Arts - Core
  - Medicine (Penn State Hershey) – Public Health
- Option Specific Research
- Serve multiple audiences
  - Embedded certificates
- Coordination at Penn State Hershey
  - Program Chair, Dr. Robert Cherry

# Homeland Security and Defense



## CORE CURRICULUM (12 credits)

**HLS / P ADM 801, Homeland Security Administration: Policies and Programs**

**HLS / PHIL 803, Homeland Security: Social and Ethical Issues**

**HLS / CRIM 805, Violence, Threats, and Insurgency**

## ELECTIVE GROUP B

(Choose 1)

**GEOG 880, Cultural Geography**

**PHP 553/CAS 553, Disaster Communication**

**IST 564, Crisis, Disaster, and Risk Management**

**PLSC 439, The Politics of Terrorism**



# Homeland Security and Defense



Graduate Certificate in Homeland Security and Defense 12 Credits	Graduate Certificate in Public Health Preparedness: Disaster and Bioterrorism 12 Credits	Graduate Certificate in Geospatial Intelligence 13 Credits	Postbaccalaureate Certificate in Information Systems Security 15 Credits	Graduate Certificate in Agricultural Biosecurity 12 Credits
P ADM 401	PHP 410	GEOG 882	IST 515	AGBIO 520
P ADM 404	PHP 510	GEOG 883	IST 554	AGBIO 521
P ADM 802	PHP 527	GEOG 884	Select 3 from the following	AGBIO 801
P ADM 803	PHP 530	GEOG 885	IN SC 561 IST 451 IST 454 IST 456 IST 564	AGBIO 802
		GEOG 594 (1 credit)		



## iMPS Homeland Security - Goals

- Identify and assess potential threats, vulnerabilities and consequences
- Comprehend major policy and legislation that shapes homeland security
- Apply leadership skills for producing and acting on information
- Recognize how natural and man-made catastrophes impact society and the domestic and global economy.
- Develop an appreciation of the cultural, social, psychological, political and legal aspects of terrorism and counterterrorism
- Instill applied skills in specific options

# Homeland Security and Defense



## Major Issues Faced

- Logistics
- Administrative
- Consistency of Approach
  - Option alignment
- Core Program
  - What is homeland security?
  - What is covered in a “core” program?

# Homeland Security and Defense



## Lessons Learned

- Market Research is essential
  - Program options (i.e., certificate & degree)
  - Content options
- Serendipity – building faculty depth
- Build consensus
- Flexible delivery
- Responsive to students
  - Integrating Degrees
- Connections with practitioners
  - Department of Homeland Security
  - Naval Postgraduate School
  - PA National Guard and Office of Homeland Security
  - US Army War College



## Next Steps

- Additional Programs
  - Computer Security
  - Critical Infrastructure Protection
  - Terrorism
  - Intelligence
- International Partnerships & Collaboration
  - Saudi Arabia
  - Germany
- Increased faculty research

Penn State Harrisburg

# Homeland Security and Defense



# Thank You Q & A

[http://www.worldcampus.psu.edu  
/MasterHomelandSecurity](http://www.worldcampus.psu.edu/MasterHomelandSecurity)



## Curriculum Map for Intercollege MPS in Homeland Security (iMPS-HLS): 33 credits

(1/14/2010)

### Core Curriculum - 9 cr

**HLS/P ADM 801 - Homeland Security Administration: Policies and Programs**

**HLS/PHIL 803 – Homeland Security: Social and Ethical Issues**

**HLS/CRIM 805 - Violence, Threats, and Insurgency**

Homeland Security	Public Health Preparedness	Geospatial Intelligence	Computer and Network Security	Information Security and Forensics	Ag Biosecurity
<b>Base Program - 12 cr (P ADM Students Only)</b>	<b>PHP Option - 12 cr (PHP Students Only)</b>	<b>GSI Option - 12 cr (GSI Students Only)</b>	<b>CNS Option - 12 cr (CSE Students Only)</b>	<b>ISF Option - 12 cr (IST Students Only)</b>	<b>AGBIO Option - 12 cr (AGBIO Students Only)</b>
P ADM 401 P ADM 404 P ADM 802 P ADM 803* <i>*Open to non-P ADM students</i>	PHP 410 PHP 510 PHP 527* PHP 530 <i>*Open to non-PHP students</i>	GEOG 882 GEOG 883* GEOG 884 GEOG 885 <i>*Open to non-GSI students</i>	CSE 543* CSE 546 EE 561 CSE 514 <i>*Open to non-CNS students</i>	IST 454 IST 515 IST 554* IN SC 561 <i>*Open to non-ISF students</i>	AGBIO 520* AGBIO 521 AGBIO 801 AGBIO 802 <i>*Open to non-AGBIO students</i>
<b>Elective Group A - 6 cr (Choose 2)</b>	<b>Elective Group A - 6 cr (Choose 2)</b>	<b>Elective Group A - 6 cr (Choose 2)</b>	<b>Elective Group A - 6 cr (Choose 2)</b>	<b>Elective Group A - 6 cr (Choose 2)</b>	<b>Elective Group A - 6 cr (Choose 2)</b>
GEOSC 402 PLSC 439 PHP 553/ <b>CAS</b> 553 PHP 558 / <b>PSY</b> 558 <i>Courses with an asterisk (*)</i>	GEOSC 402 IST 564 PHP 553/ <b>CAS</b> 553 PHP 558/ <b>PSY</b> 558 <i>Courses with an asterisk (*)</i>	GEOSC 402 GEOG 880 IST 564 IST 885 <i>Courses with an asterisk (*)</i>	CSE 544 CSE 545 CSE 511 EE/CSE 588 <i>Courses with an asterisk (*)</i>	IST 451 IST 456 IST 564 SRA 468 <i>Courses with an asterisk (*)</i>	VBSC 444 MANGT 510 GEOSC 402 PHP 558/ <b>PSY</b> 558 <i>Courses with an asterisk (*)</i>
<b>Elective Group B – 3 cr (Choose 1)</b>	<b>Elective Group B – 3 cr (Choose 1)</b>	<b>Elective Group B – 3 cr (Choose 1)</b>	<b>Elective Group B – 3 cr (Choose 1)</b>	<b>Elective Group B – 3 cr (Choose 1)</b>	<b>Elective Group B – 3 cr (Choose 1)</b>
GEOG 880 PHP 553 / <b>CAS</b> 553 IST 564 PLSC 439	GEOG 880 PHP 553 / <b>CAS</b> 553 IST 564 PLSC 439	GEOG 880 PHP 553 / <b>CAS</b> 553 IST 564 PLSC 439	GEOG 880 PHP 553 / CAS 553 IST 564 PLSC 439	GEOG 880 PHP 553 / <b>CAS</b> 553 IST 564 PLSC 439	GEOG 880 PHP 553 / <b>CAS</b> 553 IST 564 PLSC 439
<b>Capstone Experience – 3 cr</b>	<b>Capstone Experience – 3 cr</b>	<b>Capstone Experience – 3 cr</b>	<b>Capstone Experience – 3 cr</b>	<b>Capstone Experience – 3 cr</b>	<b>Capstone Experience – 3 cr</b>
P ADM 594	PHP 594	GEOG 594	CSE 594	IST 594	AGBIO 594

# Homeland Security and Defense



## Homeland Security & Defense (Base Program)

- Option Courses
  - P ADM 401, Introduction to Homeland Security
  - P ADM 404, Homeland Security and Defense in Practice
  - P ADM 802, Multifaceted Approaches to Homeland Security
  - P ADM 803\*, Strategic Planning and Organizational Imperatives in Homeland Defense and Security
- Elective Group A (Choose 2)
  - GEOSC 402, Natural Disasters
  - PLSC 439, The Politics of Terrorism
  - PHP/CAS 553, Disaster Communication
  - PHP/PSY 558, Disaster Psychology
  - Option courses with an \* (PHP 527, GEOG 883, IST 554, and AGBIO 520)
- Capstone Experience
  - P ADM 594



## Public Health Preparedness

- Option Courses
  - PHP 410, Public Health Preparedness for Disaster and Terrorist Emergencies I
  - PHP 510, Public Health Preparedness for Disaster and Terrorist Emergencies II
  - PHP 527\*, Public Health Evaluation of Disasters and Bioterrorism
  - PHP 530, Critical Infrastructure Protection of Health Care Delivery Systems
- Elective Group A (Choose 2)
  - GEOSC 402, Natural Disasters
  - IST 564, Crisis, Disaster, and Risk Management
  - PHP/CAS 553, Disaster Communication
  - PHP/PSY 558, Disaster Psychology
  - Option courses with an \* (P ADM 803, GEOG 883, IST 554, and AGBIO 520)
- Capstone Experience
  - PHP 594



## Geospatial Intelligence

- Option Courses
  - GEOG 882, Graphic Foundations of Geospatial Intelligence
  - GEOG 883\*, Remote Sensing for the Geospatial Intelligence Professional
  - GEOG 884, Geographic Information Systems for the Geospatial Intelligence Professional
  - GEOG 885, Advanced Analytic Methods in Geospatial Intelligence
- Elective Group A (Choose 2)
  - GEOSC 402, Natural Disasters
  - GEOG 880, Cultural Geography
  - IST 564, Crisis, Disaster, and Risk Management
  - IST 885, Introduction to Multisensor Data Fusion
  - Option courses with an \* (P ADM 803, PHP 527, IST 554, and AGBIO 520)
- Capstone Experience

# Homeland Security and Defense



## Information Security & Forensics

- Option Courses
  - IST 454, Computer and Cyber Forensics
  - IST 515, Information Security and Assurance
  - IST 554\*, Network Management and Security
  - INSC 561, Web Security and Privacy
- Elective Group A (Choose 2)
  - IST 451, Network Security
  - IST 456, Security and Risk Management
  - IST 564, Crisis, Disaster, and Risk Management
  - SRA 468, Visual Analytics for Security Intelligence
  - Option courses with an \* (P ADM 803, PHP 527, GEOG 883, and AGBIO 520)
- Capstone Experience
  - IST 594



## Agricultural Biosecurity

- Option Courses
  - AGBIO 520\*, Agricultural Biosecurity : Protecting a Key Infrastructure
  - AGBIO 521, Food Defense: Prevention Planning for Food Processors
  - AGBIO 801, Veterinary Infectious Disease Diagnostic and Surveillance Systems
  - AGBIO 802, Plant Protection: Responding to Introductions of Threatening Pests and Pathogens
- Elective Group A (Choose 2)
  - VBSC 444, Epidemiology of Infectious Disease
  - MANGT 510, Project Management
  - GEOSC 402, Natural Disasters
  - PHP/PSY 558, Disaster Psychology
  - Option courses with an \* (P ADM 803, PHP 527, GEOG 883, and IST 554)
- Capstone Experience
  - AGBIO 594