

**After Action Report**

***Workshop on National Needs:***

***What Employers Want from Graduate Education in  
Homeland Security***

Workshop Co-Sponsored by  
Homeland Security and Defense Education Consortium  
and  
Texas A&M University  
May 17-18, 2007  
College Station, Texas

**University Participants:**

Duke University  
George Mason University  
George Washington University  
Long Island University  
Naval Post Graduate School  
New Jersey Institute of Technology  
Penn State University  
Texas A&M University  
University of Colorado at Colorado Springs  
University of Denver

## **Executive Summary**

### **Workshop on National Needs: What Employers Want from Graduate Education in Homeland Security**

On 17-18 May, 2007, a workshop was conducted in College Station, Texas, on the subject of what employers expect to gain from hiring people with graduate degrees in Homeland Security.

- The workshop was co-sponsored by the Homeland Security and Defense Education Consortium and Texas A&M University.
- Universities participating included: Duke University, George Mason University, George Washington University, Long Island University, Naval Post Graduate School, New Jersey Institute of Technology, Penn State University, University of Colorado at Colorado Springs, University of Denver, and Texas A&M University
- Speakers were drawn from a cross section of federal, state, and local government, and private industry. They represented disciplines ranging from law enforcement and emergency management to veterinary medicine and food safety.

Speakers were promised a non-attribution environment, although they were advised that their comments would be aggregated for the purposes of this report. They were asked to speak from a personal, not an institutional perspective, based on their personal experience. The single question speakers were asked to address was this: “Five years from now, if your organization hired a person with a masters degree in homeland security, what would you expect them to know upon arrival in your office?”

- The single most commonly desired skill for employees in the field of homeland security, repeated by almost every speaker, was “the ability to read large amounts of material, draw logical conclusions, and communicate those conclusions clearly and concisely in writing and orally.”
- The single most desired quality for employees in the field of homeland security, mentioned by multiple speakers, was “integrity.”
- The single most desired special knowledge for employees in the field of homeland security was knowledge of existing policy, to include the National Response Plan, National Incident Command System, etc., as well as how to work with state and local agencies.

The many additional comments fell into two general categories:

- Core Knowledge, Skills and Abilities. Prominently cited were:
  - Applying basic technology, especially computers
  - A basic understanding of science, especially the biological sciences
  - Effective communications: written, oral and interpersonal (leadership)
  - Critical thinking and analysis (going beyond the facts to draw logical conclusions)
  - Resource management (to include planning, budgeting and project management)

- “Real World Experience” as an intern or in some other line of work
- Discipline Specific Knowledge, Skills and Abilities. Prominently cited were:
  - Fundamentals of homeland security
  - Fundamentals of government
  - Business principles
  - Criminal justice and law enforcement
  - Emergency management
  - National defense and intelligence apparatus
  - Risk management
  - International considerations
- Finally, infrastructure areas addressed in some depth included Health, Energy, and Food.
  - This last set of subjects was highlighted by a narrow set of speakers during the finite time we had available in the short workshop
  - A larger number of speakers representing more of the infrastructure sectors would doubtless have produced a broader focus on infrastructure

To repeat this point as a general comment, the speakers selected did skew the list of employer desires we compiled, probably shortchanging critical infrastructure (and engineering) in the process. But the range of speakers was quite broad nonetheless, and this fact gives special weight to the frequency with which the first two sets of comments were repeated. While the sample set was relatively small, it was diverse, and many of the results strikingly consistent.

Those planning graduate educational programs in homeland security and those contemplating hiring graduates of those programs would do well to consider these results.

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**Aggregated Speaker Comments**  
**Workshop on National Needs:**  
**What Employers Want from Graduate Education in Homeland Security**

**Core Knowledge, Skills and Abilities**

**Those mentioned most frequently were:**

**Applying Technology**

- Basic technology skills – technologically savvy
- Technology interoperability
- Network and information security and managing the human factor for information security
- Using technology for analysis and to mitigate threats
- Using technology for detection and surveillance

**Basic Knowledge**

- Microbiology
- Chemistry
- Math (statistics)
- Science

**Communicating Effectively**

- Written
  - Concise – executive summary or briefing
  - Factually without opinion or bias
  - For different audiences – policymakers, interagency, intra-agency, business
- Verbal
  - Clearly articulate ideas and concepts
  - Public speaking
  - Presentation skills for different groups and situations
- Interpersonal skills
- Developing partnerships and relationships, formal and informal; quickly identify and connect with potential partners; network with stakeholders
- Defend a position, even if you don't agree with it
- How to communicate with
  - Policymakers and decision makers
  - The public
  - The media
  - The private sector
- Communication when managing incidents
- Negotiation and persuasion

## **Managing Resources**

- Budgetary and finance knowledge, balancing cost with outcome
- Legal and regulatory compliance
- Human resource development and managing people
- Manpower allocation
- Program development
- Service provider and vendor management
- Project management
- Planning
  - Capabilities based
  - Contingency
  - Strategic
    - Translating high level HS missions into strategic plans
    - Strategic targeting/response
  - Long range
  - Tactical
  - With multiple groups

## **Thinking Strategically and Analytically**

- Visionary
- Creative
- Decisive
- Situational awareness
- Appreciation of the importance and application of theory
- Analytical/synthesis skills
  - Analyze problems and suggest solutions
  - Analyze information credibility and act on conclusions
  - Evaluate and interpret data; measure preparedness outcomes
  - Use empirical evidence to support an argument
  - Innovative problem solving and program development
  - Manage and prioritize large volumes of information
  - Analyze trends and unprecedented events for meaning
- Think operationally, tactically, strategically
- Ability to shift between thinking schemes; flexibility in problem solving
- Concrete and practical in approaches to problems
- Global/systems perspective
- Seeks information from multiple sources; ability to search and use open source reports
- Willing to question the paradigm

## **Working Responsibly**

- Cross-functional or interdisciplinary team building
- Honesty and integrity
- Accept and support diversity
- Understand how to make an organization work [OODA Loop]

- Interagency cooperation, communication and intelligence sharing
- Political savvy
- Positive outlook about future of US
- Stay current on local, national and international events
- Understand and appreciate value of educating the public
- Understand policies, strategies and legal issues
- Understand difference in drills, exercises and reality

**Also mentioned, although less often:**

**Managing a Career**

- Business etiquette
- Curiosity and desire to learn, life-long learner
- Appropriate business dress
- Writing a resume
- Marketing skills [networking]
- Realities of the workplace

**Experience**

- Experience with
  - Incident command
  - Field work
  - Drills and exercises
- First responder experience
- Internships or practicum
- Leadership experience

**Personal Traits**

- Ability to deal with change, flexibility
- Commitment to public service
- Compassionate
- Sense of humor
- Initiative
- Open-minded
- Able to operate under stress
- Passionate
- Able to persevere
- Self-motivated

**Discipline-Specific Knowledge, Skills and Abilities**

**Those mentioned most frequently were:**

**Business Knowledge**

- History of government and business

- Business continuity planning
- Know and contribute to homeland security laws and regulations, particularly as they apply to the business sector
- Impact of global inter-relationships for supply and trade
- How business and government can partner or collaborate to
  - Marshal private resources
  - Maintain continuity
  - Develop products and services for homeland security
  - Plan, train and exercise together
- Loss prevention
- What business needs to know about government emergency operations and procedures
- Government support structures for supply and trade, US and foreign

### **Criminal Justice/Law Enforcement**

- Crime analysis and strategic intelligence
- Intelligence-led policing
- Psychology – criminal and public
- Security
- Sensitivity to tradeoff between intelligence and law enforcement
- Understand transnational crime
- Federal, state and local cooperation
- Knowledge of private sector/business, industrial, and private security cooperation issues

### **Emergency Management**

- Basic principles of emergency management
- Applying emergency management principles in their field
- Human behavior in disasters
- Importance of EM to homeland security
- Incident response
- Post-incident recovery

### **Government and Agencies**

- Awareness of inter-agency challenges
- Balance of power in federalism, how politics affects the process
- Balancing civil liberties with privacy
- How federal government works – policy development, roles of agencies, their culture, legal constraints, mission, strengths and weaknesses
- Constitutional law, relevant laws and regulations
- Tools of government for addressing public problems—loans, grants, contracts, etc.
- Federal, state and local issues relating to government
- Grant process, grant writing and administration

## **Homeland Security “Fundamentals”**

- History and basic principles of homeland security
- History of homeland security and terrorism
- Structures and functions of DHS
- Demonstrated ability to apply national response planning documents
- Deep understanding of threat environment – emerging threats, nature of four main threats, prevention, response, impact
- Globalization and homeland security
- Federal, state and local issues that impact preparedness, including varying state homeland security structures/systems
- Response disciplines
- Tools available and their uses
- Training and exercises – participating in or leading mock incidents
- Intelligence warning process
- How constitution and legal framework affect homeland security

## **Also mentioned, although less often:**

### **International**

- Cooperation and communication between US entities and foreign agencies
- International relations – languages, basics of world religions, social and political realities abroad
- Specific regional or country knowledge
- Domestic and international factors and their interaction to lead to sound policy

### **Risk management**

- Risk assessment
  - Systematically identify and appraise relevant threats
  - Calculating risk: threat, vulnerability, consequence
- Risk-based decision making
  - Develop related metrics, risk forecasting and statistical models to validate assumptions and identify trends
  - Allocate resources based on risk
- Risk management
- Risk communication

## **Critical Infrastructure**

### **Health**

- Foundations of epidemiology
- Emerging diseases
- Health policy
- Public health systems
- Animal health framework
- Hospital finances

**Energy**

- Knowledge of fundamentals of stream integration
- Knowledge of US energy policy, particularly those aspects focused on energy security and energy independence
- Understanding of US energy policy from a geopolitical viewpoint, as well as a national one

**Food**

- Developing a food security plan
- Food processing and safety
- Promote food security awareness
- Supply chain management and traceability
- Develop and deliver training for food safety

## **Occupations and Agencies Represented by Speakers**

Workshop on National Needs:

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- Emergency Management
- Library Science
- General Accountability Office
- Immigration and Customs Enforcement, DHS
- Department of Energy
- Intelligence Community (CIA)
- National Guard
- Center for Domestic Preparedness
- Federal Bureau of Investigation
- Houston Police Department
- Local Government (County Level Council of Governments)
- Texas Engineering Extension Service (TEEX) [Disaster & Emergency Preparedness Training]
- Business Executives for National Security (Business Response Task Force)
- 911 Emergency Call System
- Airport Director
- Food/Ag Safety (senior scientist at a major supermarket chain)
- Cyber Security (civilian security company)
- Customs and Border Protection, DHS (retired)
- County Veterinary Public Health
- State Public Health
- Biodefense Consultant
- US Northern Command
- Office of the Chief Learning Officer, DHS
- International Affairs, Bush School of Government and Public Service
- Dean of Graduate Studies, Texas A&M University
- Vice President for Research, Texas A&M University
- Naval Postgraduate School (Curriculum Specialist)

## **Guidance Provided to Speakers**

Workshop on National Needs:

What Employers Want from Graduate Education in Homeland Security

Friends and Colleagues,

We are but a few days from your visit to our Workshop on National Needs (WON2), focusing on curriculum development at the graduate degree level in homeland security. Please allow me to share some final thoughts concerning your presentation.

As you know, homeland security is still in its infancy as an academic endeavor. Many schools and agencies have done excellent work in trying to capture what needs to be taught today, and adapting their expertise to deliver that product. But we are far from even a full definition of homeland security, and have much to do before it emerges as an academic discipline in its own right. We hope that our workshop will move us all forward toward that goal.

Let me begin by stressing what we are NOT asking you to do. We are NOT asking you to recap what your organization is teaching in the field of homeland security. This was a goal for past programs and for schools just getting underway. Our audience all have curriculum and programs of their own – they do not need a recap of your work.

INSTEAD, we are asking for your **PERSONAL PERSPECTIVE**, based on your **PERSONAL EXPERTISE** on the following question:

**“FIVE YEARS FROM NOW, IF YOUR ORGANIZATION HIRED A PERSON WITH A MASTERS DEGREE IN HOMELAND SECURITY, WHAT WOULD YOU EXPECT THEM TO KNOW UPON ARRIVAL?”**

We are looking for you to provide **PART** of our final answer. No need to design an entire curriculum, or provide a multi page or multi slide presentation. In particular, please **DO NOT ATTEMPT TO SPEAK FOR YOUR ORGANIZATION OR INDUSTRY AS A WHOLE**.

But **PLEASE DO** give us about 12 minutes of thoughts focused by one or two slides with:

- the background / perspective from which you speak
- a half dozen or so thoughts in bullet format on this subject.

Of course, you will have to balance between the broad, philosophical and theoretical knowledge that will serve a graduate (and you, as the employer) for many years, vs. the immediate tactical and operation knowledge the graduate will need to get started on his or her work. And you may even want to focus on questions the graduates should be prepared to address, rather than the answers to those questions. Providing this judgment and balance is precisely the reason we picked you to speak to us. You do not have to solve the complete puzzle – just helping us define it will be a huge step forward.

When the conference is over, we will collect all these focused thoughts and create a short report on this step in developing the national homeland security workforce. We believe this workshop and report will prove valuable – indeed, foundational – in creating a new academic discipline over the next decade or more. Thanks for your time, your interest, and your participation.

Dave McIntyre